Industria y Comercio

SUPERINTENDENCIA

Delegatura de propiedad Industrial

División de Nuevas Creaciones

PCT

SOLICITUD

PATENTE DE INVENCIÓN

21. **EXPEDIENTE No.** 07 2359

54. **TÍTULO** Derivados de 2-pirrolidona sustituida como fungicida e insecticida

51. **CLASIFICACIÓN INTERNACIONAL**

71. **SOLICITANTE** Bayer Cropscience AG

DOMICILIO 40789 Monheim, Republica Federal de Alemania.

74. **APODERADO** Emilio Ferrero
CC. 438.019 de Usaquén

22. **BOGOTÁ, D. C.,**

(FORMA P-10)

Industria y Comercio
SUPERINTENDENCIA

PETITORIO

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
Rad: 07-002359- -00000-0000
Fec: 2007-01-11 16:56:57 Dep: 2020 NUEVACREACIONES
Tra: 11 PATENTEIYII
Cla: 379 FASENACIONALI
Act 411 PRESENTACION Folios: 506

FORMULARIO UNICO DE SOLICITUD DE PATENTE
PCT
ENTRADA EN FASE NACIONAL

1 SOLICITUD DE:

☒ Patente de Invención. ☐ Patente de Modelo de Utilidad.
☒ Capítulo I. ☐ Capítulo II.

2 SOLICITANTE (71)	Nombre: **BAYER CROPSCIENCE AG** sociedad constituida y existente bajo las leyes de la República Federal de Alemania Dirección: Alfred-Nobel-Strasse 50, 40789 Monheim, República Federal de Alemania Domicilio: 40789 Monheim, República Federal de Alemania	**IDENTIFICACIÓN** C.C. ☐ NIT ☐ C.E. ☐ Otro ☐ Cual ____ Número ____
3 REPRESENTANTE APODERADO	Nombre: EMILIO FERRERO Dirección: Carrera 4ª. No. 72-35 Teléfono: 347 36 11 Fax: 211 86 50 E-mail: clientes@camyp.com. Domicilio: Bogotá, Colombia.	**IDENTIFICACIÓN** C.C. ☒ NIT ☐ C.E. ☐ Otro ☐ Cual ____ Número 438.019 T.P 31.929

4 INVENTOR (ES) (72)

1. **Stefan HILLEBRAND**
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16. **Hartwig MÜLLER**
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República Federal de Alemania

17. **Kevin BACON**
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Higashinada-ku,
Kobe 658-0032,
Japon

(5) **PCT (86)**
Solicitud Internacional No. PCT/EP2005/007442 Fecha: 9 de julio de 2005
Publicación Internacional No. WO 2006/005551 A1 Fecha: 19 de enero de 2006

(6) TÍTULO (54)
DERIVADOS DE 2-PIRROLIDONA SUSTITUIDA COMO FUNGICIDAS E INSECTICIDAS

(7) **Clasificación Internacional (51)** C07D 207/028

(8) **Prioridad** SI☒ NO☐

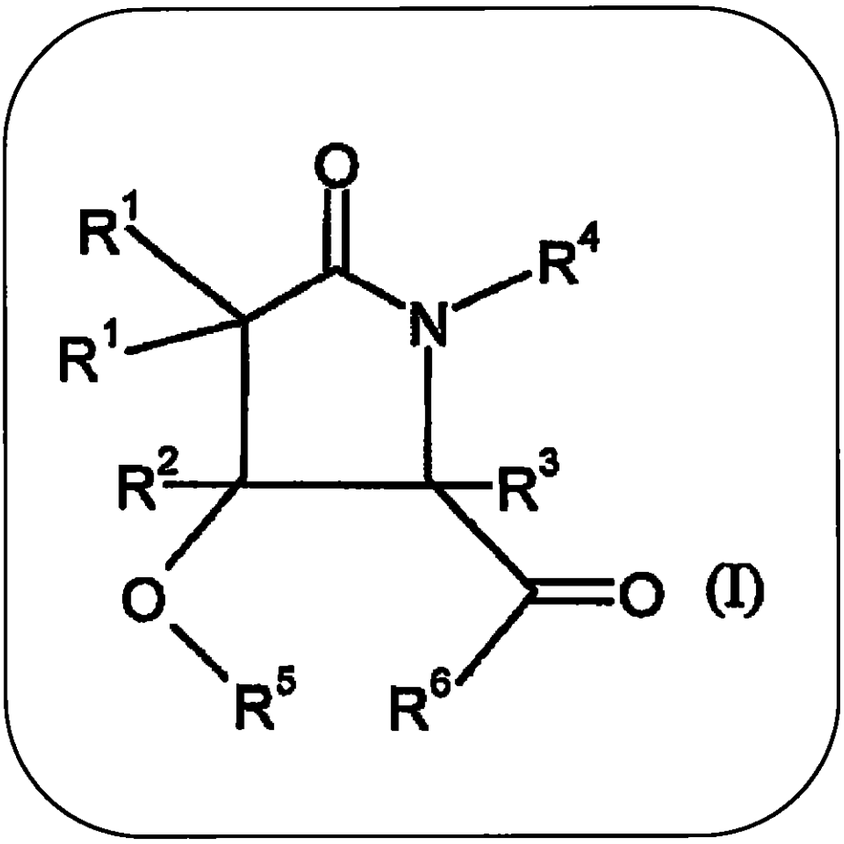
(33) País de Origen	(32) Fecha	(31) Número de Solicitud
EP	12 de julio de 2004	04016320.6

(9) **Comprobante de pago No.: 07-1.764 Fecha: 10 de enero de 2007**

(10) **Anexos:**

- ☒ Comprobante de pago de la tasa de presentación de la solicitud por $ 482.000.oo.
- ☐ Comprobante de pago por reivindicación de prioridad.
- ☒ Documento que acredita la existencia y representación legal cuando el solicitante sea persona jurídica.
- ☒ Poderes, si fuere el caso.
- ☐ Documento de cesión del inventor al solicitante o a su causante.
- ☐ Declaraciones.
- ☒ Copia de la solicitud internacional. (Resumen, descripción, reivindicaciones, dibujos)
- ☒ Traducción de la solicitud internacional al castellano. (Resumen, descripción, reivindicaciones, dibujos)
- ☐ Copia del examen preliminar efectuado por la IPEA.
- ☐ Traducción del examen preliminar efectuado por la IPEA.
- ☐ De ser el caso, copia del contrato de acceso.
- ☐ De ser el caso, documento que acredite la licencia o autorización de uso de conocimientos tradicionales de las comunidades indígenas.
- ☐ De ser el caso, certificado de depósito del material biológico.
- ☒ Arte final 12x12
- ☐ De ser el caso, información sobre otras solicitudes de patente o títulos obtenidos en el extranjero por el mismo titular o su causante, relacionadas parcial o totalmente con la invención de esta solicitud.
- ☒ Otros: VER HOJA DE DOCUMENTOS ANEXOS

(11) **FIGURA CARACTERÍSTICA**



(12) Solicito la concesión de la patente,

NOMBRE: EMILIO FERRERO

FIRMA : _____

C.C. 438.019 de Usaquén T.P. 31.929

NNJ

DOCUMENTOS ANEXOS

1. ☒ Publicación Internacional WO 2006/005551 A1
   Descripción:
   Páginas 288 en el idioma original
   Páginas 414 en español
   Reivindicaciones: Número (s) 10
   Figuras: Número (s)

2. ☒ **Forma PCT/ISA/210.** Informe de Búsqueda Internacional.

3. ☒ 2 **Forma PCT/IB/306.** Notificación de Registro de un Cambio.

4. ☒ Extracto de publicación.

NO SE REALIZARON MODIFICACIONES EN LA FASE INTERNACIONAL

CAVELIER
ABOGADOS
EDIFICIO SISKI
CARRERA 4a Nº 72-35
BOGOTA, 8 - COLOMBIA

179

Representación y Poder con autenticación notarial y Apostille para patentes, modelos de utilidad, diseños industriales, marcas de fábrica, nombres comerciales, enseñas, nombres de dominio, lemas comerciales, licencias.

Representation and Power-of- Attorney with notarial authentication and Apostille for patents, utility models, industrial designs, trademarks, commercial names, trade emblems, domain names, slogans, licenses.

REPRESENTACION Y PODER

REPRESENTATION AND POWER- OF- ATTORNEY

13549
10966

Yo (nosotros), abajo firmado (s)/I (we), the undersigned
Bayer CropScience AG

domiciliado (s) en/of Alfred-Nobel-Str. 50,
40789 Monheim, Germany, hereby ratify the patent application
No. 03.005.574 filed by Emilio FERRERO on January 28, 2003 and

por el presente nombramos a EMILIO FERRERO, tpa. 31929; GONZALO PERDOMO, tpa. 831; LUZ CLEMENCIA DE PAEZ, tpa. 23555 y GERMAN CAVELIER, tpa. 832, domiciliados en la Carrera 4ª Nº 72 35, Bogotá, Colombia, en obedecimiento a lo dispuesto en el parágrafo 1o del Artículo 543 del Código de Comercio, el primero como principal y los demás como suplentes, en su orden, como mis (nuestros) representantes en todos los asuntos de propiedad industrial con facultad para recibir notificaciones y nombrar apoderados judiciales o extrajudiciales. El primer representante suplente reemplazará al principal en caso de ausencia o impedimento temporal o definitivo de aquél. La misma regla se aplicará cuando el segundo representante suplente haya de reemplazar al primero, o el tercero al segundo. En tales casos, el representante principal, o el primero, o segundo suplente, en su caso, o ambos, declararán su intención de no ejercer la representación mediante declaración autenticada por Notario Público en Colombia, o por Notario u otro Funcionario Público, o Cónsul de Colombia, en el extranjero; y si se tratare de impedimento, con el certificado respectivo. Si alguno de los nombrados faltare definitivamente, el siguiente tomará su lugar. Cuando cesare la ausencia o impedimento del representante principal, o de su primero o segundo suplentes, en su caso, podrán ejercer la representación, en su orden, uno u otros según el caso, asumiéndola por el solo hecho de ejercerla, cesando en ese momento el ejercicio de la representación por el primero, segundo o tercer suplente en su caso.

in due compliance with the terms of paragraph 1st. of article 543 of the Commercial Code, do hereby appoint EMILIO FERRERO, tpa. 31929; GONZALO PERDOMO, tpa. 831; LUZ CLEMENCIA DE PAEZ, tpa. 23555 and GERMAN CAVELIER, tpa. 832, domiciled at Carrera 4ª Nº 72 35, Bogotá, Colombia, the first as principal and the others as alternates, in the order of their appointment, as our representatives for all industrial property matters with faculty to receive notifications and to appoint attorneys in and out of Court. The first alternate shall replace the principal in case of his absence or of temporal or definitive impediment. The same rule will apply when the second alternate representative is to replace the first one, or when the third is to replace the first or second alternates in their turn, or both of them, second. In such cases, the principal representative, or the first or second alternates in their turn, or both of them, shall state their intention not to act as representatives through a declaration given before a Notary Public in Colombia, or before a Notary or another Public Official or a Colombian Consul abroad; and in case of impediment, the appropriate certificate shall suffice. If any of the appointees were to be definitely absent, the following alternate shall take his place. When the absence or impediment of the principal representative, or of the first or second alternate in their turn ceases, the representation can be taken [illegible] the principal, the first or second [illegible], and the mere fact or its exercise will suffice. The exercise of the representation by the first, second or third alternate in their turn shall end at such time.

Además, confiero (conferimos) poder a los abogados arriba nombrados, para obtener la protección de mi (nuestra) propiedad industrial y contra la competencia desleal, a cuyo efecto autorizo (amos) a los dichos apoderados para que me (nos) representen ante cualesquiera entidades o personas, ejerzan o no jurisdicción, especialmente ante las del orden

In addition, we grant Power of Attorney in favor of the above-named attorneys at law so that they may obtain the protection of my (our) industrial property and against the unfair competition, for which purpose I (we) authorize the said attorneys to represent me (us) before any authorities or persons,

Jministrativo, contencioso administrativo y judicial, así como los ribunales de arbitramento, en todo lo concerniente a los siguientes asuntos: a) Obtención de patentes de invención, modelos de utilidad, y diseños industriales; el registro de marcas de fábrica, colectivas, defensivas, de servicio, lemas comerciales, nombres comerciales, enseñas, nombres de dominio, variedades vegetales y denominaciones de origen; su renovación, traspaso, cambio de nombre o domicilio, cancelación voluntaria; y el registro de licencias de uso de esos derechos; b) Las acciones de competencia desleal, protección del consumidor, oposiciones u observaciones, cancelación administrativa y judicial, nulidad, medidas cautelares, concesión de licencias, la tutela, la protección de secretos industriales, y en general los juicios civiles, penales, administrativos o contencioso administrativos relacionados con estos derechos; acciones y procesos que promovamos o se nos promuevan. Y para que en todos los asuntos arriba determinados, puedan sustituir este mandato, transigir, conciliar, admitir los hechos del proceso, desistir, cancelar, recibir, renunciar, y ratificar los actos de agentes oficiosos.

with or without jurisdiction, specially those administrative, administrative contentious and judicial, as well as before Arbitration Court, in all matters concerning the following: a) Obtainment of patents, utility models and industrial designs; the registration of trademarks, collective, defensive and service marks, slogans, commercial names, trade emblems, domain names, vegetal varieties and denominations of origin; its renewal, assignment, change of name or domicile, voluntary cancellation; and the registration of licenses of use of the above rights; b) Actions of unfair competition, protection to the consumer, oppositions or observations, administrative or Court cancellation, nullity, infringement, granting of licenses, the action for writ mandamus, the protection of trade secrets, and in general the civil, penal, and administrative suits relating to those rights; actions and suits instituted by me (us) or against me (us). And that in all the above matters they may substitute this Power of-Attorney, compromise, conciliate, admit the facts of the case, desist, cancel, receive, resign, and ratify acts done by representatives without a power of attorney.

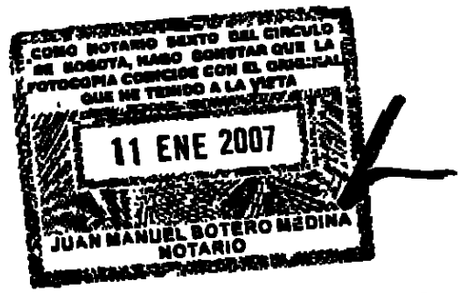
Dado y firmado hoy/Given and signed this 12th of February, 2003

en/in Leverkusen

por/by Dr. Axel Bader, Dr. Ralf-Rüdiger Jesse

Firma / Signature

Bayer CropScience AG



AUTENTICACION NOTARIAL (SOCIEDAD)

El suscrito Notario Certifica: Que la firma que antecede de Dr. Axel Bader y Dr. Rolf-Rüdiger Jesse

auténtica; que el signatario desempeña actualmente el cargo de Secretarios de la compañía Bayer CropScience AG

sociedad que actualmente existe y está organizada de acuerdo a las leyes de Alemania

que la dirección de dicha compañía es Alfred Nobel-Str. 50, 40789 Monheim, Alemania

y que el signatario tiene facultad para otorgar este documento.

Todos los hechos anteriores le constan por haber examinado los documentos respectivos y de todo ello da fe.
Dado y firmado en Leverkusen

El 12 de febrero, 2003

NOTARIAL AUTHENTICATION (COMPANY)

The undersigned Notary certifies: That the preceding signature of
Dr. Axel Bader and Dr. Ralf-Rüdiger Jesse
is authentic, that the signatory currently acts in the position of secretaries
of the company Bayer CropScience AG
a company currently existing and organized under the laws of Germany
that the address is Alfred-Nobel-Str. 50, 40789 Monheim, Germany
and that the signatory has the power to grant this document.

The Notary Public is aware and attests to the above facts upon examination of the corresponding documents.
Given and signed in Leverkusen

On 12th of February, 2003

El Notario Público - The Notary Public
(Firma-sello) (Signature-seal)

DIRK HEIDERHOFF 1 NOTAR IN LEVERKUSEN

COMO NOTARIO SEXTO DEL CIRCUITO DE BOGOTA, PUDO CONSTAR QUE LA FOTOCOPIA CORRESPONDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
11 ENE 2007
JUAN MANUEL BOTERO MEDINA
NOTARIO

8

URNr. 242/2003

Ich beglaubige die vor mir vollzogenen Unterschriften :

1. des Herrn Dr. Ralf-Rüdiger Jesse, geschäftsansässig in D 51368 Leverkusen, Bayerwerk, Germany,

2. des Herrn Dr. Axel Bader, geschäftsansässig in D 51368 Leverkusen, Bayerwerk, Germany,

- persönlich bekannt -.

Ich bescheinige aufgrund Einsicht in das Handelsregister des Amtsgerichts Langenfeld - HRB 3990 -, daß die genannten Herren berechtigt sind, die Bayer CropScience Aktiengesellschaft in Monheim am Rhein als Prokuristen einzeln zu vertreten.

Leverkusen, den 12. Februar 2003

Notar

COMO NOTARIO SEXTO DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA

11 ENE 2007

JUAN MANUEL BOTERO MEDINA
NOTARIO

APOSTILLE

(Convention de La Haye du 5 octobre 1961)

1. Land: Bundesrepublik Deutschland
   Diese öffentliche Urkunde
2. ist unterschrieben von Dirk Heiderhoff
3. in seiner Eigenschaft als Notar
4. sie ist versehen mit dem Stempel/Siegel des (der) Notars Dirk Heiderhoff in Leverkusen

Bestätigt

5. in Köln
6. am 17. FEB. 2003
7. durch den Vizepräsidenten des Landgerichts Köln
8. unter Nr. 482/03
9. Stempel/Siegel:
10. Unterschrift: Callebe

Der Präsident des Landgerichts Köln

SEXTO NOTARIO SEXTO DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA CORRESPONDE CON EL ORIGINAL QUE ME FUE PRESENTADO A LA VISTA

01 ENE 2007

JUAN MANUEL POTES
NOTARIO

Geb § 150 EUR 13,-

9

TRADUCCION OFICIAL No. 9450

de un documento escrito en Alemán, efectuada por Luz Arriaga de Herber, resolución del Ministerio de Justicia 599 del 6 de marzo 1978.-

---

Traducción de los sellos y autenticaciones que aparecen en el documento de representación y poder, escrito en español e inglés, por medio del cual la firma Bayer CropScience AG, domiciliada en Alfred-Nobel-Str. 50, D 40789 Monheim, Alemania, otorga poder a EMILIO FERRERO, tpa. 31929; GONZALO PERDOMO, tpa. 831; LUZ CLEMENCIA DE PAEZ, tpa 23555 y GERMAN CAVELIER, tpa. 832, domiciliados en la Carrera 4 No. 72-35, Bogotá, Colombia. Dado y firmado el 12 de febrero 2003 en Leverkusen, Alemania, por los señores Dr. Axel Bader y Dr. Ralf-Rüdiger Jesse.

Autenticación en español e inglés de las firmas antecedentes y certificació de existencia de la sociedad por el notario de Leverkusem, Dirk Heiderhoff.

Fdo.: firma ilegible

Sello redondo en tinta:

Dirk Heiderhoff, notario de Leverkusen

COMO NOTARIO SEXTO DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA

11 ENE 2007

JUAN MANUEL BO[illegible]
NOTARIO

LUZ ARRIAGA DE HERBER

10

Protocolo notarial 242/2003

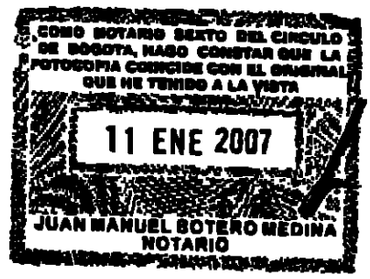
Certifico la autenticidad de la firma antecedentes puestas ante mí por los señores

1. Dr. Ralf-Rüdiger Jesse, con domicilio comercial en D-51368, Bayerwerk, Alemania,
2. Dr. Axel Bader, con domicilio comercial en D-51368, Bayerwerk, Alemania,

a quienes conozco en persona.

Certifico, por haber tenido la lista el registro de comercio del Juzgado Municipal de Langenfeld -HRB 3990- que los mencionados señores están facultados, en su calidad de apoderados, para representar individualmente a la firma Bayer CropScience Aktiengesellschaft, domiciliada en Monheim am Rhein.

Leverkusen, 12 de febrero 2003
(Hilo y oblea notarial)
Fdo.: firma ilegible, Notario



Costas
Art. 141, 154 KostO
Valor EUROS 3.000,-
Derechos Art. 32,45 EUROS 10,-

Derechos Art. 58	EUROS 10,-
Derechos Art. 150	Euros 13,-
IVA	EUROS 5,28
Total	EUROS 38,28

Fdo.: Heiderhoff, notario

APOSTILLA

(Convention de La Haye du 5 octobre 1961)

1. País: República Federal de Alemania

   Este documento público

2. Ha sido firmado por Dirk Heiderhoff

3. Actuando en calidad de notario

4. Lleva el sello del notario Dirk Heiderhoff, notario de Leverkusen

Certificado

5. en Colonia 6. El 17 de febrero 2003

7 por el Vicepresidente del Tribunal Regional de Colonia

8. bajo el No 482/03

9. Sello 10. Firma

El Presidente del Fdo.: firma ilegible

Tribunal Regional de Colonia Caliebe

ES TRADUCCIÓN FIEL COMPLETA, de copia debidamente firmada en los archivos de estas oficinas para su correspondiente legalización.

Bogotá, 14 de marzo 2003.

DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA

11 ENE 2007

JUAN MANUEL [illegible] GUERRERO
NOTARIO

COMO NOTARIO SEXTO DEL CIRCULO DE SANTAFE DE BOGOTA, HAGO CONSTAR QUE EL(LOS) ANTERIOR(ES) FIRMA(S) PUESTA(S) POR

IDENTIFICADO(S) CON C.C. No.(s)

ES(SON) AUTENTICA(S)

SANTAFE DE BOGOTA, 18 MAR 2003

MINISTERIO DE RELACIONES EXTERIORES

208993

COTEJADA PARA APARECE EN EL DOCUMENTO DESEMPEÑA LAS FUNCIONES INDICADAS

COMO NOTARIO SEXTO DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA CORRESPONDE CON EL ORIGINAL QUE SE TUVO A LA VISTA

11 ENE 2007

JUAN MANUEL BOTERO MEDINA
NOTARIO

TRADUCCIÓN OFICIAL No. 10.09/02 realizada por Diego Vargas, Traductor Oficial, Resolución No. 0001 de 1999 del Ministerio de Justicia y registrado ante el Ministerio de Relaciones Exteriores de Colombia.

A continuación se traducen los sellos y legalizaciones de un documento escrito en inglés y español por medio del cual Bayer CropScience AG, domiciliado en Alfred-Nobel-Str. 50, 40789 Monheim, Alemania, por el presente ratifica la solicitud de patente No. 03.005.574, presentada por EMILIO FERRERO el 28 de enero de 2003 y otorga derechos de representación y poder a los Doctores EMILIO FERRERO, tpa. 31929; GONZALO PERDOMO, tpa. 831; LUZ CLEMENCIA DE PÁEZ, tpa. 23555 y GERMÁN CAVELIER, tpa. 832, domiciliados en la Carrera 4° No. 72-35.

Dado y firmado hoy 12 de febrero de 2003

en Leverkusen

por Dr. Axel Brader, Dr. Ralf-Rüdiger Jesse

Bayer CropScience AG

Firma Ilegible *Firma Ilegible*

COMO NOTARIO SEXTO DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA CONCIDE CON EL ORIGINAL QUE ME FUERON A LA VISTA
11 ENE 2007
JUAN MANUEL [illegible] OTERO MEDINA
NOTARIO

(ANEXO)

AUTENTICACIÓN NOTARIAL (SOCIEDAD) en donde se certifican la firma anterior del Doctor Axel Bader y del Doctor Ralf-Rüdiger Jesse como

Diego F. Vargas

DIEGO F. VARGAS Z.
TRADUCTOR E INTERPRETE OFICIAL
ESPAÑOL - INGLES – INGLES - ESPAÑOL
RES. 0001 DE ENERO 4 DE 1999
MINISTERIO DE JUSTICIA

Secretarios de Bayer CropScience AG, una sociedad actualmente existente y organizada de acuerdo a las leyes de Alemania y con dirección en Alfred-Nobel-Str. 50, 40789 Monheim, Alemania. Dado y firmado en Leverkusen el 12 de febrero del 2003.

Firma Ilegible
Notario Público *Sello*

Se anexa autenticación notarial en alemán de las firmas anteriores.

Respaldo:

Apostilla expedida por Alemania y certificado el [illegible] de febrero de 2003 bajo el número **482/03**.

Es traducción fiel y completa de la cual se deja copia en esta oficina para su confrontación.

DVZ/ID-4268/WPCL002G/COLO 13549-841-002-0

DIEGO F. VARGAS
TRADUCTOR E INTERPRETE OFICIAL
ESPAÑOL - INGLES – INGLES - ESPAÑOL
RES. 0001 DE ENERO 4 DE 1999
MINISTERIO DE JUSTICIA

COMO NOTARIO SEXTO DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA COINCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA
11 ENE 200[illegible]
JUAN MANUEL SOTERO MEDINA
NOTARIO

COMO NOTARIO SEXTO DEL CIRCULO DE SANTAFE DE BOGOTA, HAGO CONSTAR QUE LA(S) ANTERIOR(ES) FIRMA(S) PUESTA(S) POR

IDENTIFICADO(S) CON C.C. No.(s)

ES(SON) AUTENTICA(S)

SANTAFE DE BOGOTA, 18 MAR 2007

MINISTERIO DE RELACIONES EXTERIORES

2007 MAR 18 P 12:24

JEFE DE LEGALIZACIONES BOGOTA D.C.

208992

COTA FIRMA APARECE EN EL DOCUMENTO DESE MAYOR LAS FUNCIONES INDICADAS

DEMO NOTARIO SEXTO DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA CORRESPONDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA

11 ENE 2007

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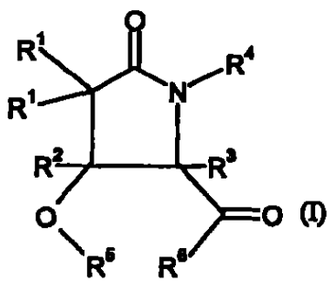
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(54) Title: SUBSTITUTED 2-PYRROLIDONE DERIVATIVES AS FUNGICIDES AND INSECTICIDES



(57) Abstract: The use of a compound of formula (I) or a salt thereof, where the symbols have the meanings given in the description, for the control of phytopathogenic microorganisms of harmful animals.

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SUBSTITUTED 2-PYRROLIDONE DERIVATIVES AS FUNGICIDES AND INSECTICIDES

The invention relates to substituted heterocycles, processes for their preparation and their use for controlling phytopathogenic fungi and harmful insects.

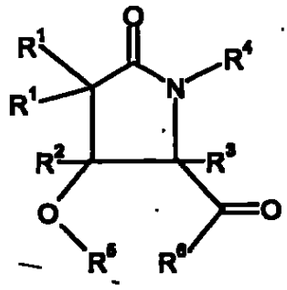
Certain compounds with 5- or 6-membered Lactame rings are known for their fungicidal activity, e.g. Procymidone, Cycloheximide and Capsimycin (see "The Pesticide Manual", 13 ed., C.D.S. Tomlin (Ed.), British Crop Protection Council, Farnham 2003.

However, since modern pesticides must meet a wide range of demands, for example regarding level, duration and spectrum of action, use spectrum, toxicity, combination with other active substances, combination with formulation auxiliaries or synthesis, and since the occurrence of resistances is possible, the development of such substances can never be regarded as concluded, and there is constantly a high demand for novel compounds which are advantageous over the known compounds, at least as far as some aspects are concerned.

It has now surprisingly been found that certain substituted heterocycles are particularly active as fungicides and insecticides.

Such compounds have been partly described in Yakugaku Zasshi, Pharmaceutical Society of Japan 92 (1972) 1507 and in WO-A 04/071382 as proteasom inhibitors. A utility against plant pests and plant pathogens is not disclosed.

Accordingly, in one aspect of the invention there is provided the use of a compound of formula (I) or a salt thereof,



(I)

wherein the symbols have the following meanings:

R^1 is the same or different H, halogen, unsubstituted or substituted (C_1-C_{20})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-

cycloalkenyl, O-R", $S(O)_nR$", SO_2NR_2", COOR", COSR', CSOR', -O-COR", -O-CSR', -CO-R" or $CONR_2$", or the two substituents R^1 together form a 3 to 8 membered ring which is a carbocyclic ring or contains one or two heteroatom units;

R' is the same or different (C_1-C_{12})-alkyl, (C_2-C_{12})-alkenyl, (C_2-C_{12})-alkynyl, (C_3-C_8)-cycloalkyl, (C_3-C_8)-cycloalkenyl, (C_6-C_{12})-aryl, or heterocyclyl, all of which are unsubstituted or substituted;

R" is the same or different H or R';

n is 0, 1 or 2;

R^2 is H, unsubstituted or substituted (C_1-C_8)-alkyl, unsubstituted or substituted (C_2-C_8)-alkenyl, unsubstituted or substituted (C_2-C_8)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubsituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, or unsubstituted or substituted heterocyclyl;

R^3 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubsituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, COOR", CSOR", COSR", -CO-R" or $CONR_2$";

R^4 H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubsituted or substituted (C_3-C_8)-cycloalkenyl, $S(O)_nR'$, COOR', CSOR', COSR', -CO-R', $CONR_2$" or G;

R^5 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubsituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, or unsubstituted or substituted heterocyclyl, SO_2R', COR', COOR', COSR', CSOR', $CONR_2$" or G;

G is $Si[(C_1-C_8)\text{-alkyl}]_x[(CH_2)_r\text{-phenyl-}(CH_3)_s]_y[(O)_v\text{-}((C_1-C_4)\text{-alkylene})\text{-}(O\text{-}(C_1-C_4)\text{-alkylene})_w\text{-}H]_z$

where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2;

R^6 is OR", SR" or NR_2"

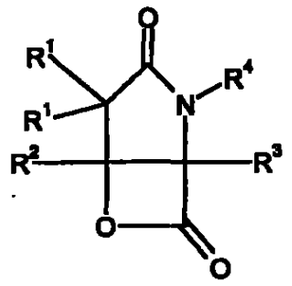
or

R^5 and R^6 together form a bond,

for the control of phytopathogenic microorganisms or harmful animals.

In a further aspect of the invention there is provided a process for controlling phytopathogenic microorganisms and harmful animals, which comprises applying a compound of formula (I) as described above to the phytopathogenic microorganism or harmful animal or their habitat.

In yet a further aspect of the invention there is provided a compound of formula (Ia) or a salt thereof,



(Ia)

wherein the symbols have the following meanings:

R^1 is the same or different H, halogen, unsubstituted or substituted (C_1-C_{20})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, substituted or unsubstituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, O-R", $S(O)_nR$", COOR", CSOR', COSR', -O-COR', -O-CSR', -CO-R", $CONR_2$", SO_2NR_2", or the two substituents R^1 together form a 3 to 8 membered ring which is a carbocyclic ring or contains one or two heteroatom units;

n is 0, 1 or 2;

R' is the same or different (C_1-C_{12})-alkyl, (C_2-C_{12})-alkenyl, (C_2-C_{12})-alkynyl, (C_3-C_8)-cycloalkyl, (C_3-C_8)-cycloalkenyl, (C_6-C_{12})-aryl, or heterocyclyl, all of which are unsubstituted or substituted;

R'' is the same or different H or R';

R^2 is unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, or unsubstituted or substituted heterocyclyl;

R^3 is H, unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, or unsubstituted or substituted heterocyclyl, COOR'', CSOR', COSR', -CO-R' or $CONR_2$'';

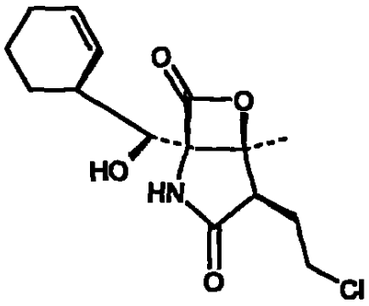
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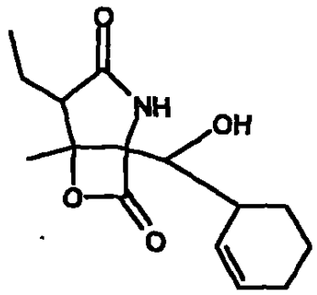
R^4 is H, unsubstituted or substituted (C_1-C_{20})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, $S(O)_tR'$, COOR', CSOR', COSR', -CO-R', $CONR_2$'' or G; and

G is $Si[(C_1\text{-}C_6)\text{-alkyl}]_x[(CH_2)_t\text{-phenyl-}(CH_3)_u]_y[(O)_v\text{-}((C_1\text{-}C_4)\text{-alkylene})\text{-}(O\text{-}(C_1\text{-}C_4)\text{-alkylene})_w\text{-}H]_z$

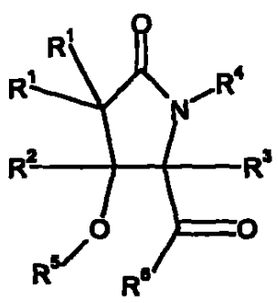
where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2;

with the proviso, that the following compounds are excluded:





In yet a further aspect of the invention there is provided a compound of formula (Ib) or a salt thereof,



(Ib)

wherein the symbols have the following meanings:

R^1 is the same or different H, halogen, unsubstituted or substituted (C_1-C_{20})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, substituted or unsubstituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, O-R", $S(O)_nR$", COOR", CSOR', COSR', -O-COR', -O-CSR', -CO-R" or $CONR_2$", or the two substituents R^1 together form a 3 to 8 membered ring which is a carbocyclic ring or contains one or two heteroatom units;

n is 0, 1 or 2;

R' is the same or different (C_1-C_{12})-alkyl, (C_2-C_{12})-alkenyl, (C_2-C_{12})-alkynyl, (C_3-C_8)-cycloalkyl, (C_3-C_8)-cycloalkenyl, (C_6-C_{12})-aryl, or heterocyclyl, all of which are unsubstituted or substituted;

R" is the same or different H or R';

R^2 is unsubstituted or substituted (C_1-C_3)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-

cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, or unsubstituted or substituted heterocyclyl;

R^3 is H, unsubstituted or substituted (C_1-C_8)-alkyl, unsubstituted or substituted (C_2-C_8)-alkenyl, unsubstituted or substituted (C_2-C_8)-alkynyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, or unsubstituted or substituted heterocyclyl, CSOR', COSR', -CO-R'' or $CONR_2''$;

R^4 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, $S(O)_nR'$, COOR', CSOR', -CO-R', $CON'R_2''$ or G;

R^5 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, SO_2R', COR', COOR', COSR', CSOR', $CONR_2''$ or G;

G is $Si[(C_1$-$C_6)$-alkyl$]_x[(CH_2)_t$-phenyl-$(CH_3)_u]_y[(O)_v$-$((C_1$-$C_4)$-alkylene)-$(O$-$(C_1$-$C_4)$-alkylene$)_w$-$H]_z$,

where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2;

R^6 is OR'', SR'' or NR_2'';

excluding compounds where

R^1=H, R^2=CH_3, R^3=H, R^4=H, C_6H_5, CH_2-C_6H_5, C_2H_5, R^5=H and R^6=NH_2, NHC_6H_5, $NHCH_2C_6H_5$.

Depending inter alia on the nature of substituents, the compounds of the formula (I) can be present as optical isomers or isomer mixtures of varying composition which, if appropriate, can be separated in a customary manner. The present invention provides both the pure isomers and the isomer mixtures, their preparation and use as well as compositions comprising them. However, herein below for the sake of simplicity only compounds of the formula (I) are referred to although

this means both the pure compounds and, if appropriate, also mixtures having varying proportions of isomeric compounds.

Salts for the purposes of the invention are preferably agrochemically acceptable salts of the compounds according to the invention.

Agrochemically acceptable salts of the compounds (I) include acid addition salts of mineral acids, carboxylic acids and sulphonic acids, for example salts of hydrochloric acid, hydrobromic acid, sulphuric acid, phosphoric acid, methanesulphonic acid, ethanesulphonic acid, toluenesulphonic acid, benzenesulphonic acid, naphthalenedisulphonic acid, acetic acid, propionic acid, lactic acid, tartaric acid, malic acid, citric acid, fumaric acid, maleic acid and benzoic acid.

Agrochemically acceptable salts of the compounds (I) also include salts of customary bases, such as for example and preferably alkali metal salts (for example sodium and potassium salts, alkaline earth metal salts (for example calcium and magnesium salts) and ammonium salts derived from ammonia or organic amines having 1 to 16 carbon atoms, such as illustratively and preferably ethylamine, diethylamine, triethylamine, ethyldiisopropylamine, monoethanolamine, diethanolamine, triethanolamine, dicyclohexylamine, dimethylaminoethanol, procaine, dibenzylamine, N-methylmorpholine, dihydroabietylamine, arginine, lysine, ethylenediamine and methylpiperidine.

In the present specification, including the accompanying claims, the aforementioned substituents have the following meanings:

Halogen means fluorine, chlorine, bromine or iodine. The term "halo" before the name of a radical means that this radical is partially or completely halogenated, that is to say, substituted by F, Cl, Br, or I, in any combination, preferably by F or Cl.

Alkyl groups and portions thereof (unless otherwise defined) may be straight-or branched-chain.

The expression "(C_1-C_6)-alkyl" is to be understood as meaning an unbranched or branched hydrocarbon radical having 1, 2, 3, 4, 5 or 6 carbon atoms, such as, for example a methyl, ethyl, propyl, isopropyl, 1-butyl, 2-butyl, 2-methylpropyl or tert-butyl radical.

Alkyl radicals and also in composite groups, unless otherwise defined, preferably have 1 to 4 carbon atoms.

(C_1-C_6)-Haloalkyl means "(C_1-C_6)alkyl" in which one or more hydrogen atoms are replaced by the same number of identical or different halogen atoms, such as monohaloalkyl, perhaloalkyl, CF_3, CHF_2, CH_2F, $CHFCH_3$, CH_2CF_3, CF_2CF_3, CF_2CHF_2, $CHClCH_2F$, CCl_3, $CHCl_2$ or CH_2CH_2Cl.

The expression "(C_1-C_6)-haloalkylene" is to be understood to mean an alkylene group mentioned under the expression "(C_1-C_6)-alkylene", in which one or more hydrogen atoms are replaced by the same number of identical or different halogen atoms.

"(C_1-C_6)Alkoxy" means an alkoxy group whose carbon chain has the meaning given under the expression "(C_1-C_6)alkyl". "Haloalkoxy" is, for example, OCF_3, $OCHF_2$, OCH_2F, OCF_2CF_3, OCH_2CF_3 or OCH_2CH_2Cl.

"(C_2-C_6)Alkenyl" means an unbranched or branched non-cyclic carbon chain having a number of carbon atoms which corresponds to this stated range and which contains at least one double bond which can be located in any position of the respective unsaturated radical. "(C_2-C_6)Alkenyl" accordingly denotes, for example, the vinyl, allyl, 2-methyl-2-propenyl, 2-butenyl, pentenyl, 2-methylpentenyl or the hexenyl group.

"(C_2-C_6)Alkynyl" means an unbranched or branched non-cyclic carbon chain having a number of carbon atoms which corresponds to this stated range and which contains one triple bond which can be located in any position of the respective unsaturated radical. "(C_2-C_6)Alkynyl" accordingly denotes, for example, the propargyl, 1-methyl-2-propynyl, 2-butynyl or 3-butynyl group.

Cycloalkyl groups preferably have from three to seven carbon atoms in the ring and are optionally substituted by halogen, (C_1-C_4)-haloalkyl or (C_1-C_4)-alkyl.

The group "G" $Si[(C_1\text{-}C_6)\text{-alkyl}]_x[(CH_2)_t\text{-phenyl-}(CH_3)_u]_y[(O)_v\text{-}((C_1\text{-}C_4)\text{-alkylene})\text{-}(O\text{-}(C_1\text{-}C_4)\text{-alkylene})_w\text{-}H]_z$, where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2; means for example the $SiMe_3$, $SiEt_3$, $SiMe_2t\text{-}Bu$, $SiMe(t\text{-}Bu)_2$, $Si\text{-}i\text{-}Pr_3$, $Si\text{-}t\text{-}BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ i-Pr, $SiMe_2$i-Pr, $SiMe_2$i-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-i-Pr), $SiPh_2$(O-t-Bu), SitBuPh(OMe), or $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$ group.

"Heterocyclyl" preferably means a saturated, unsaturated or aromatic 3 to 10 membered ring system comprising one or more heteroatoms, preferably from the group consisting of N, O and $S(O)_m$ (m = 0, 1, 2), where at least one carbon atom is present in the ring.

More preferred "heterocyclyl" denotes a thiophene, furan, pyrrole, thiazole, oxazole, imidazole, isothiazole, isoxazole, pyrazole, 1,3,4-oxadiazole, 1,3,4-thiadiazole, 1,3,4-triazole, 1,2,4-oxadiazole, 1,2,4-thiadiazole, 1,2,4-triazole, 1,2,3-triazole, 1,2,3,4-tetrazole, benzo[b]thiophene, benzo[b]furan, indole, benz[c]thiophene, 1,3,-benzodioxole, 1,3-benzodioxane, beno[c]furan, isoindole, benzoxazole, benzothiazole, benzimidazole, benzisoxazole, benzisothiazole, benzopyrazole, benzothiadiazole, benzotriazole, dibenzofuran, dibenzothiophene, carbazole, pyridine, pyrazine, pyrimidine, pyridazine, 1,3,5-triazine, 1,2,4-triazine, 1,2,4,5-tetrazine,

quinoline, isoquinoline, quinoxaline, quinazoline, cinnoline, 1,8-naphthyridine, 1,5-naphthyridine, 1,6-naphthyridine, 1,7-naphthyridine, phthalazine, pyridopyrimidine, purine, pteridine, 4H-quinolizine, morpholine, piperidine, piperazine, pyrroline, pyrrolidine, oxazoline, tetrahydrofuran, tetrahydropyran, isoxazolidine, oxazolidine, thiazoline, thiazolidine, oxirane or oxetane radical.

Particularly preferred "heterocyclyl" means pyrrolyl, imidazolyl, pyrazolyl, 1,3,4-triazolyl, 1,2,4-oxadiazolyl, oxazolyl, tetrazolyl, pyridyl, pyrazinyl, pyrimidinyl, 1,3,5-triazinyl, morpholinyl, piperidinyl, thiophenyl or thiazolyl.

"Substituted" if not otherwise defined in its respective context means, e.g. substituted by one or more, preferably one to three and in the case of halogen up to the maximum number, substituents from the group consisting of halogen, R'''', OR'''', $S(O)_nR''''$, SO_2NR_2'''', NR_2'''', COOR'''', NHCOR'''', NHCOOR'''', G, CN, NO_2, (C_3-C_6)-cycloalkyl, unsubstituted or substituted by halogen and/or (C_1-C_4)-alkyl, (C_6-C_{12})-aryl and/or heterocyclyl, the later two unsubstituted or substituted by one or more substituents from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, NO_2, and CN,

where

n is 0, 1 or 2;

R'''' is H, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_2-C_4)-alkenyl, (C_2-C_4)-haloalkenyl, (C_2-C_4)-alkynyl, (C_2-C_4)-haloalkynyl, (C_3-C_6)-cycloalkyl, (C_3-C_6)-cycloalkenyl, heterocyclyl and (C_6-C_{10})-aryl, which are both unsubstituted or substituted by one to five substituents from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, NO_2, and CN; and

G has the meaning given above.

"Substituted" preferably means substituted by one or more, preferably one to three and in case of halogen up to maximum number, substituents from the group F, Cl, Br, I, R''', OR''', $S(O)_nR'''$, SO_2NR_2''', NR_2''', COOR''', NHCOR''', NHCOOR''', G, CN, NO_2,

where

R''' is H, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_2-C_4)-alkenyl, (C_2-C_4)-haloalkenyl, (C_2-C_4)-alkynyl, (C_2-C_4)-halogalkynyl, (C_3-C_6)-cycloalkyl, (C_3-C_6)-cycloalkenyl, heterocyclyl and (C_6-C_{10})-aryl, of which the last four groups are unsubstituted or substituted by one to five substituents from the group consisting of

halogen, (C_1-C_4)-alkyl, (C_1-C_4)haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, NO_2, and CN;

G is $Si[(C_1-C_8)\text{-alkyl}]_x[(CH_2)_t\text{-phenyl-}(CH_3)_u]_y[(O)_v\text{-}((C_1-C_4)\text{-alkylene})\text{-}(O\text{-}(C_1-C_4)\text{-alkylene})_w\text{-}H]_z$,

where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2;

n is 0, 1 or 2.

More preferred "substituted" means substituted by one or more, preferrably one to three and in case of halogen up to maximum number, substituents from the group F, Cl, Br, R''', OR''', $S(O)_nR'''$, SO_2NR_2''', NR_2''', COOR'", NHCOR'", NHCOOR'"; G, CN and NO_2,

where

R''' is H, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_2-C_4)-haloalkenyl, (C_2-C_4)-alkynyl, (C_2-C_4)-halogalkynyl, (C_3-C_6)-cycloalkyl, (C_3-C_6)-cycloalkenyl, heterocyclyl and (C_6-C_{10})-aryl, of which the last four groups are unsubstituted or substituted by one to four substituents from the group consisting of fluoro, chloro, bromo, (C_1-C_4)-alkyl, (C_1-C_4)haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, NO_2, and CN;

$SiMe_3$, $SiEt_3$, $SiMe_2t\text{-}Bu$, $SiMe(t\text{-}Bu)_2$, $Si\text{-}i\text{-}Pr_3$, $Si\text{-}t\text{-}BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ i-Pr, $SiMe_2$i-Pr, $SiMe_2$i-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-i-Pr), $SiPh_2$(O-t-Bu), Sit-BuPh(OMe), or $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$;

n is 0, 1 or 2.

Particularly preferred "substituted" means substituted by one to three and in the case of halogen up to maximum number substituents from the group fluoro, chloro, R''', OR''', NR_2''', G, NO_2 and CN,

where

R''' is H, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_2-C_4)-haloalkenyl, (C_2-C_4)-alkenyl, (C_2-C_4)-haloalkenyl, (C_2-C_4)-alkynyl, (C_2-C_4)-halogalkynyl, (C_3-C_6)-cycloalkyl, heterocyclyl and phenyl, which are both unsubstituted or substituted by

one to three substituents from the group consisting of fluoro, chloro, (C_1-C_4)-alkyl, trifluoromethyl, difluoromethyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, NO_2, and CN; and

G is $SiMe_3$, $SiEt_3$, $SiMe_2t$-Bu, $SiMe(t\text{-}Bu)_2$, $Si\text{-}i\text{-}Pr_3$, $Si\text{-}t\text{-}BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ i-Pr, $SiMe_2$i-Pr, $SiMe_2$i-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-i-Pr), $SiPh_2$(O-t-Bu), Sit-BuPh(OMe), or $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$;

The symbols in formula (I) preferably have the following meanings:

R^1 is preferably the same or different H, chloro, bromo, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{10})-alkenyl, unsubstituted or substituted (C_2-C_{10})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, OR", COOR" or -CO-R" or the two substituents R^1 together form a 3 to 6 membered ring which is a carbocyclic ring or contains one or two heteroatom units.

R^2 is preferably H, unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted heterocyclyl.

R^3 is preferably H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_6)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, COOR", -CO-R" or $CONR_2$".

R^4 is preferably H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_3-C_{10})-alkenyl, unsubstituted or substituted (C_3-C_{10})-alkynyl, SO_2R', COOR', -COR', $CONR_2$" or G.

R^5 is preferably H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted phenyl, unsubstituted or substituted heterocyclyl, SO_2R', COR', COOR', COSR', CSOR', $CONR_2$" or G.

G is preferably $Si[(C_1\text{-}C_6)\text{-alkyl}]_x[(CH_2)_r\text{-phenyl-}(CH_3)_n]_y[(O)_v\text{-}((C_1\text{-}C_4)\text{-alkylene})\text{-}(O\text{-}(C_1\text{-}C_4)\text{-alkylene})_w\text{-}H]_z$,

where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2.

R^6 is preferably OR", SR" or NR_2"

or

R^5 and R^6 preferably together form a bond.

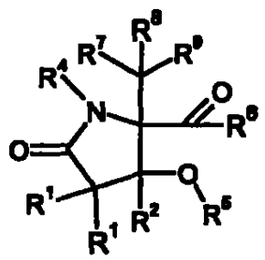
R' is preferably the same or different (C_1-C_{10})-alkyl, (C_2-C_{10})-alkenyl, (C_2-C_{10})-alkynyl, (C_3-C_8)-cycloalkyl, (C_3-C_8)-cycloalkenyl, phenyl, or heterocyclyl, all of which are unsubstituted or substituted.

R" is preferably the same or different and is H or R'.

n is preferably 0, 1 or 2.

Preferred are compounds of formula (I) where all symbols have the preferred meanings and "substituted" has the preferred meanings.

More preferred compounds of formula (I) are compounds of formula (II),



(II),

where the symbols have the following meanings:

R^1 is the same or different H, chloro, bromo, unsubstituted or substituted (C_1-C_{10})-alkyl, unsubstituted or substituted (C_2-C_8)-alkenyl, unsubstituted or substituted (C_2-C_8)-alkynyl, unsubstituted or substituted phenyl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, COOR", OR" or -CO-R" or the two substituents R^1 together form a 3 to 6 membered carbocyclic ring;

R^2 H, unsubstituted or substituted (C_1-C_4)-alkyl, unsubstituted or substituted (C_2-C_4)-alkenyl, unsubstituted or substituted (C_2-C_4)-alkynyl, unsubstituted or substituted (C_3-C_6)-

cycloalkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted heterocyclyl;

R^4 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_3-C_6)-alkenyl, unsubstituted or substituted (C_3-C_6)-alkynyl, SO_2R', COOR', -COR' or G;

R^5 is H, unsubstituted or substituted (C_1-C_8)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, SO_2R', COOR', -COR', $CONR_2''$, unsubstituted or substituted phenyl, unsubstituted or substituted heterocyclyl, or G;

G is $Si[(C_1\text{-}C_4)\text{-alkyl}]_x[(CH_2)_t\text{-phenyl-}(CH_3)_u]_y[(O)_v\text{-}((C_1\text{-}C_4)\text{-alkylene})\text{-}(O\text{-}(C_1\text{-}C_4)\text{-alkylene})_w\text{-}H]_z$,

where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2;

R^6 is OR", SR" or $NR_2"$;

or

R^5 and R^6 together form a bond;

R^7 is H, fluoro, chloro, O-R'', SR'', $NR"_2$, -O-COR', -S-COR', -O-CSR', $-O-SO_2R'$, -O-COOR', -O-CSOR', $-O-CONR_2''$, NO_2, or CN;

R^8 is H, unsubstituted or substituted (C_1-C_4)-alkyl, unsubstituted or substituted (C_2-C_4)-alkenyl, unsubstituted or substituted (C_2-C_4)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted heterocyclyl;

or

R^7 and R^8 are together =O or =S;

R^9 is H, halogen, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{10})-alkenyl, unsubstituted or substituted (C_2-C_{10})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, O-R', or SR';

or

R^8 and R^9 together form a 3 to 8 membered ring which is a carbocyclic ring or contains one or two heteroatom units,

R' is the same or different (C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, (C_3-C_8)-cycloalkyl, phenyl, or heterocyclyl, all of which are unsubstituted or substituted; and

R'' is the same or different H or R';

G $SiMe_3$, $SiEt_3$, $SiMe_2$t-Bu, $SiMe(t\text{-}Bu)_2$, Si-i-Pr_3, Si-t-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ i-Pr, $SiMe_2$i-Pr, $SiMe_2$i-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-i-Pr), $SiPh_2$(O-t-Bu), Sit-BuPh(OMe), or $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$;

n is 0, 1 or 2.

Preferred are compounds of formula (II) in which "substituted" has the preferred meanings. More preferred are compounds of formula (II) in which "substituted" has the more preferred meanings.

Particularly preferred are compounds of formula (II) in which the symbols have the following meanings:

R^1 is particularly preferred the same or different H, chloro, bromo, (C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, phenyl, wherein the last four groups are unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2, and CN; heterocyclyl, unsubstituted or substituted with fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2, or CN, (C_3-C_6)-cycloalkyl, (C_3-C_6)-cycloalkenyl, both unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, trifluoromethyl, methoxy, NO_2, and CN, or the two substituents R^1 together form a 3 to 6 membered carbocyclic ring.

R^2 is particularly preferred H, methyl, ethyl, propyl, isopropyl, allyl, propargyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2, and CN, or heterocyclyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, trifluoromethyl, methoxy, NO_2, and CN.

R^4 is particularly preferred H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_3-C_6)-alkynyl, SO_2R', COOR', -COR', $CONR_2''$ or G.

R^5 is particularly preferred H, (C_1-C_6)-alkyl, (C_2-C_6)-alkenyl, (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, SO_2R', COOR', -COR', $CONR_2''$, or G.

R^6 is particularly preferred OR", SR" or $NR_2"$,

or particularly preferred

R^5 and R^6 together form a bond.

R^7 is particulary preferred hydroxyl, mercapto, SCH_3, fluoro, chloro, bromo, methyl, ethyl, methoxy, trifluoromethoxy, ethoxy, -O-SO_2R', -O-COOR', -O-$CONR_2''$, CN, NR" or O-G.

R^8 is particularly preferred H, unsubstituted or substituted (C_1-C_4)-alkyl, unsubstituted or substituted (C_2-C_4)-alkenyl, unsubstituted or substituted (C_2-C_4)-alkynyl, unsubstituted or substituted (C_3-C_6)cycloalkyl, phenyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2 and CN, heterocyclyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2 and CN;

or particularly preferred

R^7 and R^8 are together =O or =S.

R^9 is particularly preferred H, halogen, unsubstituted or substituted (C_1-C_4)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, propargyl, unsubstituted or substituted (C_6-C_{10})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_6)-cycloalkenyl;

or particularly preferred

R^8 and R^9 together form a 3 to 6 membered ring which is a carbocyclic ring or contains one or two heteroatom units.

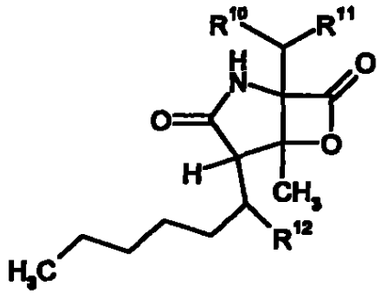
G is particularly preferred $SiMe_3$, $SiEt_3$, $SiMe_2t$-Bu, $SiMe(t\text{-}Bu)_2$, $Si\text{-}i\text{-}Pr_3$, $Si\text{-}t\text{-}BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ i-Pr, $SiMe_2$i-Pr, $SiMe_2$i-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-i-Pr), $SiPh_2$(O-t-Bu), Sit-BuPh(OMe), or $SiMe_2$(O-C_2H_4-OMe).

R' is particulary preferred the same or different (C_1-C_6)-alkyl, (C_2-C_4)-alkenyl, (C_2-C_4)-alkynyl, (C_3-C_6)-cycloalkyl, phenyl, or heterocyclyl, all of which are unsubstituted or substituted.

R" is particularly preferred the same or different H or R'.

Particulary preferred are compounds of formula (II) in which all the symbols and the term "substituted" have the particulary preferred meanings.

Further particulary preferred are compounds of formula (III),



(III),

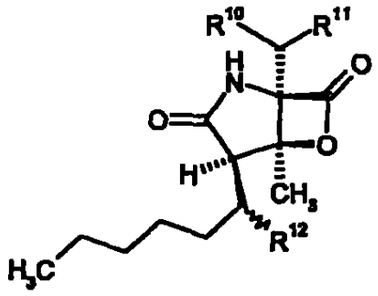
wherein

R^{10} represents hydrogen or hydroxy,

R^{11} represents cyclohexyl or cyclohex-2-enyl,

R^{12} represents hydrogen or hydroxy,

Further particularly preferred are compounds according to formula (IIIa)



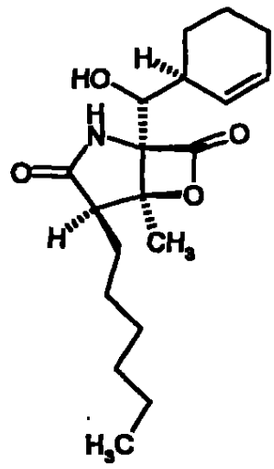
(IIIa),

wherein

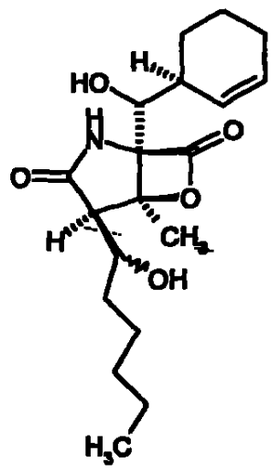
R^{10}, R^{11} and R^{12} have the meaning described above.

Further particulary preferred are the following to compounds according to formula (I),

(1R,4R,5S)-1-[(S)-(1S)-2-cyclohexen-1-yl(hydroxy)methyl]-4-hexyl-5-methyl-6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione

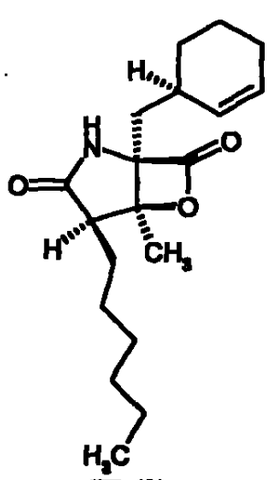


(1R,4R,5S)-1-[(S)-(1S)-2-cyclohexen-1-yl(hydroxy)methyl]-4-[1-hydroxy-hexyl]-5-methyl-6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione

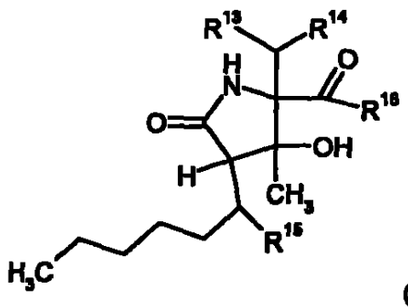


and

(1R,4R,5S)-1-[(1R)-2-cyclohexen-1-ylmethyl]-4-hexyl-5-methyl-6-oxa-2-aza-bicyclo[3.2.0]-heptane-3,7-dione



In another particulary preferred embodiment, the present invention relates to compounds according to formula



(IIIb),

wherein

R^{13} represents hydrogen or hydroxy,

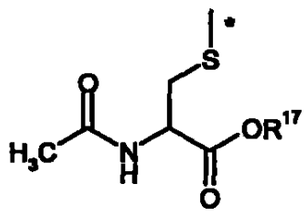
R^{14} represents cyclohexyl or cyclohex-2-enyl,

wherein cyclohexyl can be substituted with 0 to 2 hydroxy groups,

R^{15} represents hydrogen or hydroxy,

and

R^{16} represents hydroxy or a substituent of the formula



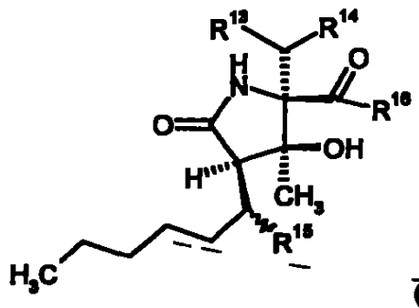
wherein

R^{17} represents hydrogen or methyl,

and

* represents the connection position to the molecule.

Further particulary preferred compounds according to formula



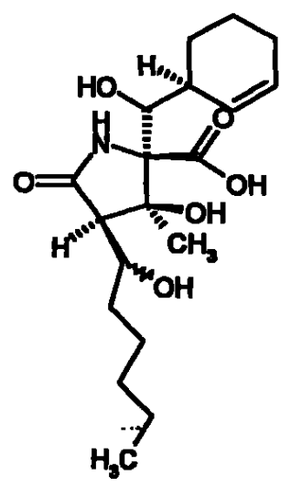
(IIIb),

wherein

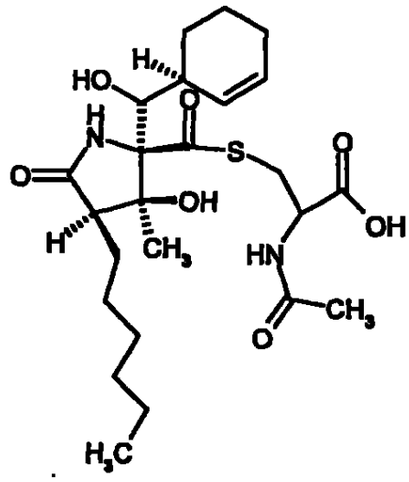
R^{13}, R^{14}, R^{15} and R^{16} have the meaning described above.

Further particularly preferred are compounds according to formula (III), such as

(3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-yl(hydroxy)methyl]-3-hydroxy-4-[1-hydroxy-hexyl]-3-methyl-5-oxo-D-proline

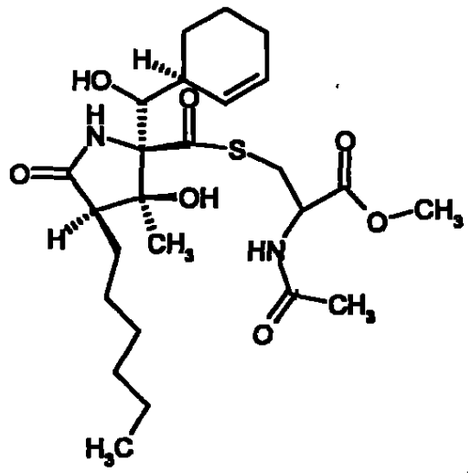


N-acetyl-S-({(2R,3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-yl(hydroxy)methyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinyl}carbonyl)cysteine



and

methyl N-acetyl-S-({(2R,3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-yl(hydroxy)methyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinyl}carbonyl)cysteinate



In the compounds of formula (Ia) the symbols and indices preferably have the following meanings:

R^1 is preferably the same or different H, chloro, bromo, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{10})-alkenyl, unsubstituted or substituted (C_2-C_{10})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_6)-cycloalkenyl, OR", COOR" or -CO-R" or the two substituents R^1 together form a 3 to 6 membered ring which is a carbocyclic ring or contains one or two heteroatom units.

R^2 is preferably unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-

C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted phenyl, or unsubstituted or substituted heterocyclyl.

R^3 is preferably H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, COOR", -CO-R" or $CONR_2$".

R^4 is preferably H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{10})-alkenyl, unsubstituted or substituted (C_2-C_{10})-alkynyl, SO_2R', COOR', -COR', $CONR_2$" or G.

G is $Si[(C_1$-$C_6)$-alkyl$]_x[(CH_2)_t$-phenyl-$(CH_3)_u]_y[(O)_v$-$((C_1$-$C_4)$-alkylene)-$(O$-$(C_1$-$C_4)$-alkylene$)_w$-$H]_z$

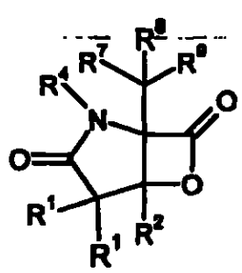
where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2.

R' is preferably the same or different (C_1-C_{10})-alkyl, (C_2-C_{10})-alkenyl, (C_2-C_{10})-alkynyl, (C_3-C_8)-cycloalkyl, phenyl, or heterocyclyl, all of which are unsubstituted or is substituted.

R" is prefereably the same or different and is H or R'.

Preferred are compounds of formula (Ia) where all symbols have the preferred meanings and "substituted" has the preferred meanings.

More preferred compounds of formula (Ia) are compounds of formula (IIa),



(IIa),

where the symbols have the following meanings:

R^1 is the same or different H, chloro, bromo, unsubstituted or substituted (C_1-C_{10})-alkyl, unsubstituted or substituted (C_2-C_8)-alkenyl, unsubstituted or substituted (C_2-C_8)-alkynyl, unsubstituted or substituted phenyl, unsubstituted or substituted heterocyclyl,

unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_6)-cycloalkenyl, COOR'', OR'' or -CO-R'' or the two substituents R^1 together form a 3 to 6 membered carbocyclic ring;

R^2 unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_4)-alkenyl, unsubstituted or substituted (C_2-C_4)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted heterocyclyl;

R^4 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_3-C_6)-alkenyl, unsubstituted or substituted (C_3-C_6)-alkynyl, SO_2R', COOR', -COR', or $CONR_2''$, or G;

G is $Si[(C_1\text{-}C_6)\text{-alkyl}]_x[(CH_2)_t\text{-phenyl-}(CH_3)_u]_y[(O)_v\text{-}((C_1\text{-}C_4)\text{-alkylene})\text{-}(O\text{-}(C_1\text{-}C_4)\text{-alkylene})_w\text{-}H]_z$,

where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2;

R^7 is H, fluoro, chloro, O-R'', SR'', NR''_2, -O-COR', -S-COR', -O-CSR', $-O\text{-}SO_2R'$, -O-COOR', -O-CSOR', $-O\text{-}CONR_2''$, NO_2, or CN;

R^8 is H, unsubstituted or substituted (C_1-C_4)-alkyl, unsubstituted or substituted (C_2-C_4)-alkenyl, unsubstituted or substituted (C_2-C_4)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted heterocyclyl;

or

R^7 and R^8 are together =O or =S;

R^9 is H, halogen, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{10})-alkenyl, unsubstituted or substituted (C_2-C_{10})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, O-R', or SR';

or

R^8 and R^9 together form a 3 to 8 membered ring which is a carbocyclic ring or contains one or two heteroatom units,

R' is the same or different (C_1-C_8)-alkyl, (C_2-C_6)-alkenyl, (C_2-C_6)-alkynyl, (C_3-C_6)-cycloalkyl, phenyl, or heterocyclyl, all of which are unsubstituted or substituted; and

R" is the same or different H or R"; and

G is $SiMe_3$, $SiEt_3$, $SiMe_2t$-Bu, $SiMe(t\text{-}Bu)_2$, Si-i-Pr_3, Si-t-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ i-Pr, $SiMe_2$i-Pr, $SiMe_2$i-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-i-Pr), $SiPh_2$(O-t-Bu), Sit-BuPh(OMe), or $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$.

Preferred are compounds of formula (IIa) in which "substituted" has the preferred meanings. More preferred are compounds of formula (IIa) in which "substituted" has the more preferred meanings.

Particularly preferred are compounds of formula (II) in which the symbols have the following meanings:

R^1 is particularly preferred the same or different H, chloro, bromo, (C_1-C_8)-alkyl, (C_2-C_6)-alkenyl, (C_2-C_4)-alkynyl, phenyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2, and CN, heterocyclyl, unsubstituted or substituted with fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2, or CN, (C_3-C_6)-cycloalkyl, (C_3-C_8)-cycloalkenyl, both unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, trifluoromethyl, methoxy, NO_2, and CN, or the two substituents R^1 together form a 3 to 6 membered carbocyclic ring.

R^2 is particularly preferred methyl, ethyl, propyl, isopropyl, allyl, propargyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2, and CN, or heterocyclyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, trifluoromethyl, methoxy, NO_2, and CN.

R^4 is particularly preferred H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_3-C_{10})-alkenyl, unsubstituted or substituted (C_3-C_6)-alkynyl, SO_2R', COOR', -COR', $CONR_2$'' or G.

R^7 is particulary preferred hydroxyl, mercapto, SCH_3, fluoro, chloro, bromo, methyl, ethyl, methoxy, trifluoromethoxy, ethoxy, -O-SO_2R', -O-COOR', -O-$CONR_2$'', CN, NR_2" or O-G.

R^8 is particularly preferred H, unsubstituted or substituted (C_1-C_4)-alkyl, unsubstituted or substituted (C_2-C_4)-alkenyl, unsubstituted or substituted (C_2-C_4)-alkynyl, unsubstituted or substituted (C_3-C_6)cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, phenyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2 and CN, heterocyclyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2 and CN;

or particularly preferred

R^7 and R^8 are together =O or =S.

R^9 is particularly preferred H, halogen, unsubstituted or substituted (C_1-C_8)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, propargyl, unsubstituted or substituted (C_6-C_{10})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_6)-cycloalkenyl;

or particularly preferred

R^8 and R^9 together form a 3 to 6 membered ring which is a carbocyclic ring or contains one or two heteroatom units.

G is particularly preferred $SiMe_3$, $SiEt_3$, $SiMe_2$t-Bu, $SiMe(t\text{-}Bu)_2$, Si-i-Pr_3, Si-t-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ i-Pr, $SiMe_2$i-Pr, $SiMe_2$i-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-i-Pr), $SiPh_2$(O-t-Bu), Sit-BuPh(OMe), or $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$.

R' is particulary preferred the same or different (C_1-C_6)-alkyl, (C_2-C_4)-alkenyl, (C_2-C_4)-alkynyl, (C_3-C_6)-cycloalkyl, phenyl, or heterocyclyl, all of which are unsubstituted or substituted.

R" is particularly preferred the same or different H or R'

Particulary preferred are compounds of formula (IIa) in which all the symbols and the term "substituted" have the particulary preferred meanings.

In the formula (Ib) the symbols and indices preferably have the following meanings:

R^1 is preferably the same or different H, chloro, bromo, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{10})-alkenyl, unsubstituted or substituted (C_2-C_{10})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_6)-cycloalkenyl, OR", COOR" or -CO-R" or the two substituents R^1 together form a 3 to 6 membered ring which is a carbocyclic ring or contains one or two heteroatom units.

R^2 is preferably H, unsubstituted or substituted (C_1-C_5)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted heterocyclyl.

R^3 is preferably H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, -CO-R" or $CONR_2$".

R^4 is preferably H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{10})-alkenyl, unsubstituted or substituted (C_2-C_{10})-alkynyl, SO_2R', COOR', -COR', $CONR_2$" or G.

R^5 is preferably H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted phenyl, unsubstituted or substituted heterocyclyl, SO_2R', COR', COOR', COSR', CSOR', $CONR_2$" or G.

G is $Si[(C_1$-$C_6)$-alkyl$]_x[(CH_2)_t$-phenyl-$(CH_3)_u]_y[(O)_v$-$((C_1$-$C_4)$-alkylene$)$-$(O$-$(C_1$-$C_4)$-alkylene$)_w$-$H]_z$

where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2.

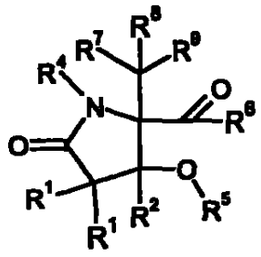
R^6 is preferably OR", SR" or NR_2".

R' is preferably the same or different (C_1-C_{10})-alkyl, (C_2-C_{10})-alkenyl, (C_2-C_{10})-alkynyl, (C_3-C_6)-cycloalkyl, phenyl, or heterocyclyl, all of which are unsubstituted or is substituted.

R" is preferably the same or different and is H or R'.

Preferred are compounds of formula (Ib) where all symbols have the preferred meanings and "substituted" has the preferred meanings.

More preferred compounds of formula (Ib) are compounds of formula (IIb),



(IIb),

where the symbols have the following meanings:

R^1 is the same or different H, chloro, bromo, unsubstituted or substituted (C_1-C_{10})-alkyl, unsubstituted or substituted (C_2-C_8)-alkenyl, unsubstituted or substituted (C_2-C_8)-alkynyl, unsubstituted or substituted phenyl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, COOR', OR" or -CO-R' or the two substituents R^1 together form a 3 to 6 membered carbocyclic ring;

R^2 H, unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_4)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted heterocyclyl;

R^4 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_3-C_6)-alkenyl, unsubstituted or substituted (C_3-C_6)-alkynyl, SO_2R', COOR', -COR', $CONR_2''$, or G;

R^5 is H, unsubstituted or substituted (C_1-C_8)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, SO_2R', COOR', -COR', $CONR_2''$, unsubstituted or substituted phenyl, unsubstituted or substituted heterocyclyl, or G;

G is $Si[(C_1\text{-}C_6)\text{-alkyl}]_x[(CH_2)_r\text{-phenyl-}(CH_3)_u]_y[(O)_v\text{-}((C_1\text{-}C_4)\text{-alkylene})\text{-}(O\text{-}(C_1\text{-}C_4)\text{-alkylene})_w\text{-}H]_z$

where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2;

R^6 is OR'', SR'' or NR_2'';

R^7 is H, fluoro, chloro, O-R'', SR'', -O-COR', -S-COR', -O-CSR', $-O-SO_2R'$, NR_2'', -O-COOR', -O-CSOR', $-O-CONR_2''$, NO_2 or CN;

R^8 is H, unsubstituted or substituted (C_1-C_4)-alkyl, unsubstituted or substituted (C_2-C_4)-alkenyl, unsubstituted or substituted (C_2-C_4)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted heterocyclyl;

or

R^7 and R^8 are together =O or =S;

R^9 is H, halogen, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{10})-alkenyl, unsubstituted or substituted (C_2-C_{10})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, O-R', or SR',

provided that if R^7 and R^8 together are =O, R^9 is not OR';

or

R^8 and R^9 together form a 3 to 8 membered ring which is a carbocyclic ring or contains one or two heteroatom units,

R' is the same or different (C_1-C_8)-alkyl, (C_2-C_6)-alkenyl, (C_2-C_6)-alkynyl, (C_3-C_6)-cycloalkyl, phenyl, or heterocyclyl, all of which are unsubstituted or substituted; and

R'' is the same or different H or R'';

G is $SiMe_3$, $SiEt_3$, $SiMe_2t$-Bu, $SiMe(t\text{-}Bu)_2$, Si-i-Pr_3, Si-t-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ i-Pr, $SiMe_2$i-Pr, $SiMe_2$i-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-i-Pr), $SiPh_2$(O-t-Bu), Sit-BuPh(OMe), or $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$;

n is 0, 1 or 2.

Preferred are compounds of formula (IIb) in which "substituted" has the preferred meanings. More preferred are compounds of formula (IIb) in which "substituted" has the more preferred meanings.

Particularly preferred are compounds of formula (IIb) in which the symbols have the following meanings:

R^1 is particularly preferred the same or different H, chloro, bromo, (C_1-C_8)-alkyl, (C_2-C_6)-alkenyl, (C_2-C_8)-alkynyl, phenyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2, and CN, heterocyclyl, unsubstituted or substituted with fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2, or CN, (C_3-C_6)-cycloalkyl, (C_3-C_8)-cycloalkenyl, both unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, trifluoromethyl, methoxy, NO_2, and CN, or the two substituents R^1 together form a 3 to 6 membered carbocyclic ring.

R^2 is particularly preferred H, methyl, ethyl, propyl, isopropyl, allyl, propargyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2, and CN, or heterocyclyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, trifluoromethyl, methoxy, NO_2, and CN.

R^4 is particularly preferred H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_3-C_6)-alkenyl, unsubstituted or substituted (C_3-C_6)-alkynyl, SO_2R', COOR', -COR'', $CONR_2''$ or G.

R^5 is particularly preferred H, (C_1-C_6)-alkyl, (C_2-C_6)-alkenyl, (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, SO_2R', COOR', -COR'', $CONR_2''$, or G.

R^6 is particularly preferred OR'', SR'' or NR_2'',

R^7 is particulary preferred hydroxyl, mercapto, SCH_3, fluoro, chloro, bromo, methyl, ethyl, methoxy, trifluoromethoxy, ethoxy, -O-SO_2R', -O-COOR', -O-$CONR_2''$, CN, NR_2'' or O-G.

R^8 is particularly preferred H, unsubstituted or substituted (C_1-C_4)-alkyl, unsubstituted or substituted (C_2-C_4)-alkenyl, unsubstituted or substituted (C_2-C_4)-alkynyl, unsubstituted or substituted (C_3-C_6)cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, phenyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl,e thyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2 and CN, heterocyclyl, unsubstituted or substituted with one to three substituents from

the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2 and CN;

or particularly preferred

R^7 and R^8 are together =O or =S.

R^9 is particularly preferred H, halogen, unsubstituted or substituted (C_1-C_8)-alkyl, unsubstituted or substituted (C_2-C_8)-alkenyl, propargyl, unsubstituted or substituted (C_6-C_{10})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_6)-cycloalkenyl;

or particularly preferred

R^8 and R^9 together form a 3 to 6 membered ring which is a carbocyclic ring or contains one or two heteroatom units.

G is particularly preferred $SiMe_3$, $SiEt_3$, $SiMe_2t$-Bu, $SiMe(t\text{-}Bu)_2$, Si-i-Pr_3, Si-t-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ i-Pr, $SiMe_2$i-Pr, $SiMe_2$i-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-i-Pr), $SiPh_2$(O-t-Bu), Sit-BuPh(OMe), or $SiMe_2$(O-C_2H_4-OMe);

R' is particulary preferred the same or different (C_1-C_6)-alkyl, (C_2-C_4)-alkenyl, (C_2-C_4)-alkynyl, (C_3-C_6)-cycloalkyl, phenyl, or heterocyclyl, all of which are unsubstituted or substituted.

R" is particularly preferred the same or different H or R'

Particulary preferred are compounds of formula (IIb) in which all the symbols and the term "substituted" have the particulary preferred meanings.

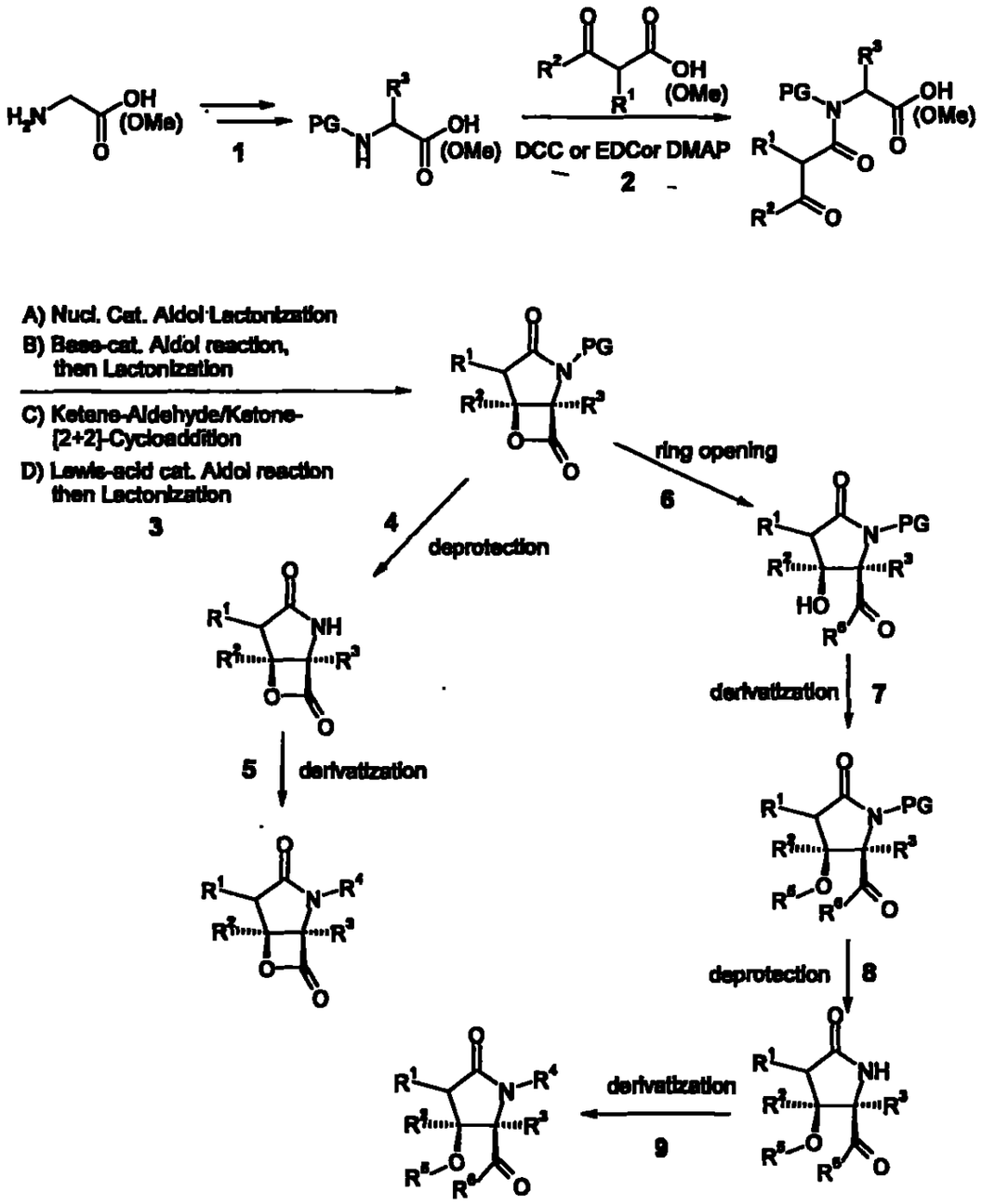
The compounds according to the invention are prepared by methods which are known per se from the literature, as described in standard works on organic synthesis, for example Houben.-Weyl, Methoden der Organischen Chemie [Methods in Organic Chemistry], Georg-Thieme-Verlag, Stuttgart.

The preparation is carried out under reaction conditions which are known and suitable for the abovementioned reactions. Other variants which are known per se, but not illustrated here in greater detail, may also be used.

If desired, the starting materials may also be formed in situ, in such a way that they are not isolated from the reaction mixture but immediately reacted further to give the compounds of the formula (I).

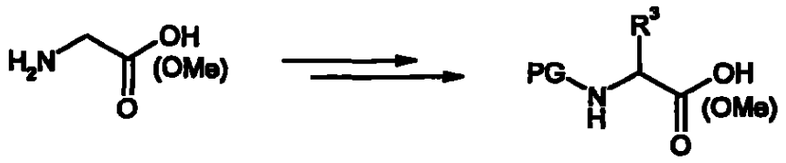
In particular compounds of formula (I) can be prepared according to the following processes A to D:

Process A



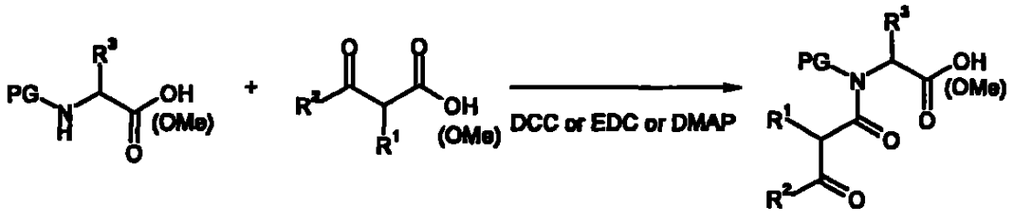
1

Following well established procedures known in the literature glycin or its methyl ester is converted into derivatized amino acid after protecting the free amine (e.g. D. Enders, Helv. Chim Acta 85 (2002) 3657-3677). R^3 is introduced this way.



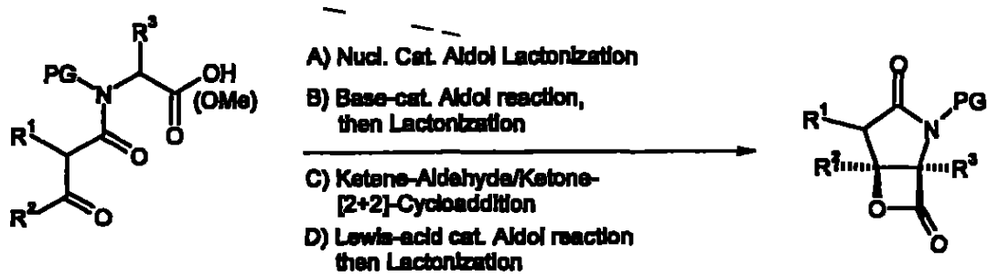
2

The protected amino acids is acylated by substituted beta-keto acids or their esters bearing R^1 and R^2. The acylation is performed by using dicyclohexylcarbodiimide (DCC), 1-Ethyl-3-(3-Dimethyl-aminopropyl)carbodiimide (EDC) or 4-dimethylaminopyridine (DMAP).



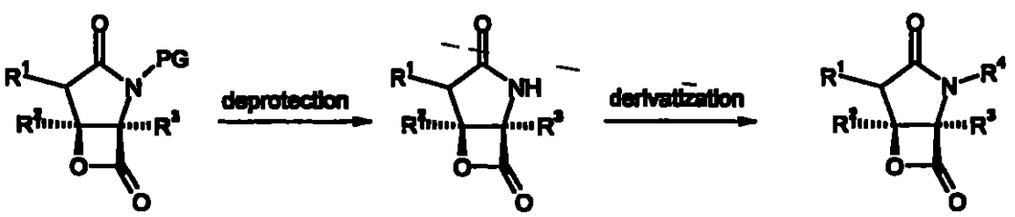
3

Key step of the route is the lactonization. It is performed either as a nucleophilic catalysed aldol lactonization (method A) described by Romo et al. (G.S, Cortez, R.L. Tennyson, D. Romo *J. Am. Chem. Soc.* 2001, *123*, 7945) or as a standard base catalysed aldol reaction (method B) with a following lactonization (E. J. Corey et. al., *Angew. Chem.* 1998, *110*, 1784). Furthermore the lactone can be obtained by using a ketene aldehyde [2+2]-cycloaddition (method C, C. Zhu, X. Shen, S.G. Nelson *J. Am. Chem. Soc.* 2004, *126*, 5352). Lewis-acid catalyzed Aldol reaction with a following lactonization is a further possible method (method D). Methodologies for the catalytic aldol reaction with ketones have been reported for non-stereocontrolled reactions (e.g. Kobayashi, S. et al. *Chem. Lett.* 1988, 1491; Chen, J.et al. *J. Org. Chem.* 1988, *63*, 9739) and for enantioselective aldol reactions (Denmark, S. E.; Fan, Y. *J. Am. Chem. Soc.* 2002, *124*, 4233; Oisaki, K.et al. *J. Am. Chem. Soc.* 2003, *125*, 5644).



4 + 5

Compounds of formula (Ia) are synthesized following known literature procedures. The nitrogen is deprotected and derivatized with R^4 if needed.



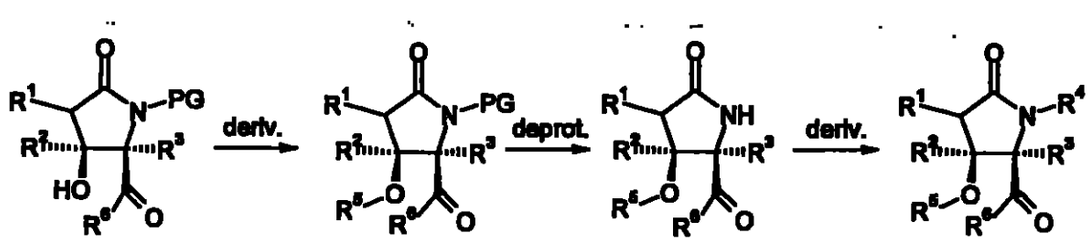
5 6

Compounds of formula (I) are synthesized following known literature procedures. In the first step the lactone ring is cleaved according to methods known in the literature. R^6 is introduced in the molecule.



10 7 + 8 + 9

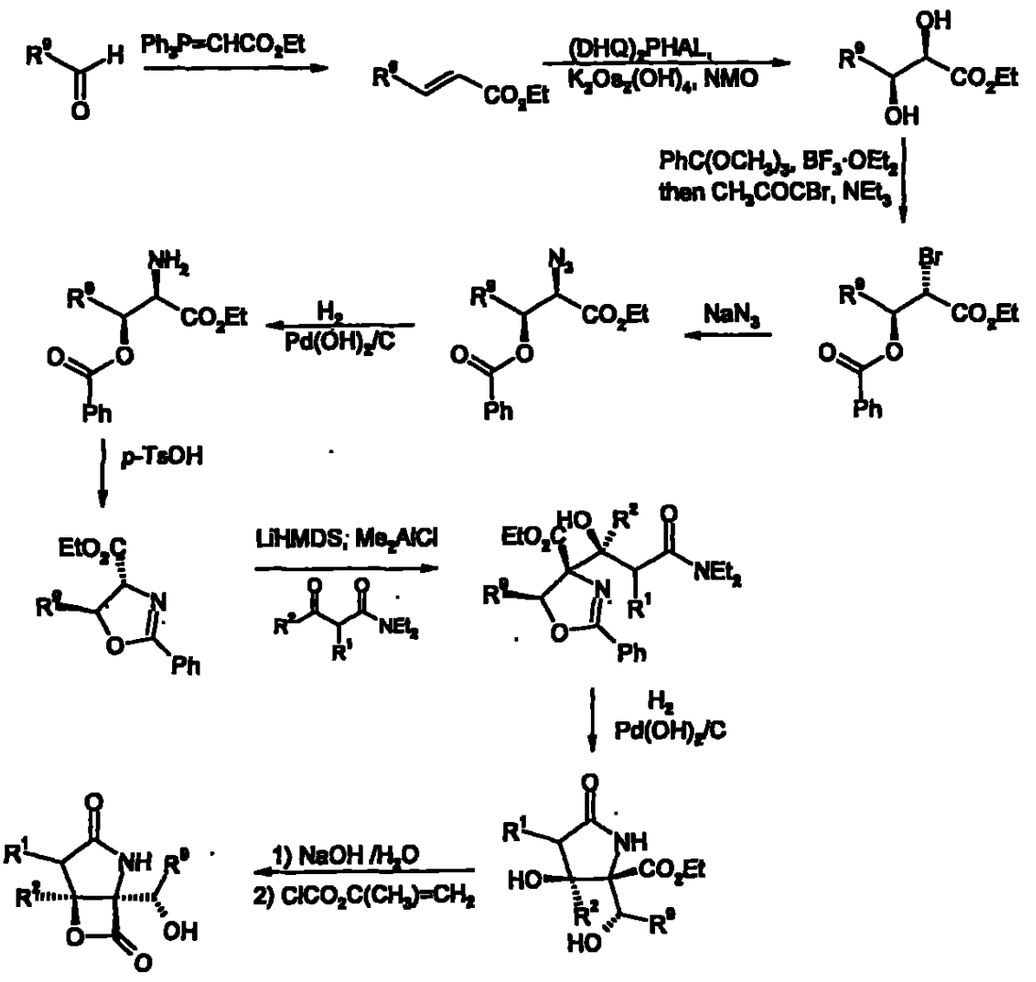
After derivatization of the free OH to introduce R^5 the nitrogen is deprotected and derivatized with R^4 if needed.



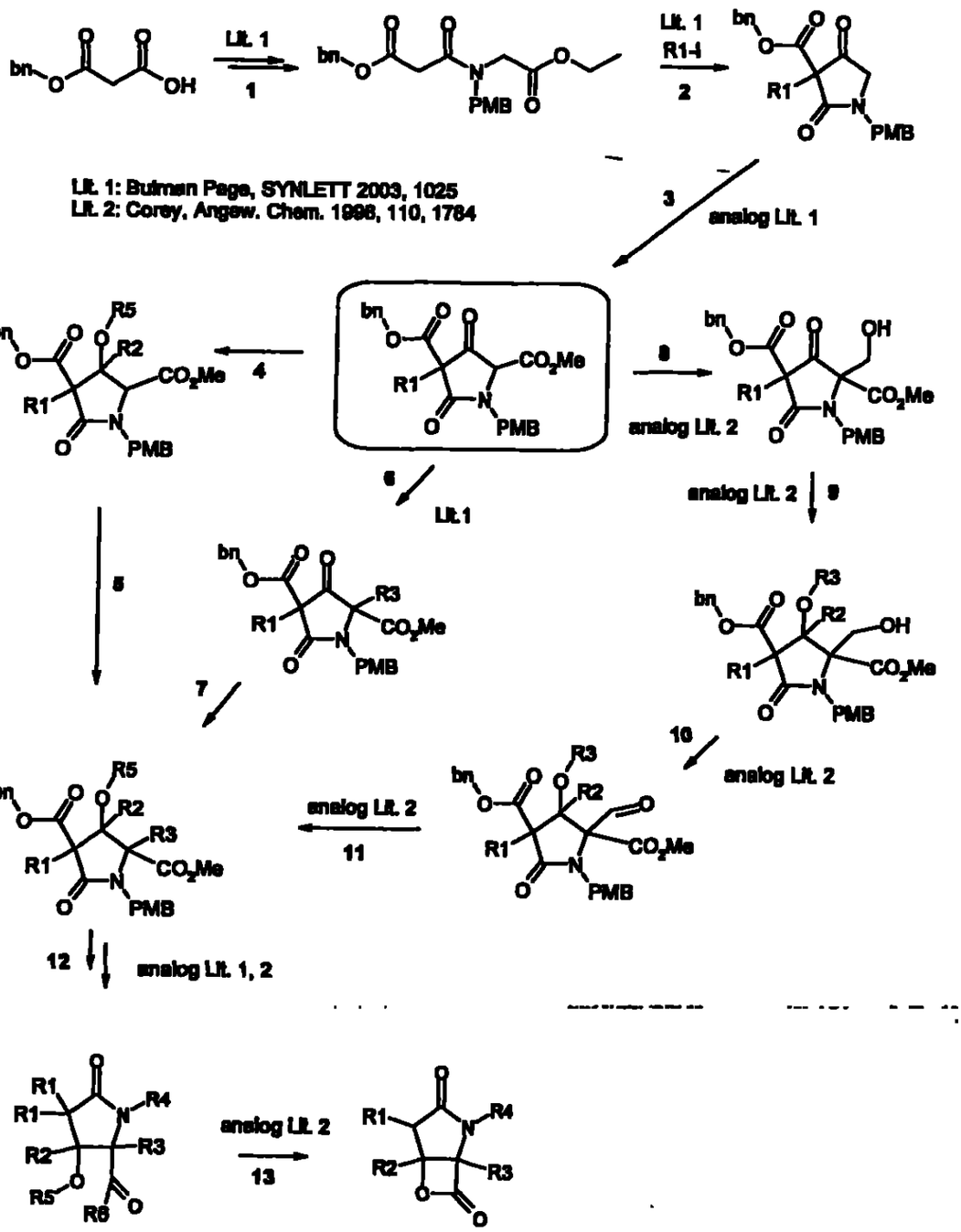
Process B

Compounds of of formula (II) are synthesized following a literature procedure (F. Souci, L. Grenier, M.L. Behnke, A.T. Destree, T.A. McCormack, J. Adams, L. Plamondon, *J. Am. Chem. Soc.* 1999, *121*, 9967) via a multistep synthesis as shown in the following scheme.

This route can be performed to introduce all stereogenic centers with the required configuration.



Process C

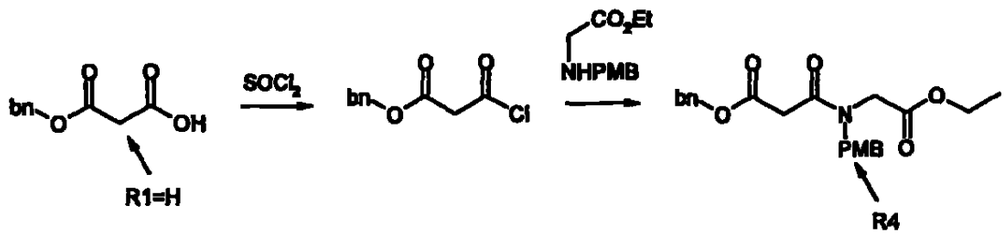

Lit. 1
1
Lit. 1
R1-I
2
Lit. 1: Bulman Page, SYNLETT 2003, 1025
Lit. 2: Corey, Angew. Chem. 1998, 110, 1784
3
analog Lit. 1
4
8
analog Lit. 2
6
Lit.1
analog Lit. 2
9
5
7
10
analog Lit. 2
analog Lit. 2
11
12
analog Lit. 1, 2
analog Lit. 2
13

1

Following the literature procedure [1] monobenzyl malonate is converted into the acid chloride und subsequently treated with N-(p-methoxybenzyl)glycine ethyl ester.

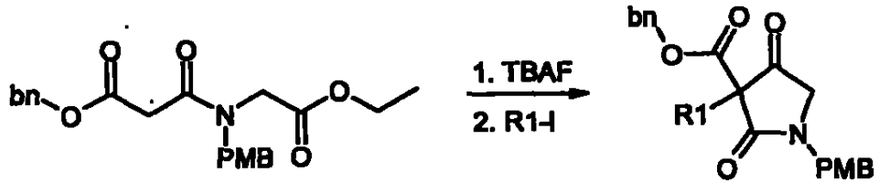
R^1 = H, R^4 = pmb

Possible variations (not published): R^1 = Aryl, Alkyl; R^4 = Aryl, Alkyl



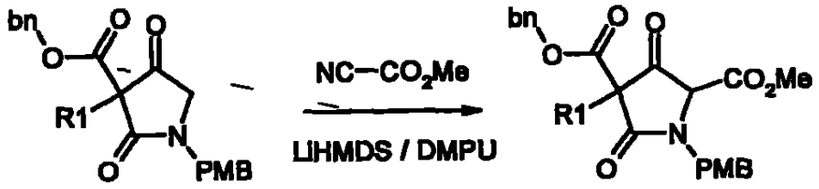
2

Cyclisation is induced by tetrabutylammoniumfluoride, alkylations (introduction of R^1) are performed using alkyl-, benzyl- or allyl iodides [1].



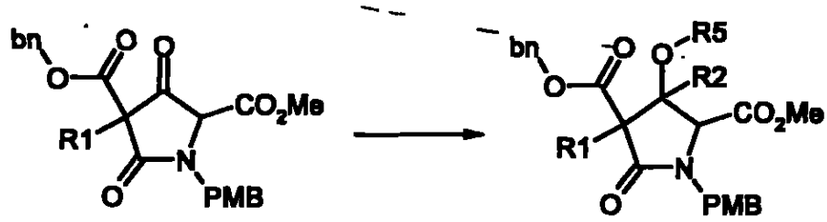
3

LHMDS (Lithiumhexamethyldisilazid) and DMPU in THF are employed for deprotonation, methyl cyanoformate for carboxylation [1].



4

Ketone reduction can be performed analog [2] using $NaBH(OAc)_3$ ($R^5 = R^2 = H$). Introduction of substituents R_2 (e.g. alkyl, ally, aryl) may be performed by addition of a suitable organometallic reagent (e.g. Grignard).

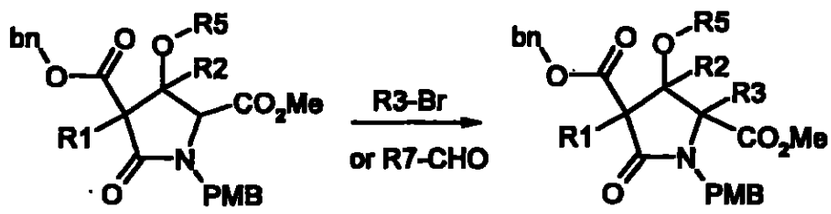


5

5

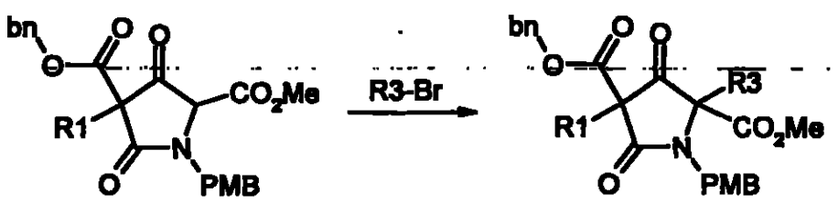
After O-protection (R^5 = silyl, benzyl) alkyls and aldehydes can be added.

(R^3 = alkyl, allyl, benzyl or R^7 = alkyl, allyl, benzyl, aryl, R^8 = OH)



6

According to [1] allyl bromides react readily.



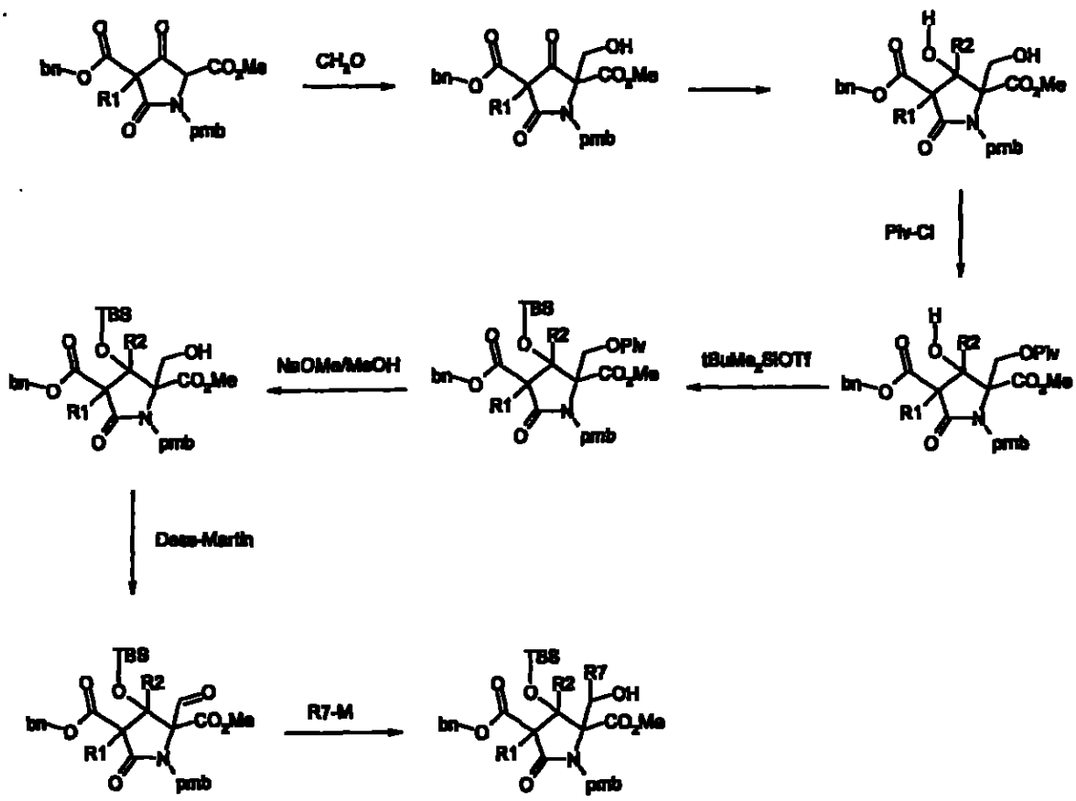
7

see 4

8-11

analog to [2]: addition of formaldehyd (8), ketone reduction (see (4)), protection of primary hydroxyl group as pivolyl ester, protection of secondary hydroxyl group as TBS ether,

deprotection of pivolyl ester (9), Dess-Martin Oxidation (10), addition of Grignard reagents [2] or Zinc organometallics [3] (11)



12

Possible transformations are

-decarboxylation (R1 no more CO_2Bn): Pd-catalyzed hydrogenolysis gives debenzylation and induces decarboxylation [1]

- N-deprotection (R4=H) utilizing Cer(ammonium)nitrat (CAN) if R4 is PMB [2]

- transesterfication (R6=O-alkyl, O-allyl, O-benzyl)

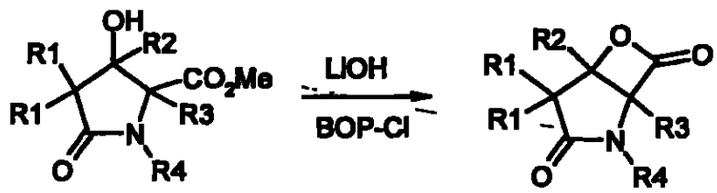
- saponification (R6=OH)

- thioester formation (R6= S-alkyl)

- amide formation (R6=NH-alkyl/Aryl, N-alkyl-aryl, N-dialkyl)

13

Lactonisation using BOP-Cl is described in [2].



Literature:

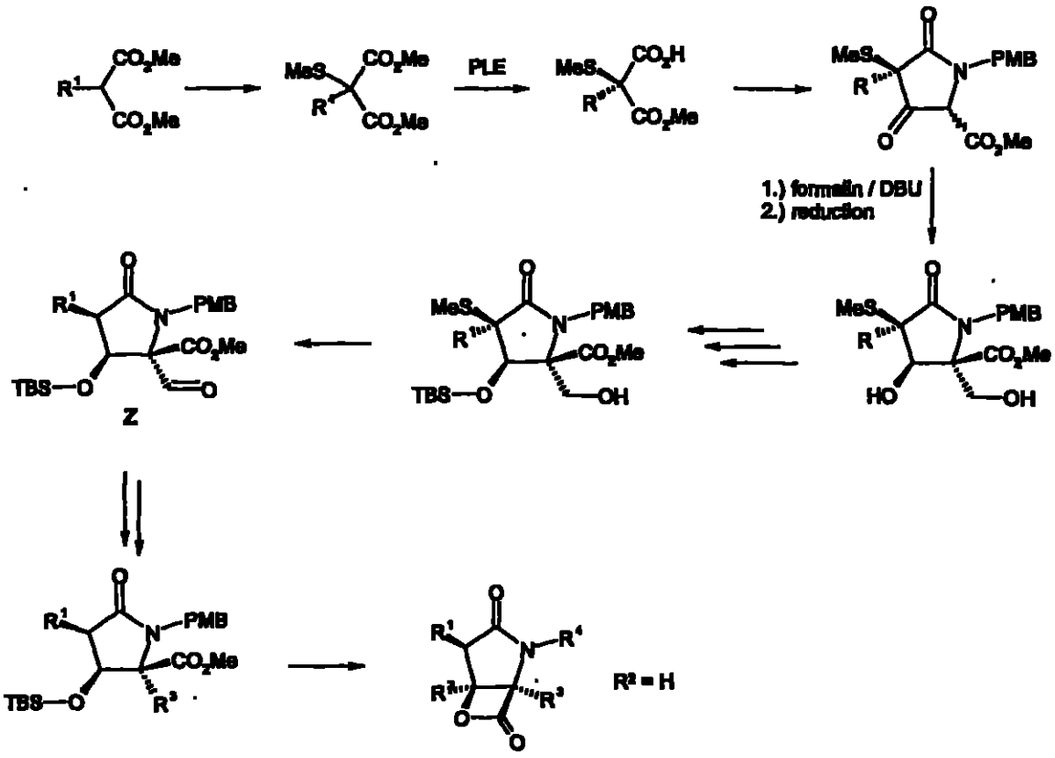
[1] P.C. Bulman Page et. al., *SYNLETT* 2003, 1025.

[2] E. J. Corey et. al., *Angew. Chem.* 1998, *110*, 1784.

[3] L. R. Reddy, P. Saravanan, E. J. Corey, *J. Am. Chem. Soc.*, ASAP

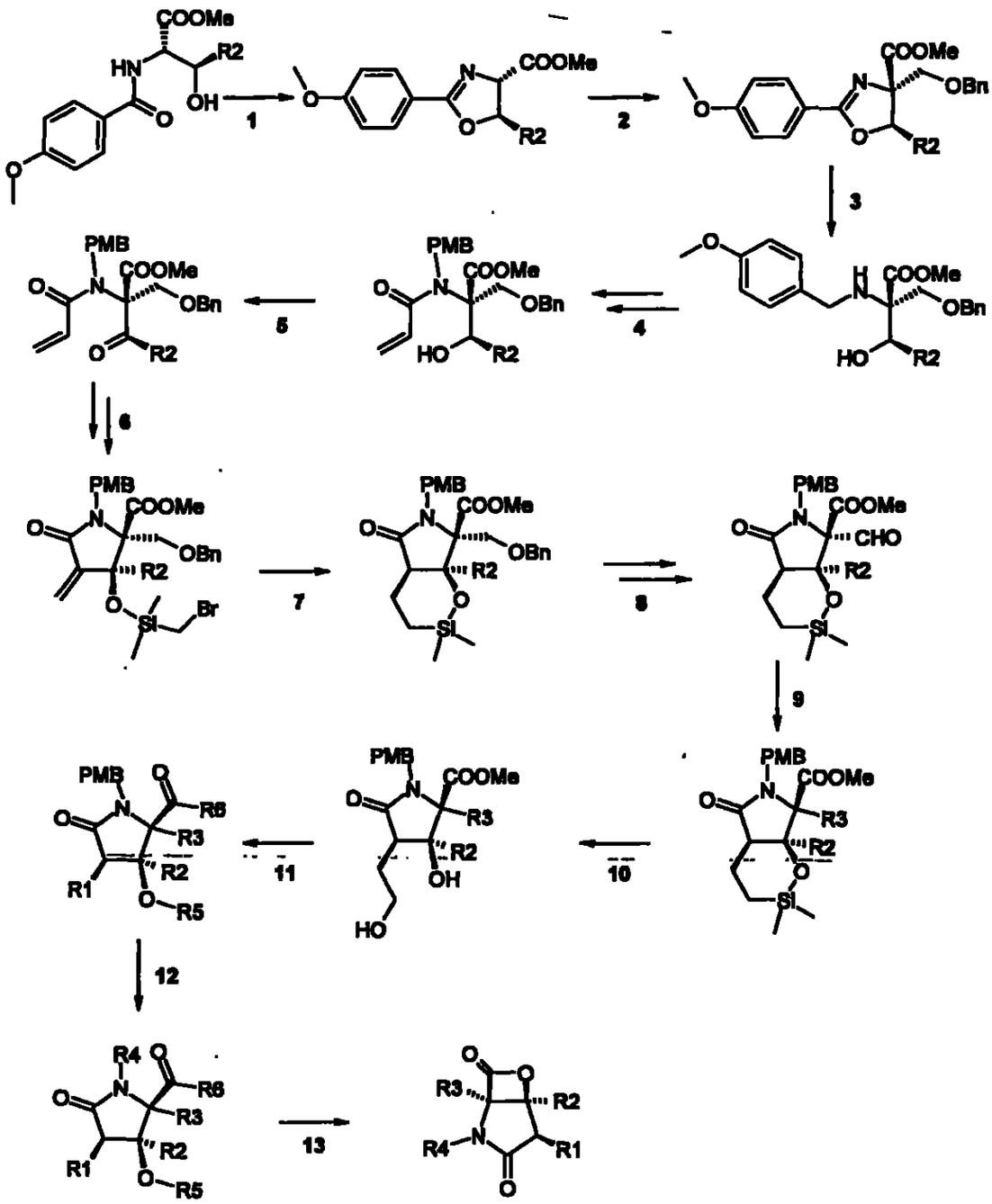
Process D

Compounds of formula (I) with R^2 = H can be synthesized following a literature procedure (E.J. Corey, W. Li, T. Nagamitsu, *Angew. Chem. IE* 1998, *37*, 1676-1679.) starting from enantiomerically pure substituted malonate via a multistep synthesis as shown in the process scheme. This synthetic route is highly flexible for R^1 and it can be carried out with complete stereocontrol. Key intermediate Z allows broad variation of R^3.


PLE
1.) formalin / DBU
2.) reduction
Z
R² = H

Process E

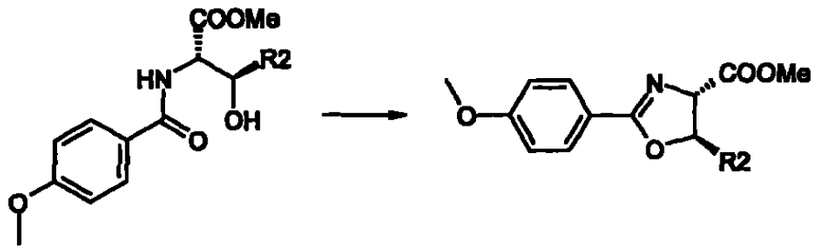
This process is based on a method described in the literature (Corey et al., J. Am. Chem. Soc. 2004, 126, 6230-6231)



36

1

Following the literature procedure a derivative of serine methyl ester was *N*-acylated with 4-methoxybenzoyl chloride to form the amide which is cyclized to an oxazoline by heating with *p*-toluenesulfonic acid.



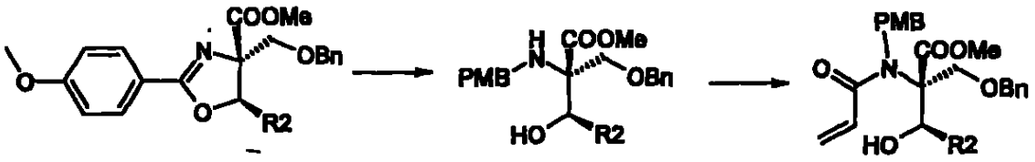
2

Deprotonation of the oxazoline with lithium diisopropylamide alkylation of the resulting enolate with chloromethyl benzyl ether affords the desired isomer.



3-4

Reduction with sodium cyanoborohydride yields to a PMB-amine (PMB = 4-methoxybenzyl) which can be transformed to the N-acrylyl-N-PMB derivative by reaction with Me3SiCl and Et3N to form the trimethyl silyl ether, followed by acylation with acrylyl chloride and acidic work up.



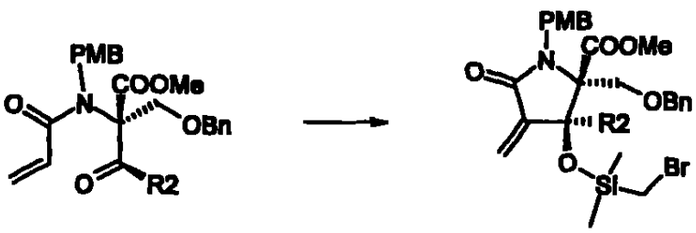
5

Dess-Martin periodinane oxidation produces the keto amide ester.



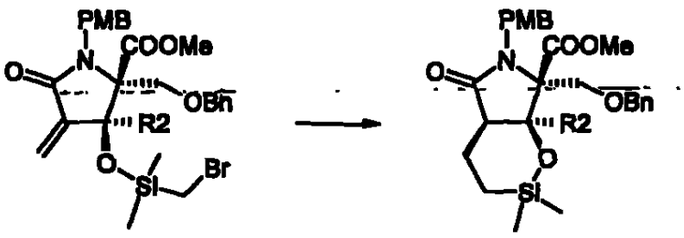
6

The keto amide ester can be cyclized to the γ-lactam by means of an internal Baylis-Hillman-aldol reaction using quinuclidine as the catalytic base. The cyclization product can be silylated with bromomethyldimethylsilyl chloride and separated by column chromatography.



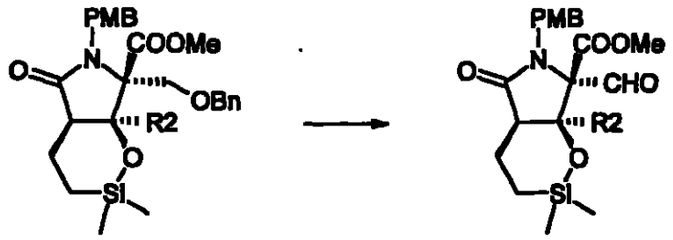
7

The γ-lactam core can be transformed by tri-*n*-butyltin hydride mediated radical-chain cyclization cleanly into the *cis*-fused bicyclic γ-lactam.



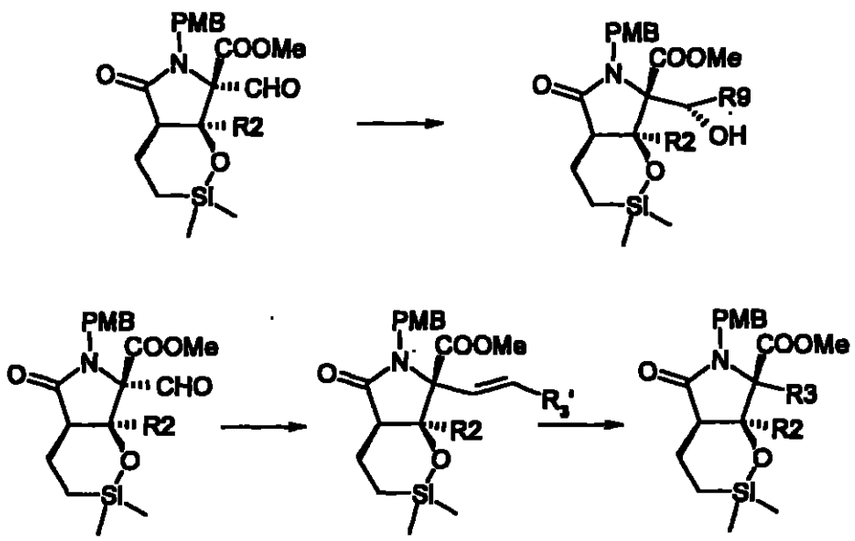
8

Cleavage of the benzyl ether with hydrogen on palladium/charcoal and Dess-Martin periodinane oxidation provide an aldehyde.



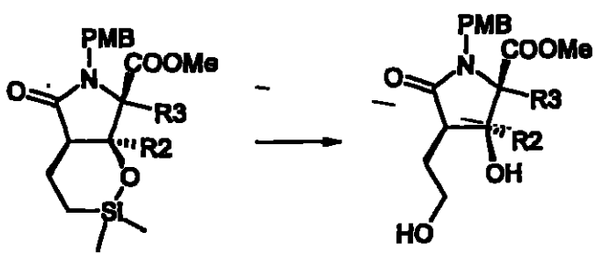
9

Conversion of this aldehyde into substituents R3 is possible either by addition of a suitable organometallic reagent, e.g. Grignard, or by performing a Wittig reaction followed by a hydration of the created alkene.



10

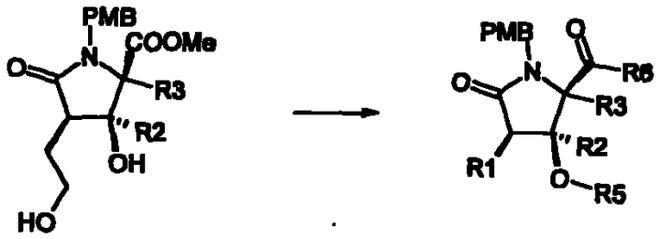
Tamao-Fleming oxidation of the bicycle affords the corresponding PMB protected diol ester.



11

Possible transformations of this diol ester are

- oxidation of the primary hydroxy group to the aldehyde following Wittig reaction and reduction of the created alkene to vary the substituent R1
- derivatization (e.g. alkylation, acylation etc.) of the secondary hydroxy group (e.g. R5 = alkyl, allyl, benzyl, acyl etc.)
- transesterfication (e.g. R6 = O-alkyl, O-allyl, O-benzyl)
- saponification (e.g. R6 = OH)
- thioester formation (e.g. R6 = S-alkyl)
- amide formation (e.g. R6 = NH-alkyl/aryl, N-alkyl-aryl, N-dialkyl)



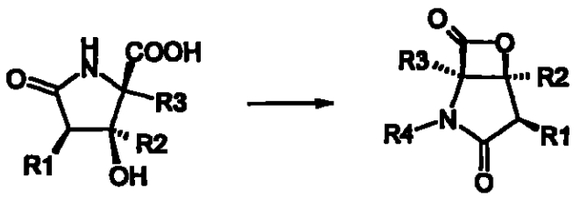
12

After Co(IV)-induced oxidative cleavage of the PMB group the amide can be N-alkylated (R4 = alkyl, benzyl etc.) by using standard procedures if needed.



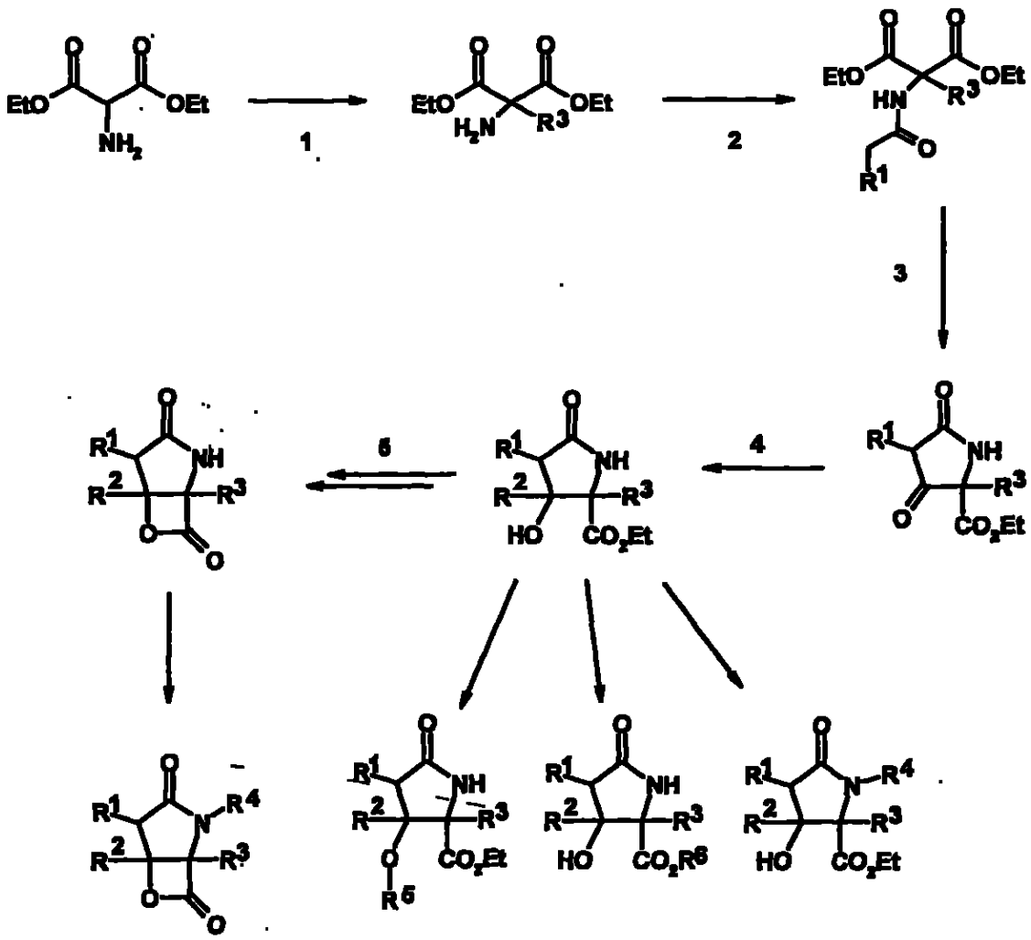
13

Lactonisation of the β-hydroxy acid (R4 = R5 = R6 = H) to compounds of formula (Ia) proceeds by using bis-(2-oxo-3-oxazolidinyl)phosphinic chloride (BOPCl). If needed, the amide can be N-alkylated (R4 = alkyl, allyl, benzyl etc.) at this stage, too.



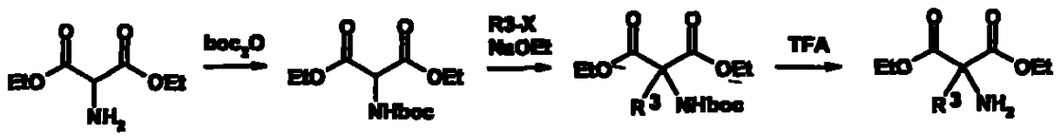
5

Process F



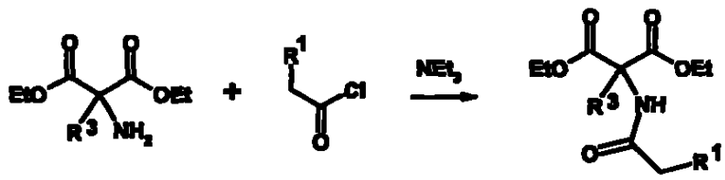
1

In a protection – alkylation – deprotection sequence substituted diethylaminomalonates are obtained. Possible variations: R3 = alkyl, allyl, benzyl, subst. alkyl



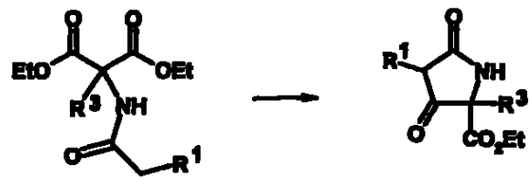
2

N-acylation proceeds under mild conditions. Possible variations: R1 = no limitations



3

Base induzed cyclisation gives tetramic acids.



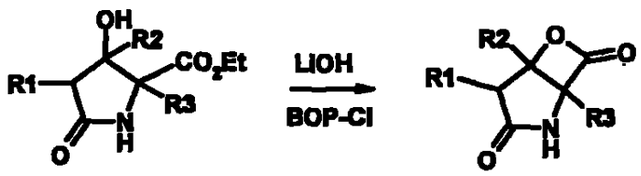
4

The next step is performed either by reduction or addition of a suitable organometallic reagent (e.g. Grignard).

Possible variations: R2= H, alkyl, benzyl, aryl



BOP-Cl is employed for lactonization.



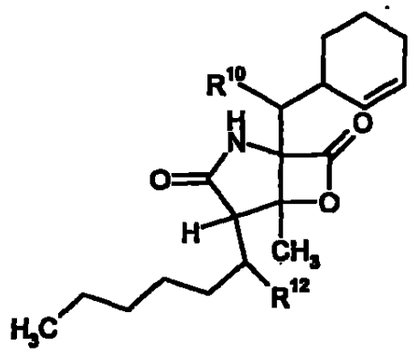
Possible transformations are:

- introduction of R4 = alkyl, benzyl, acyl, sulfonyl
- introduction of R5 = alkyl, benzyl, acyl, sulfonyl
- transesterfication (R6=O-alkyl, O-allyl, O-benzyl)
- saponification (R6=OH)
- thioester formation (R6= S-alkyl)

or combinations thereof

Further, compounds of formula (II) can be prepared by

[A] a process for synthesizing the compounds of general formula



(IIIc),

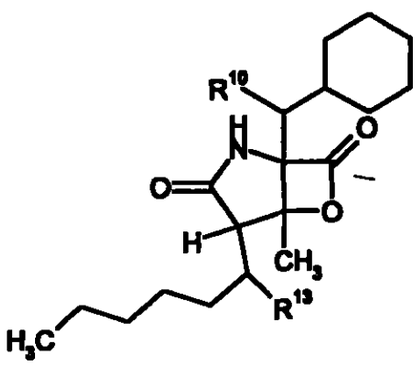
wherein

R^{10} and R^{12} have the meaning described above,

characterized in that the compounds are prepared via fermentation and isolation from an Actinomycete of the genus *Streptomyces*,

or

[B] a process for synthesizing the compounds of general formula



(IIId),

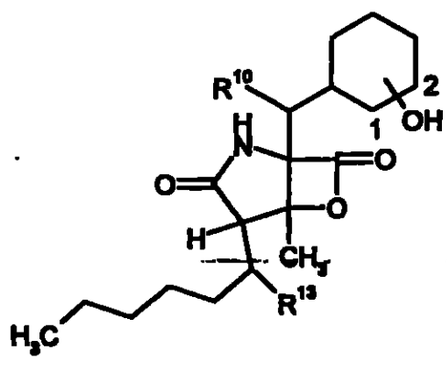
wherein

R^{10} and $R1^3$ have the meaning described above,

characterized in that the compounds are prepared via hydrogenation of the double bond in compounds of the formula (IIIc),

or

[C] a process for synthesizing the compounds of general formula



(IIIe),

wherein

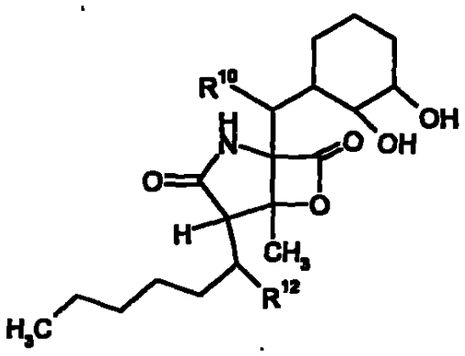
R^{10} and $R1^3$ have the meaning described above, and

the hydroxy-group is attached onto carbon atom 1 or 2,

characterized in that the compounds are prepared via hydration of the double bond in compounds of the formula (IIIc),

or

[D] a process for synthesizing the compounds of general formula



(IIIf),

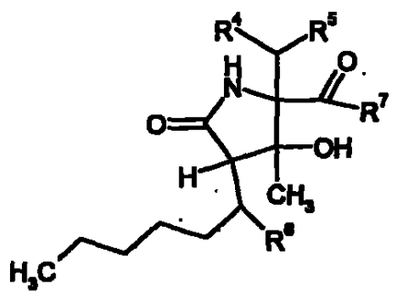
wherein

R^{10} and R^{12} have the meaning described above,

characterized in that the compounds are prepared via oxidation of the double bond in compounds of the formula (IIIc),

or

[E] a process for synthesizing the compounds of general formula



(IIIb),

wherein

R^{13}, R^{14}, R^{15} and R^{16} have the meaning described above,

characterized in that the compounds are prepared via fermentation and isolation from an Actinomycete of the genus *Streptomyces*

Process [A] and [E] can be carried out as described in the experimental section.

The hydrogenation in process [B] can be carried out in the presence of an catalyst such as palladium/charcoal and hydrogen in a suitable solvent in a temperature range from 0°C to +100°C, at normal pressure or at elevated pressure up to 3 bar.

Suitable solvents are i.e. ethers such as diethyl ether, methyl-t-butyl ether, dioxan or tetrahydrofuran, alcohols such as methanol, ethanol, n-propanol, iso-propanol, n-butanol or t-butanol, preferred is methanol, ethanol, iso-propanol or tetrahydrofuran.

The hydration in process [C] can be carried out by hydroboration with oxidative work-up using e.g. diborane (B_2H_6) in tetrahydrofuran followed by hydrogen peroxide. Alternatively an epoxide can be generated and opened by reduction methods. All processes can be carried out in a suitable solvent in a temperature range from -78°C to +25°C, at normal pressure or at elevated pressure up to 3 bar.

Suitable solvents are i.e. tetrahydrofuran, diethyl ether, tert.-butyl-methyl ether, and related solvents.

The oxidation in process [D] can be carried out by chiral or achiral dihydroxylation methods using potassium permanganate ($KMnO_4$) or osmium tetroxide (OsO_4). In the case of osmium tetroxide, catalytical amounts may be sufficient, when tert. amine N-Oxides e.g. N-Methyl-morpholine-N-oxide or other oxidants like potassium ferricyanide (K_3FeCN_6) are used. All processes can be carried out in a suitable solvent in a temperature range from 0°C to +100°C, at normal pressure or at elevated pressure up to 3 bar.

Suitable solvents are alcohols such as ethanol or t-butanol, with appropriate amounts of water added.

The compounds according to the present invention exhibit a strong microbicidal activity. Thus, they can be used for combating undesired microorganisms, such as phytopathogenic fungi and bacteriae, in agriculture and horticulture. The compounds are suitable for the direct control of undesired microorganisms as well as for generating resistance in plants against attack by undesired plant pathogens.

Resistance-inducing substances in the present context are to be understood as those substances which are capable of stimulating the defence system of plants such that the treated plants, when subsequently inoculated with undesirable microorganisms, display substantial resistance to these microorganisms.

Undesirable microorganisms in the present case are to be understood as phytopathogenic fungi and bacteriae. The substances according to the invention can thus be employed to generate resistance in plants against attack by the harmful organisms mentioned within a certain period of time after the treatment. The period of time within which resistance is brought about in general extends from 1 to 10 days, preferably 1 to 7 days, after treatment of the plants with the active compounds.

Generally, the compounds according to the invention can be used as fungicides for combating phytopathogenic fungi, such as Plasmodiophoromycetes, Oomycetes, Chytridiomycetes, Zygomycetes, Ascomycetes, Basidiomycetes and Deutero-mycetes, and can also be used as bactericides for combating bacteriae, such as Pseudomonadaceae, Rhizobiaceae, Enterobacteriaceae, Corynebacteriaceae, Streptomycetaceae, Proteobacteriae and Gram-positive groups.

Some pathogens causing fungal diseases which come under the generic names listed above are mentioned as examples, but not by way of limitation:

Erwinia species, such as, for example, Erwinia amylovora;

Pythium species, such as, for example, Pythium ultimum;

Phytophthora species, such as, for example, Phytophthora infestans;

Pseudoperonospora species, such as, for example, Pseudoperonospora humuli or

Pseudoperonospora cubensis;

Plasmopara species, such as, for example, Plasmopara viticola;

Bremia species, such as, for example, Bremia Lactucae;

Peronospora species, such as, for example, Peronospora pisi or P. brassicae;

Erysiphe species, such as, for example, Erysiphe graminis;

Sphaerotheca species, such as, for example, Sphaerotheca fuliginea;

Podosphaera species, such as, for example, Podosphaera leucotricha;

Venturia species, such as, for example, Venturi inaequalis;

Pyrenophora species, such as, for example, Pyrenophora teres or P. graminea

(conidia form: Drechslera, syn: Helminthosporium);

Cochliobolus species, such as, for example, Cochliobolus sativus

(conidia form: Drechslera,syn: Helminthosporium);

Uromyces species, such as, for example, Uromyces appendiculatus;

Puccinia species, such as, for example, Puccinia recondita;

Sclerotinia species, such as, for example, Sclerotinia sclerotiorum;

Tilletia species, such as, for example, Tilletia caries;

Ustilago species, such as, for example, Ustilago nuda or Ustilago avenae;

Pellicularia species, such as, for example, Pellicularia sasakii;

Pyricularia species, such as, for example, Pyricularia oryzae;

Fusarium species, such as, for example, Fusarium culmorum;

Botrytis species, such as, for example, Botrytis cinerea;

Septoria species, such as, for example, Leptosphaeria nodorum;

Cercospora species, such as, for example, Cercospora canescens;

Alternaria species, such as, for example, Alternaria brassicae;

Pseudocercosporella species, such as, for example, Pseudocercosporella herpotrichoides; and

Phakopsora species, such as, for example Phakopsora pachyrhizi and Phakopsora meibomiae.

The compounds according to the present invention are particularly suitable for causing resistance against infection of plants by plant pathogens, such as Pyricularia oryzae, Phythophthora infestans etc.

The good toleration, by plants, of the active compounds, at the concentrations required for combating plants diseases, permits treatment of above-ground parts of plants, of vegetative propagation stock and seeds, and of the soil.

The compounds according to the present invention have a low toxicity against warm-blooded animals and therefore can be used safely.

The active compounds can be converted into the customary formulations, such as solutions, emulsions, wettable powders, suspensions, powders, foams, pastes, granules, tablets, aerosols, natural and synthetic materials impregnated with active compound, very fine capsules in polymeric substances, coating compositions for use on seed, and formulations used with burning equipment, such as fumigating cartridges, fumigating cans and fumigating coils, as well as ULV cold mist and warm mist formulations.

These formulations may be produced in known manner, for example by mixing the active compounds with extenders, that is to say liquid or liquefied gaseous or solid diluents or carriers, optionally with the use of surface-active agents, that is to say emulsifying agents and/or dispersing agents and/or foam-forming agents. In the case of the use of water as an extender, organic solvents can, for example, also be used as auxiliary solvents.

As liquid solvents diluents or carriers, there are suitable in the main, aromatic hydrocarbons such as xylene, toluene or alkyl naphthalenes, chlorinated aromatic or chlorinated aliphatic hydrocarbons, such as chlorobenzenes, chloroethylenes or methylene chloride, aliphatic hydrocarbons, such as cyclohexane or paraffins, for example mineral oil fractions, alcohols, such as butanol or glycol as well as their ethers and esters, ketones, such as acetone, methyl ethyl ketone, methyl-isobutyl ketone or cyclohexanone, or strongly polar solvents, such as dimethylformamide and dimethyl-sulphoxide, as well as water.

By liquefied gaseous diluents or carriers are meant liquids which would be gaseous at normal temperature and under normal pressure, for example aerosol propellants, such as halogenated hydrocarbons as well as butane, propane, nitrogen and carbon dioxide.

As solid carriers there may be used ground natural minerals, such as kaolings, clays, talc, chalk, quartz, attapulgite, montmorillonite or diatomaceous earth, and ground synthetic minerals, such as highly-dispersed silicic acid, alumina and silicates. As solid carriers for granules there may be used crushed and fractionated natural rocks such as calcite, marble, pumice, sepiolite and dolomite, as well as synthetic granules of inorganic and organic meals, and granules of organic material such as sawdust, coconut shells, maize cobs and tobacco stalks.

As emulsifying and/or foam-forming agents there may be used non-ionic and anionic emulsifiers, such as polyoxyethylene-fatty acid esters, polyoxyethylene-fatty alcohol ethers, for example alkylaryl polyglycol ethers, alkyl sulphonates, alkyl sulphates, aryl sulphonates as well as albumin hydrolysis products.

Dispersing agents include, for example, lignin sulphite waste liquors and methylcellulose.

Adhesives such as carboxymethylcellulose and natural and synthetic polymers in the form of powders, granules or latices, such as gum arabic, polyvinyl alcohol and polyvinyl acetate, can be used in the formulation.

It is possible to use colorants such as inorganic pigments, for example iron oxide, titanium oxide and Prussian Blue, and organic dyestuffs, such as alizarin dyestuffs, azo dyestuffs or metal phthalocyanine dyestuffs, and trace nutrients, such as salts of iron, manganese, boron, copper, cobalt, molybdenum and zinc.

The formulations in general contain from 0.1 to 95 per cent by weight of active compound, preferably from 0.5 to 90 per cent by weight.

The active compounds according to the invention can be present in the formulations or in the various use forms as a mixture with other known active compounds, such as fungicides, bactericides, insecticides, acaricides, nematicides, herbicides, bird repellents, growth factors, plant nutrients and agents for improving soil structure.

In many cases, synergistic effects are achieved, i.e. the activity of the mixture exceeds the activity of the individual components.

Examples of co-components in mixtures are the following compounds:

Fungicides:

1. Inhibition of Nucleic acid synthesis

1.1 benalaxyl, benalaxyl-M, bupirimate, chiralaxyl, clozylacon, dimethirimol, ethirimol, furalaxyl, hymexazol, metalaxyl-M, ofurace, oxadixyl, oxolinic acid

2. Inhibition of mitosis and cell division :

2.1 benomyl, carbendazim, diethofencarb, fuberidazole, pencycuron, thiabendazole thiophanate-methyl, zoxamide

3. Inhibition of respiration

3.1 CI : diflumetorim

3.2 CII :boscalid, carboxin, fenfuram, flutolanil, furametpyr, mepronil, oxycarboxine, penthiopyrad, thifluzamide

3.3 CIII : azoxystrobin, cyazofamid, dimoxystrobin, enestrobin, famoxadone, fenamidone, fluoxastrobin, kresoxim-methyl, metominostrobin, orysastrobin, pyraclostrobin, picoxystrobin, trifloxystrobin,

3.4 Uncouplers : dinocap, fluazinam

3.5 Inhibition of ATP production : fentin acetate, fentin chloride, fentin hydroxide, silthiofam

4. Inhibition of AA and protein biosynthesis

4.1 andoprim, blasticidin-S, cyprodinil, kasugamycin, kasugamycin hydrochloride hydrate, mepanipyrim, pyrimethanil,

5. Inhibition of signal transduction

5.1 fenpiclonil, fludioxonil, quinoxyfen

6. Inhibition of lipids and membranes synthesis

6.1 chlozolinate, iprodione, procymidone, vinclozolin

6.2 pyrazophos, edifenphos, iprobenfos (IBP), isoprothiolane

6.3 tolclofos-methyl, biphenyl

6.4 iodocarb, propamocarb, propamocarb hydrochloride

7. Inhibition of ergosterol Biosynthesis

7.1 fenhexamid,

7.2 azaconazole, bitertanol, bromuconazole, cyproconazole, diclobutrazole, difenoconazole, diniconazole, diniconazole-M, epoxiconazole, etaconazole, fenbuconazole, fluquinconazole, flusilazole, flutriafol, furconazole, furconazole-cis, hexaconazole, imibenconazole, ipconazole, metconazole, myclobutanil, paclobutrazol, penconazole, propiconazole, prothioconazole,

simeconazole, tebuconazole, tetraconazole, triadimefon, triadimenol, triticonazole, uniconazole, voriconazole, imazalil, imazalil sulfate, oxpoconazole, fenarimol, flurprimidol, nuarimol, pyrifenox, triforine, pefurazoate, prochloraz, triflumizole, viniconazole,

7.3 aldimorph, dodemorph, dodemorph acetate, fenpropimorph, tridemorph, fenpropidin, spiroxamine

7.4 naftifine, pyributicarb, terbinafine,

8. Inhibition of cell wall synthesis

8.1 benthiavalicarb, bialaphos, dimethomorph, flumorph, iprovalicarb, polyoxins, polyoxorim, validamycin A

9. Inhibition of melanine biosynthesis

9.1 carpropamid, diclocymet, fenoxanil, phtalide, pyroquilon, tricyclazole,

10. Host defence inducer

10.1 acibenzolar-S-methyl, probenazole, tiadinil

11. Multisite

11.1 captafol, captan, chlorothalonil, copper preparations such as: copper hydroxide, copper naphthenate, copper oxychloride, copper sulphate, copper oxide, oxine-copper and Bordeaux mixture, dichlofluanid, dithianon, dodine, dodine free base, ferbam, fluorofolpet, folpet, guazatine, guazatien acetate, iminoctadine, iminoctadine albesilate, iminoctadine triacetate, mancopper, mancozeb, maneb, metiram, metiram zinc, propineb, sulphur and sulphur preparations including calcium polysulphide, thiram, tolylfluanid, zineb, ziram,

12. Unknown

12.1 amibromdole, benthiazole, bethoxazin, capsimycin, carvone, chinomethionat, chloropicrin, cufraneb, cyflufenamid, cymoxanil, dazomet, debacarb, diclomezine, dichlorophen, dicloran, difenzoquat, difenzoquat methylsulphate, diphenylamine, ethaboxam, ferimzone, flumetover, flusulfamide, fosetyl-aluminium, fosetyl-calcium, fosetyl-sodium, fluopicolide, fluoroimide,

hexachlorobenzene, 8-hydroxyquinoline sulfate, irumamycin, methasulphocarb, metrafenone, methyl isothiocyanate, mildiomycin, natamycin, nickel dimethyldithiocarbamate, nitrothal-isopropyl,octhilinone, oxamocarb, oxyfenthiin, pentachlorophenol and salts, 2-phenylphenol and salts, phosphorous acid and its salts, piperalin, propanosine –sodium, proquinazid, pyrrolnitrine, quintozene, tecloftalam, tecnazene, triazoxide, trichlamide, zarilamid and 2,3,5,6-tetrachloro-4-(methylsulfonyl)-pyridine, N-(4-Chloro-2-nitrophenyl)-N-ethyl-4-methyl-benzenesulfonamide, 2-amino-4-methyl-N-phenyl-5-thiazolecarboxamide, 2-chloro-N-(2,3-dihydro-1,1,3-trimethyl-1H-inden-4-yl)-3-pyridincarboxamide, 3-[5-(4-chlorophenyl)-2,3-dimethylisoxazolidin-3-yl]pyridine, cis-1-(4-chlorophenyl)-2-(1H-1,2,4-triazole-1-yl)-cycloheptanol, methyl 1-(2,3-dihydro-2,2-dimethyl-1H-inden-1-yl)-1H-imidazole-5-carboxylate, 3,4,5-trichloro-2,6-pyridinedicarbonitrile, Methyl 2-[[[cyclopropyl[(4-methoxyphenyl)imino]methyl]thio]methyl]-.alpha.-(methoxy-methylene)- benzeneacetate, 4-Chloro-alpha-propynyloxy-N-[2-[3-methoxy-4-(2-propynyloxy) phenyl]ethyl]-benzeneacetamide, (2S)-N-[2-[4-[[3-(4-chlorophenyl)-2-propynyl]oxy]-3-methoxyphenyl]ethyl]- 3-methyl-2-[(methylsulfonyl)amino]-butanamide, 5-chloro-7-(4-methylpiperidin-1-yl)-6-(2,4,6-trifluorophenyl)[1,2,4]triazolo[1,5-a]pyrimidine, 5-chloro-6-(2,4,6-trifluorophenyl)-N-[(1R)-1,2,2-trimethylpropyl][1,2,4]triazolo[1,5-a]pyrimidin-7-amine, 5-chloro-N-[(1R)-1,2-dimethylpropyl]-6-(2,4,6-trifluorophenyl)[1,2,4]triazolo[1,5-a]pyrimidin-7-amine, N-[1-(5-bromo-3-chloropyridin-2-yl)ethyl]-2,4-dichloronicotinamide, N-(5-bromo-3-chloropyridin-2-yl)methyl-2,4-dichloronicotinamide, 2-butoxy-6-iodo-3-propyl-benzopyranon-4-one, N-{(Z)-[(cyclopropylmethoxy)imino][6-(difluoromethoxy)-2,3-difluorophenyl]methyl}-2-phenyl-acetamide, N-(3-ethyl-3,5,5-trimethyl-cyclohexyl)-3-formylamino-2-hydroxy-benzamide, 2-[[[[1-[3(1Fluoro-2-phenylethyl)oxy]phenyl]ethylidene]amino]oxy]methyl]-alpha-(methoxyimino)-N-methyl-alphaE-benzeneacetamide, N-{2-[3-chloro-5-(trifluoromethyl)pyridin-2-yl]ethyl}-2-(trifluoromethyl)benzamide, N-(3',4'-dichloro-5-fluorobiphenyl-2-yl)-3-(difluoromethyl)-1-methyl-1H-pyrazole-4-carboxamide, 1-[(4-methoxyphenoxy)methyl]-2,2-dimethylpropyl-1H-imidazole-1-carboxylic acid, O-[1-[(4-methoxyphenoxy)methyl]-2,2-dimethylpropyl]-1H-imidazole- 1-carbothioic acid, 2-(2-{[6-(3-chloro-2-methylphenoxy)-5-fluoropyrimidin-4-yl]oxy}phenyl)-2-(methoxyimino)-N-methylacetamide

Bactericides:

bronopol, dichlorophen, nitrapyrin, nickel dimethyldithiocarbamate, kasugamycin, octhilinone, furancarboxylic acid, oxytetracyclin, probenazole, streptomycin, tecloftalam, copper sulphate and other copper preparations.

Insecticides / acaricides / nematicides:

1. Acetylcholinesterase (AChE) inhibitors

1.1 carbamates (for example alanycarb, aldicarb, aldoxycarb, allyxycarb, aminocarb, azamethiphos, bendiocarb, benfuracarb, bufencarb, butacarb, butocarboxim, butoxycarboxim, carbaryl, carbofuran, carbosulfan, chloethocarb, coumaphos, cyanofenphos, cyanophos, dimetilan, ethiofencarb, fenobucarb, fenothiocarb, formetanate, furathiocarb, isoprocarb, metam-sodium, methiocarb, methomyl, metolcarb, oxamyl, pirimicarb, promecarb, propoxur, thiodicarb, thiofanox, triazamate, trimethacarb, XMC, xylylcarb)

1.2 organophosphates (for example acephate, azamethiphos, azinphos (-methyl, -ethyl), bromophos-ethyl, bromfenvinfos (-methyl), butathiofos, cadusafos, carbophenothion, chlorethoxyfos, chlorfenvinphos, chloromephos, chloropyrifos (-methyl/-ethyl), coumaphos, cyanofenphos, cyanophos, chlorfenvinphos, demeton-s-methyl, demeton-s-methylsulphon, dialifos, diazinon, dichlofenthion, dichlorvos/DDVP, dicrotophos, dimethoate, dimethylvinphos, dioxabenzofos, disulfoton, EPN, ethion, ethoprophos, etrimfos, famphur, fenamiphos, fenitrothion, fensulfothion, fenthion, flupyrazofos, fonofos, formothion, fosmethilan, fosthiazate, heptenophos, iodofenphos, iprobenfos, isazofos, isofenphos, isopropyl o-salicylate, isoxathion, malathion, mecarbam, methacrifos, methamidophos, methidathion, mevinphos, monocrotophos, naled, omethoate, oxydemeton-methyl, parathion (-methyl/-ethyl), phenthoate, phorate, phosalone, phosmet, phosphamidon, phosphocarb, phoxim, pirimiphos (-methyl/-ethyl), profenofos, propaphos, propetamphos, prothiofos, prothoate, pyraclofos, pyridaphenthion, pyridathion, quinalphos, sebufos, sulfotep, sulprofos, tebupirimfos, temephos, terbufos, tetrachlorovinphos, thiometon, triazophos, triclorfon, vamidothion)

2. Sodium channel modulators/blockers of voltage-dependent sodium channels

2.1 pyrethroids (for example acrinathrin, allethrin (d-cis-trans, d-trans), beta-cyfluthrin, bifenthrin, bioallethrin, bioallethrin-S-cyclopentyl-isomer, bioethanomethrin, biopermethrin, bioresmethrin, chlovaporthrin, cis-cypermethrin, cis-resmethrin, cis-permethrin, clocythrin, cycloprothrin, cyfluthrin, cyhalothrin, cypermethrin (alpha-, beta-, theta-, zeta-), cyphenothrin, DDT, deltamethrin, empenthrin (1R-isomer), esfenvalerate, etofenprox, fenfluthrin, fenpropathrin, fenpyrithrin, fenvalerate, flubrocythrinate, flucythrinate, flufenprox, flumethrin, fluvalinate, fubfenprox, gamma-cyhalothrin, imiprothrin, kadethrin, lambda-cyhalothrin, metofluthrin, permethrin (cis-, trans-), phenothrin (1R-trans isomer), prallethrin, profluthrin, protrifenbute, pyresmethrin, resmethrin, RU 15525, silafluofen, tau-fluvalinate, tefluthrin, terallethrin, tetramethrin (1R-isomer), tralomethrin, transfluthrin, ZXI 8901, pyrethrins (pyrethrum))

2.2 oxadiazines (for example indoxacarb)

3. Acetylcholine receptor agonists/antagonists

3.1 chloronicotinyls/neonicotinoids (for example acetamiprid, clothianidin, dinotefuran, imidacloprid, nitenpyram, nithiazine, thiacloprid, thiamethoxam)

3.2 nicotine, bensultap, cartap

4. Acetylcholine receptor modulators

4.1 spinosyns (for example spinosad)

5. Antagonists of GABA-controlled chloride channels

5.1 cyclodiene organochlorines (for example camphechloro, chlorodane, endosulfan, gamma-HCH, HCH, heptachloro, lindane, methoxychloro

5.2 fiproles (for example acetoprole, ethiprole, fipronil, vaniliprole)

6. chloride channel activators

6.1 mectins (for example abamectin, avermectin, emamectin, emamectin-benzoate, ivermectin, milbemectin, milbemycin)

7. Juvenile hormone mimetics

(for example diofenolan, epofenonane, fenoxycarb, hydroprene, kinoprene, methoprene, pyriproxifen, triprene)

8. Ecdyson agonists/disruptors

8.1 diacylhydrazines (for example chromafenozide, halofenozide, methoxyfenozide, tebufenozide)

9. Chitin biosynthesis inhibitors

9.1 benzoylureas (for example bistrifluron, chlofluazuron, diflubenziron, fluazuron, flucycloxuron, flufenoxuron, hexaflumuron, lufenuron, novaluron, noviflumuron, penfluron, teflubenzuron, triflumuron)

9.2 buprofezin

9.3 cyromazine

10. Inhibitors of oxidative phosphorylation, ATP disruptors

10.1 diafenthiuron

10.2 organotins (for example azocyclotin, cyhexatin, fenbutatin-oxide)

11. Decouplers of oxidative phosphorylation acting by interrupting the H-proton gradient

11.1 pyrroles (for example chlorofenapyr)

11.2 dinitrophenols (for example binapacryl, dinobuton, dinocap, DNOC)

12. Site-I electron transport inhibitors

12.1 METIs (for example fenazaquin, fenpyroximate, pyrimidifen, pyridaben, tebufenpyrad, tolfenpyrad)

12.2 hydramethylnone

12.3 dicofol

13. Site-II electron transport inhibitors

13.1 rotenone

14. Site-III electron transport inhibitors

14.1 acequinocyl, fluacrypyrim

15. Microbial disruptors of the insect gut membrane

Bacillus thuringiensis strains

16. Inhibitors of fat synthesis

16.1 tetronic acids (for example spirodiclofen, spiromesifen)

16.2 tetramic acids [for example 3-(2,5-dimethylphenyl)-8-methoxy-2-oxo-1-azaspiro[4.5]dec-3-en-4-yl ethyl carbonate (alias: carbonic acid, 3-(2,5-dimethylphenyl)-8-methoxy-2-oxo-1-azaspiro[4.5]dec-3-en-4-yl ethyl ester, CAS Reg. No.: 382608-10-8) and carbonic acid, cis-3-(2,5-dimethylphenyl)-8-methoxy-2-oxo-1-azaspiro[4.5]dec-3-en-4-yl ethyl ester (CAS Reg. No.: 203313-25-1)]

17. Carboxamides

(for example flonicamid)

18. Octopaminergic agonists

(for example amitraz)

19. Inhibitors of magnesium-stimulated ATPase

(for example propargite)

20. Phthalamides

(for example N^2-[1,1-dimethyl-2-(methylsulphonyl)ethyl]-3-iodo-N^1-[2-methyl-4-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]phenyl]-1,2-benzenedicarboxamide (CAS Reg. No.: 272451-65-7), flubendiamide)

21. Nereistoxin analogues

(for example thiocyclam hydrogen oxalate, thiosultap-sodium)

22. Biologicals, hormones or pheromones

(for example azadirachtin, Bacillus spec., Beauveria spec., Codlemone, Metarrhizium spec., Paecilomyces spec., Thuringiensin, Verticillium spec.)

23. Active compounds with unknown or unspecific mechanisms of action

23.1 fumigants (for example aluminium phosphide, methyl bromide, sulphuryl fluoroide)

23.2 selective antifeedants (for example cryolite, flonicamid, pymetrozine)

23.3 mite growth inhibitors (for example clofentezine, etoxazole, hexythiazox)

23.4 amidoflumet, benclothiaz, benzoximate, bifenazate, bromopropylate, buprofezin, chinomethionat, chlorodimeform, chlorobenzilate, chloropicrin, clothiazoben, cycloprene, cyflumetofen, dicyclanil, fenoxacrim, fentrifanil, flubenzimine, flufenerim, flutenzin, gossyplure, hydramethylnone, japonilure, metoxadiazone, petroleum, piperonyl butoxide, potassium oleate, pyrafluprole, pyridalyl, pyriprole, sulfluramid, tetradifon, tetrasul, triarathene, verbutin,

furthermore the compound 3-methylphenyl propylcarbamate (Tsumacide Z), the compound 3-(5-chloro-3-pyridinyl)-8-(2,2,2-trifluoroethyl)-8-azabicyclo[3.2.1]octane-3-carbonitrile (CAS Reg. No. 185982-80-3) and the corresponding 3-endo-isomer (CAS Reg. No. 185984-60-5) (cf. WO 96/37494,

WO 98/25923), and preparations which comprise insecticidally active plant extracts, nematodes, fungi or viruses.

A mixture with other known active compounds, such as herbicides, or with fertilizers and growth regulators, safeners and/or semiochemicals is also possible.

The active compounds can be used as such or in the form of their formulations or the use forms prepared therefrom by further dilution, such as ready-to-use solutions, emulsions, suspensions, powders, tablets, pastes, microcapsules and granules. They are used in the customary manner, for example by watering, immersion, spraying, atomising, misting, vaporizing, injecting, forming a slurry, brushing on, dusting, scattering, dry dressing, moist dressing, wet dressing, slurry dressing or encrusting.

In the treatment of parts of plants, the active compounds concentration in the use forms can be varied within a substantial range. They are, in general, from 1 to 0.0001% by weight, preferably from 0.5 and 0.001%.

For the treatment of seed, amounts of active compound of 0.1 to 10 g, especially 1 to 5 g, are generally employed per 1 kilogram of seed.

For the treatment of soil, active compound concentrations, at the point of action, of 0.00001 to 0.1% by weight, especially of 0.0001 to 0.02%, are generally employed.

As already mentioned above, all plants and parts of plants can be treated according to the invention. In a preferred embodiment naturally occurring plant species and plant varieties or those obtained by conventional biological breeding methods, such as crossbreeding or protoplast fusion as well as parts of such plants are treated. In an additional preferred embodiment transgenic plants and plant varieties which have been obtained by genetic engineering methods, possibly in combination with conventional methods (genetically modified organisms) and parts of such plants are treated. The term "parts" or "parts of plants" or "plant parts" is explained above.

According to the invention plants of the plant varieties commercially available or used at any particular time are very preferably treated. Plant varieties are understood to be plants with specific properties ("traits") which have been obtained both by conventional breeding, by mutagenesis or by recombinant DNA techniques. They can be varieties, biotypes or genotypes.

Depending on the species or varieties of plants, their location and growth conditions (the types of soil, climate, vegetation period and feed concerned), superadditive ("synergistic") effects can occur as a result of the treatment according to the invention. Effects such as for example reduced

application rates and/or broadening of the activity spectra and/or increased activity of the compounds and compositions usable according to the invention, improved plant growth, increased tolerance of high or low temperatures, increased tolerance of dry conditions or water or ground salt contents, increased flowering capacity, facilitated harvesting, acceleration of maturity, increased crop yields, higher quality and/or increased nutritional value of the harvested crops and increased storing quality and/or processibility of the harvested crops are possible, which are greater than those actually expected.

Preferred transgenic plants or plant varieties (obtained by genetic engineering) to be treated according to the invention include all plants which as a result of the genetic modification concerned have received genetic material which provides them with particularly advantageous valuable properties ("traits"). Examples of such properties are improved plant growth, increased tolerance of high or low temperatures, increased tolerance of dry conditions or water or ground salt contents, increased flowering capacity, facilitated harvesting, acceleration of maturity, increased crop yields, higher quality and/or increased nutritional value of the harvested crops and increased storing quality and/or processibility of the harvested crops. Additional and particularly noteworthy examples of such properties are increased resistance of the plants to animal and microbial pests, such as to insects, mites, phytopathogenic fungi, bacteria and/or viruses as well as increased tolerance by the plants of certain herbicidal active compounds. Examples which may be mentioned of transgenic plants are the important crop plants such as cereals (wheat and rice), corn, soybeans, potatoes, cotton, rape and fruit plants (producing apples, pears, citrus fruits and grapes), the crop plants corn, soybeans, potatoes, cotton and rape being particularly noteworthy. Particularly significant properties ("traits") are increased resistance of the plants to insects due to the toxins forming in the plants, and in particular those which are produced in the plants (hereinafter referred to as "Bt plants") by the genetic material obtained from Bacillus Thuringiensis (e.g. by the genes CrylA(a), CrylA(b), CrylA(c), CrylIA, CryIIIB2, Cry9c Cry2Ab, Cry3Bb and CrylF and combinations thereof). Particularly significant properties ("traits") are the increased resistance of plants to fungi, bacteria and viruses due to systemically acquired resistance (SAR), systemin, phytoalexins, elicitors and resistance genes and correspondingly expressed proteins and toxins. Particulary significant properties ("traits") are also increased tolerance by the plants of certain herbicidal active compounds, such as for example imidazolinones, sulphonylureas, glyphosate or phosphinotricine (e.g. the "PAT" gene). The corresponding genes imparting the required properties ("traits") can also occur in the transgenic plants in combination with each other. Examples which may be mentioned of "Bt plants" are varieties of corn, cotton, soybeans and potatoes which are sold under the trade names YIELD GARD® (e.g. corn, cotton, soybeans), KnockOut® (e.g. corn), StarLink® (e.g. corn), Bollgard® (cotton), Nucotn® (cotton)

and NewLeaf® (potatoes). Examples which may be mentioned of herbicide-tolerant plants are varieties of corn, cotton and soybeans which are sold under the trade names Roundup Ready® (tolerance of glyphosate, e.g. corn, cotton, soybeans), Liberty Link® (tolerance of phosphinotricine, e.g. rape), IMI® (tolerance of imidazolinones) and STS® (tolerance of sulphonylureas, e.g. corn). Herbicide-resistant plants (bred for herbicide tolerance in the conventional manner) which may be mentioned are also the varieties (e.g. corn) sold under the name Clearfield®. The above statements do of course also apply to any plant varieties which may be developed in the future or launched onto the market in the future and which have the genetic properties ("traits") described above or developed in the future.

According to the invention the above-mentioned plants can be particularly advantageously treated with the compounds of the general formula I or the active compound mixtures according to the invention. The preferred ranges mentioned above for the active compounds or mixtures also apply to the treatment of these plants. Particularly advantageous is the treatment of plants with the compounds or mixtures specifically listed in the present text.

The active compounds are further suitable for controlling animal pests. Harmful animals as used herein means harmful arthropods and helminths, in particular insects, arachnids and nematodes, which are encountered in agriculture, in forestry, in the protection of stored products and of materials, and in the hygiene sector, and have good plant tolerance and favourable toxicity to warm-blooded animals. They may be preferably employed as plant protection agents. They are active against normally sensitive and resistant species and against all or some stages of development. The abovementioned pests include:

From the order of the Isopoda, for example, Oniscus asellus, Armadillidium vulgare and Porcellio scaber.

From the order of the Diplopoda, for example, Blaniulus guttulatus.

From the order of the Chilopoda, for example, Geophilus carpophagus and Scutigera spp.

From the order of the Symphyla, for example, Scutigerella immaculata.

From the order of the Thysanura, for example, Lepisma saccharina.

From the order of the Collembola, for example, Onychiurus armatus.

From the order of the Orthoptera, for example, Acheta domesticus, Gryllotalpa spp., Locusta migratoria migratorioides, Melanoplus spp. and Schistocerca gregaria.

From the order of the Blattaria, for example, Blatta orientalis, Periplaneta americana, Leucophaea maderae, Blattella germanica.

From the order of the Dermaptera, for example, Forficula auricularia.

From the order of the Isoptera, for example, Reticulitermes spp.

From the order of the Phthiraptera, for example, Pediculus humanus corporis, Haematopinus spp., Linognathus spp., Trichodectes spp. and Damalinia spp.

From the order of the Thysanoptera, for example, Hercinothrips femoralis, Thrips tabaci, Thrips palmi and Frankliniella accidentalis.

From the order of the Heteroptera, for example, Eurygaster spp., Dysdercus intermedius, Piesma quadrata, Cimex lectularius, Rhodnius prolixus and Triatoma spp.

From the order of the Homoptera, for example, Aleurodes brassicae, Bemisia tabaci, Trialeurodes vaporariorum, Aphis gossypii, Brevicoryne brassicae, Cryptomyzus ribis, Aphis fabae, Aphis pomi, Eriosoma lanigerum, Hyalopterus arundinis, Phylloxera vastatrix, Pemphigus spp., Macrosiphum avenae, Myzus spp., Phorodon humuli, Rhopalosiphum padi, Empoasca spp., Euscelis bilobatus, Nephotettix cincticeps, Lecanium corni, Saissetia oleae, Laodelphax striatellus, Nilaparvata lugens, Aonidiella aurantii, Aspidiotus hederae, Pseudococcus spp. and Psylla spp.

From the order of the Lepidoptera, for example, Pectinophora gossypiella, Bupalus piniarius, Cheimatobia brumata, Lithocolletis blancardella, Hyponomeuta padella, Plutella xylostella, Malacosoma neustria, Euproctis chrysorrhoea, Lymantria spp., Bucculatrix thurberiella, Phyllocnistis citrella, Agrotis spp., Euxoa spp., Feltia spp., Earias insulana, Heliothis spp., Mamestra brassicae, Panolis flammea, Spodoptera spp., Trichoplusia ni, Carpocapsa pomonella, Pieris spp., Chilo spp., Pyrausta nubilalis, Ephestia kuehniella, Galleria mellonella, Tineola bisselliella, Tinea pellionella, Hofmannophila pseudospretella, Cacoecia podana, Capua reticulana, Choristoneura fumiferana, Clysia ambiguella, Homona magnanima, Tortrix viridana, Cnaphalocerus spp., Oulema oryzae.

From the order of the Coleoptera, for example, Anobium punctatum, Rhizopertha dominica, Bruchidius obtectus, Acanthoscelides obtectus, Hylotrupes bajulus, Agelastica alni, Leptinotarsa decemlineata, Phaedon cochleariae, Diabrotica spp., Psylliodes chrysocephala, Epilachna varivestis, Atomaria spp., Oryzaephilus surinamensis, Anthonomus spp., Sitophilus spp., Otiorrhynchus sulcatus, Cosmopolites sordidus, Ceuthorrhynchus assimilis, Hypera postica, Dermestes spp., Trogoderma spp., Anthrenus spp., Attagenus spp., Lyctus spp., Meligethes aeneus, Ptinus spp., Niptus hololeucus, Gibbium psylloides, Tribolium spp., Tenebrio molitor, Agriotes spp., Conoderus

spp., Melolontha melolontha, Amphimallon solstitialis, Costelytra zealandica and Lissorhoptrus oryzophilus.

From the order of the Hymenoptera, for example, Diprion spp., Hoplocampa spp., Lasius spp., Monomorium pharaonis and Vespa spp.

From the order of the Diptera, for example, Aedes spp., Anopheles spp., Culex spp., Drosophila melanogaster, Musca spp., Fannia spp., Calliphora erythrocephala, Lucilia spp., Chrysomyia spp., Cuterebra spp., Gastrophilus spp., Hyppobosca spp., Stomoxys spp., Oestrus spp., Hypoderma spp., Tabanus spp., Tannia spp., Bibio hortulanus, Oscinella frit, Phorbia spp., Pegomyia hyoscyami, Ceratitis capitata, Dacus oleae, Tipula paludosa, Hylemyia spp. and Liriomyza spp.

From the order of the Siphonaptera, for example, Xenopsylla cheopis and Ceratophyllus spp.

From the class of the Arachnida, for example, Scorpio maurus, Latrodectus mactans, Acarus siro, Argas spp., Ornithodoros spp., Dermanyssus gallinae, Eriophyes ribis, Phyllocoptruta oleivora, Boophilus spp., Rhipicephalus spp., Amblyomma spp., Hyalomma spp., Ixodes spp., Psoroptes spp., Chorioptes spp., Sarcoptes spp., Tarsonemus spp., Bryobia praetiosa, Panonychus spp., Tetranychus spp., Hemitarsonemus spp., Brevipalpus spp.

The phytoparasitic nematodes include, for example, Pratylenchus spp., Radopholus similis, Ditylenchus dipsaci, Tylenchulus semipenetrans, Heterodera spp., Globodera spp., Meloidogyne spp., Aphelenchoides spp., Longidorus spp., Xiphinema spp., Trichodorus spp., Bursaphelenchus spp.

If appropriate, the compounds according to the invention can, at certain concentrations or application rates, also be used as herbicides or microbicides, for example as fungicides, antimycotics and bactericides. If appropriate, they can also be employed as intermediates or precursors for the synthesis of other active compounds.

All plants and plant parts can be treated in accordance with the invention. Plants are to be understood as meaning in the present context all plants and plant populations such as desired and undesired wild plants or crop plants (including naturally occurring crop plants). Crop plants can be plants which can be obtained by conventional plant breeding and optimization methods or by biotechnological and recombinant methods or by combinations of these methods, including the transgenic plants and inclusive of the plant cultivars protectable or not protectable by plant breeders' rights. Plant parts are to be understood as meaning all parts and organs of plants above and below the ground, such as shoot, leaf, flower and root, examples which may be mentioned being leaves, needles, stalks, stems, flowers, fruit bodies, fruits, seeds, roots, tubers and rhizomes.

The plant parts also include harvested material, and vegetative and generative propagation material, for example cuttings, tubers, rhizomes, offsets and seeds.

Treatment according to the invention of the plants and plant parts with the active compounds is carried out directly or by allowing the compounds to act on the surroundings, environment or storage space by the customary treatment methods, for example by immersion, spraying, evaporation, fogging, scattering, painting on and, in the case of propagation material, in particular in the case of seeds, also by applying one or more coats.

The active compounds can be converted to the customary formulations, such as solutions, emulsions, wettable powders, suspensions, powders, dusts, pastes, soluble powders, granules, suspension-emulsion concentrates, natural and synthetic materials impregnated with active compound and microencapsulations in polymeric substances.

These formulations are produced in a known manner, for example by mixing the active compounds with extenders, that is liquid solvents, and/or solid carriers, optionally with the use of surfactants, that is emulsifiers and/or dispersants, and/or foam-formers.

If the extender used is water, it is also possible to employ for example organic solvents as auxiliary solvents. Essentially, suitable liquid solvents are: aromatics such as xylene, toluene or alkylnaphthalenes, chlorinated aromatics or chlorinated aliphatic hydrocarbons such as chlorobenzenes, chloroethylenes or methylene chloride, aliphatic hydrocarbons such as cyclohexane or paraffins, for example petroleum fractions, mineral and vegetable oils, alcohols such as butanol or glycol and also their ethers and esters, ketones such as acetone, methyl ethyl ketone, methyl isobutyl ketone or cyclohexanone, strongly polar solvents such as dimethylformamide and dimethyl sulphoxide, and also water.

As solid carriers there are suitable:

for example ammonium salts and ground natural minerals such as kaolins, clays, talc, chalk, quartz, attapulgite, montmorillonite or diatomaceous earth, and ground synthetic minerals, such as highly disperse silica, alumina and silicates; as solid carriers for granules there are suitable: for example crushed and fractionated natural rocks such as calcite, marble, pumice, sepiolite and dolomite, and also synthetic granules of inorganic and organic meals, and granules of organic material such as sawdust, coconut shells, maize cobs and tobacco stalks; as emulsifiers and/or foam-formers there are suitable: for example nonionic and anionic emulsifiers, such as polyoxyethylene fatty acid esters, polyoxyethylene fatty alcohol ethers, for example alkylaryl polyglycol ethers, alkylsulphonates, alkyl

sulphates, arylsulphonates and also protein hydrolysates; as dispersants there are suitable: for example lignin-sulphite waste liquors and methylcellulose.

Tackifiers such as carboxymethylcellulose and natural and synthetic polymers in the form of powders, granules or latices, such as gum arabic, polyvinyl alcohol and polyvinyl acetate, as well as natural phospholipids such as cephalins and lecithins, and synthetic phospholipids, can be used in the formulations. Other possible additives are mineral and vegetable oils.

It is possible to use colorants such as inorganic pigments, for example iron oxide, titanium oxide and Prussian Blue, and organic dyestuffs, such as alizarin dyestuffs, azo dyestuffs and metal phthalocyanine dyestuffs, and trace nutrients such as salts of iron, manganese, boron, copper, cobalt, molybdenum and zinc.

The formulations generally comprise between 0.1 and 95% by weight of active compound, preferably between 0.5 and 90%.

The active compounds according to the invention can be employed as such or in their formulations as a mixture with known fungicides, bactericides, acaricides, nematicides or insecticides in order to increase the activity spectrum or avoid the development of resistance. In many cases synergistic effects are achieved, ie. the efficacy of the mixture is greater than the efficacy of the individual components.

Favourable examples of co-components in mixtures are the compounds listed above as possible mixing partners in case of a fungicidal use of the compounds of formula (I).

It is also possible to admix other known active compounds, such as herbicides, fertilizers and growth regulators.

When used as insecticides, the active compounds according to the invention can furthermore be present in their commercially available formulations and in the use forms, prepared from these formulations, as a mixture with synergistic agents. Synergistic agents are compounds which increase the action of the active compounds, without it being necessary for the synergistic agent added to be active itself.

The active compound content of the use forms prepared from the commercially available formulations can vary within wide limits. The active compound concentration of the use forms can be from 0.0000001 to 95% by weight of active compound, preferably between 0.0001 and 1% by weight.

The compounds are employed in a customary manner appropriate for the use forms.

When used against hygiene pests and pests of stored products, the active compound is distinguished by an excellent residual action on wood and clay as well as by a good stability to alkali on limed substrates.

As already mentioned above, it is possible to treat all plants and their parts according to the invention. In a preferred embodiment, wild plant species and plant cultivars, or those obtained by conventional biological breeding, such as crossing or protoplast fusion, and parts thereof, are treated. In a further preferred embodiment, transgenic plants and plant cultivars obtained by genetic engineering, if appropriate in combination with conventional methods (Genetically Modified Organisms), and parts thereof are treated. The term "parts" or "parts of plants" or "plant parts" has been explained above.

Particularly preferably, plants of the plant cultivars which are in each case commercially available or in use are treated according to the invention. Plant cultivars are understood as meaning plants with novel properties ("traits") which are grown by conventional cultivation, by mutagenesis or by recombinant DNA techniques. These may be cultivars, biotypes or genotypes.

Depending on the plant species or plant cultivars, their location and growth conditions (soils, climate, vegetation period, diet), the treatment according to the invention may also result in superadditive ("synergistic") effects. Thus, for example, reduced application rates and/or widenings of the activity spectrum and/or an increase in the activity of the substances and compositions to be used according to the invention, better plant growth, increased tolerance to high or low temperatures, increased tolerance to drought or to water or soil salt content, increased flowering performance, easier harvesting, accelerated maturation, higher harvest yields, better quality and/or a higher nutritional value of the harvested products, better storage stability and/or processability of the harvested products are possible which exceed the effects which were actually to be expected.

The transgenic plants or plant cultivars (i.e. those obtained by genetic engineering) which are preferably to be treated according to the invention include all plants which, in the genetic modification, received genetic material which imparted particularly advantageous useful properties ("traits") to these plants. Examples of such properties are better plant growth, increased tolerance to high or low temperatures, increased tolerance to drought or to water or soil salt content, increased flowering performance, easier harvesting, accelerated maturation, higher harvest yields, better quality and/or a higher nutritional value of the harvested products, better storage stability and/or processability of the harvested products. Further and particularly emphasized examples of

such properties are a better defence of the plants against animal and microbial pests, such as against insects, mites, phytopathogenic fungi, bacteria and/or viruses, and also increased tolerance of the plants to certain herbicidally active compounds. Examples of transgenic plants which may be mentioned are the important crop plants, such as cereals (wheat, rice), maize, soya beans, potatoes, cotton, oilseed rape and also fruit plants (with the fruits apples, pears, citrus fruits and grapes), and particular emphasis is given to maize, soya beans, potatoes, cotton and oilseed rape. Traits that are emphasized are in particular increased defence of the plants against insects by toxins formed in the plants, in particular those formed in the plants by the genetic material from Bacillus thuringiensis (for example by the genes CryIA(a), CryIA(b), CryIA(c), CryIIA, CryIIIA, CryIIIB2, Cry9c, Cry2Ab, Cry3Bb and CryIF and also combinations thereof) (hereinbelow referred to as "Bt plants"). Traits which are also particularly emphasized are the increased resistance of plants to fungi, bacteria and viruses by systemic acquired resistance (SAR), systemin, phytoalexins, elicitors and resistance genes and the correspondingly expressed proteins and toxins. Traits that are furthermore particularly emphasized are the increased tolerance of the plants to certain herbicidally active compounds, for example imidazolinones, sulphonylureas, glyphosate or phosphinotricin (for example the "PAT" gene). The genes which impart the desired traits in question can also be present in combination with one another in the transgenic plants. Examples of "Bt plants" which may be mentioned are maize varieties, cotton varieties, soya bean varieties and potato varieties which are sold under the trade names YIELD GARD® (for example maize, cotton, soya beans), KnockOut® (for example maize), StarLink® (for example maize), Bollgard (cotton), Nucotn® (cotton) and NewLeaf® (potato). Examples of herbicide-tolerant plants which may be mentioned are maize varieties, cotton varieties and soya bean varieties which are sold under the trade names Roundup Ready® (tolerance to glyphosate, for example maize, cotton, soya bean), Liberty Link® (tolerance to phosphinotricin, for example oilseed rape), IMI® (tolerance to imidazolinones) and STS® (tolerance to sulphonylureas, for example maize). Herbicide-resistant plants (plants bred in a conventional manner for herbicide tolerance) which may be mentioned include the varieties sold under the name Clearfield® (for example maize). Of course, these statements also apply to plant cultivars having these genetic traits or genetic traits still to be developed, which cultivars will be developed and/or marketed in the future.

The plants listed can be treated according to the invention in a particularly advantageous manner with the compounds of the formula I or the active compound mixtures according to the invention. The preferred ranges stated above for the active compounds or mixtures also apply to the treatment of these plants. Particular emphasis is given to the treatment of plants with the compounds or mixtures specifically mentioned in the present text.

The active compounds according to the invention act not only against plant, hygiene and stored product pests, but also in the veterinary medicine sector against animal parasites (ectoparasites), such as hard ticks, soft ticks, mange mites, leaf mites, flies (biting and licking), parasitic fly larvae, lice, hair lice, feather lice and fleas. These parasites include:

From the order of the Anoplurida, for example, Haematopinus spp., Linognathus spp., Pediculus spp., Phtirus spp. and Solenopotes spp.

From the order of the Mallophagida and the suborders Amblycerina and Ischnocerina, for example, Trimenopon spp., Menopon spp., Trinoton spp., Bovicola spp., Werneckiella spp., Lepikentron spp., Damalina spp., Trichodectes spp. and Felicola spp.

From the order of the Diptera and the suborders Nematocerina and Brachycerina, for example, Aedes spp., Anopheles spp., Culex spp., Simulium spp., Eusimulium spp., Phlebotomus spp., Lutzomyia spp., Culicoides spp., Chrysops spp., Hybomitra spp., Atylotus spp., Tabanus spp., Haematopota spp., Philipomyia spp., Braula spp., Musca spp., Hydrotaea spp., Stomoxys spp., Haematobia spp., Morellia spp., Fannia spp., Glossina spp., Calliphora spp., Lucilia spp., Chrysomyia spp., Wohlfahrtia spp., Sarcophaga spp., Oestrus spp., Hypoderma spp., Gasterophilus spp., Hippobosca spp., Lipoptena spp. and Melophagus spp.

From the order of the Siphonapterida, for example Pulex spp., Ctenocephalides spp., Xenopsylla spp. and Ceratophyllus spp.

From the order of the Heteropterida, for example, Cimex spp., Triatoma spp., Rhodnius spp. and Panstrongylus spp.

From the order of the Blattarida, for example Blatta orientalis, Periplaneta americana, Blattela germanica and Supella spp.

From the subclass of the Acaria (Acarida) and the orders of the Meta- and Mesostigmata, for example, Argas spp., Ornithodorus spp., Otobius spp., Ixodes spp., Amblyomma spp., Boophilus spp., Dermacentor spp., Haemophysalis spp., Hyalomma spp., Rhipicephalus spp., Dermanyssus spp., Raillietia spp., Pneumonyssus spp., Sternostoma spp. and Varroa spp.

From the order of the Actinedida (Prostigmata) und Acaridida (Astigmata), for example, Acarapis spp., Cheyletiella spp., Ornithocheyletia spp., Myobia spp., Psorergates spp., Demodex spp., Trombicula spp., Listrophorus spp., Acarus spp., Tyrophagus spp., Caloglyphus spp., Hypodectes spp., Pterolichus spp., Psoroptes spp., Chorioptes spp., Otodectes spp., Sarcoptes spp., Notoedres spp., Knemidocoptes spp., Cytodites spp. and Laminosioptes spp.

The active compounds of the formula (I) according to the invention are also suitable for controlling arthropods which infest agricultural productive livestock, such as, for example, cattle, sheep, goats, horses, pigs, donkeys, camels, buffalo, rabbits, chickens, turkeys, ducks, geese and bees, other pets, such as, for example, dogs, cats, caged birds and aquarium fish, and also so-called test animals, such as, for example, hamsters, guinea pigs, rats and mice. By controlling these arthropods, cases of death and reduction in productivity (for meat, milk, wool, hides, eggs, honey etc.) should be diminished, so that more economic and easier animal husbandry is possible by use of the active compounds according to the invention.

The active compounds according to the invention are used in the veterinary sector in a known manner by enteral administration in the form of, for example, tablets, capsules, potions, drenches, granules, pastes, boluses, the feed-through process and suppositories, by parenteral administration, such as, for example, by injection (intramuscular, subcutaneous, intravenous, intraperitoneal and the like), implants, by nasal administration, by dermal use in the form, for example, of dipping or bathing, spraying, pouring on and spotting on, washing and powdering, and also with the aid of moulded articles containing the active compound, such as collars, ear marks, tail marks, limb bands, halters, marking devices and the like.

When used for cattle, poultry, pets and the like, the active compounds of the formula (I) can be used as formulations (for example powders, emulsions, free-flowing compositions), which comprise the active compounds in an amount of 1 to 80% by weight, directly or after 100 to 10 000-fold dilution, or they can be used as a chemical bath.

It has furthermore been found that the compounds according to the invention have a strong insecticidal action against insects which destroy industrial materials.

The following insects may be mentioned as examples and as preferred - but without limitation:

Beetles, such as

Hylotrupes bajulus, Chlorophorus pilosis, Anobium punctatum, Xestobium rufovillosum, Ptilinus pecticornis, Dendrobium pertinex, Ernobius mollis, Priobium carpini, Lyctus brunneus, Lyctus africanus, Lyctus planicollis, Lyctus linearis, Lyctus pubescens, Trogoxylon aequale, Minthes rugicollis, Xyleborus spec. Tryptodendron spec. Apate monachus, Bostrychus capucins, Heterobostrychus brunneus, Sinoxylon spec. Dinoderus minutus.

Hymenopterons, such as

Sirex juvencus, Urocerus gigas, Urocerus gigas taignus, Urocerus augur.

Termites, such as

Kalotermes flavicollis, Cryptotermes brevis, Heterotermes indicola, Reticulitermes flavipes, Reticulitermes santonensis, Reticulitermes lucifugus, Mastotermes darwiniensis, Zootermopsis nevadensis, Coptotermes formosanus.

Bristletails, such as Lepisma saccharina.

Industrial materials in the present connection are to be understood as meaning non-living materials, such as, preferably, plastics, adhesives, sizes, papers and cards, leather, wood and processed wood products and coating compositions.

Wood and processed wood products are materials to be protected, especially preferably, from insect infestation.

Wood and processed wood products which can be protected by the agents according to the invention or mixtures comprising these are to be understood as meaning, for example:

building timber, wooden beams, railway sleepers, bridge components, boat jetties, wooden vehicles, boxes, pallets, containers, telegraph poles, wood panelling, wooden windows and doors, plywood, chipboard, joinery or wooden products which are used quite generally in house-building or in building joinery.

The active compounds can be used as such, in the form of concentrates or generally customary formulations, such as powders, granules, solutions, suspensions, emulsions or pastes.

The formulations mentioned can be prepared in a manner known per se, for example by mixing the active compounds with at least one solvent or diluent, emulsifier, dispersing agent and/or binder or fixing agent, a water repellent, if appropriate siccatives and UV stabilizers and if appropriate dyestuffs and pigments, and also other processing auxiliaries.

The insecticidal compositions or concentrates used for the preservation of wood and wood-derived timber products comprise the active compound according to the invention in a concentration of 0.0001 to 95% by weight, in particular 0.001 to 60% by weight.

The amount of the compositions or concentrates employed depends on the nature and occurrence of the insects and on the medium. The optimum amount employed can be determined for the use in each case by a series of tests. In general, however, it is sufficient to employ 0.0001 to 20% by weight, preferably 0.001 to 10% by weight, of the active compound, based on the material to be preserved.

Solvents and/or diluents which are used are an organic chemical solvent or solvent mixture and/or an oily or oil-like organic chemical solvent or solvent mixture of low volatility and/or a polar organic chemical solvent or solvent mixture and/or water, and if appropriate an emulsifier and/or wetting agent.

Organic chemical solvents which are preferably used are oily or oil-like solvents having an evaporation number above 35 and a flashpoint above 30°C, preferably above 45°C. Substances which are used as such oily or oil-like water-insoluble solvents of low volatility are appropriate mineral oils or aromatic fractions thereof, or solvent mixtures containing mineral oils, preferably white spirit, petroleum and/or alkylbenzene.

Mineral oils having a boiling range from 170 to 220°C, white spirit having a boiling range from 170 to 220°C, spindle oil having a boiling range from 250 to 350°C, petroleum and aromatics having a boiling range from 160 to 280°C, terpentine oil and the like, are advantageously employed.

In a preferred embodiment, liquid aliphatic hydrocarbons having a boiling range from 180 to 210°C or high-boiling mixtures of aromatic and aliphatic hydrocarbons having a boiling range from 180 to 220°C and/or spindle oil and/or monochloronaphthalene, preferably α-monochloronaphthalene, are used.

The organic oily or oil-like solvents of low volatility which have an evaporation number above 35 and a flashpoint above 30°C, preferably above 45°C, can be replaced in part by organic chemical solvents of high or medium volatility, providing that the solvent mixture likewise has an evaporation number above 35 and a flashpoint above 30°C, preferably above 45°C, and that the insecticide/fungicide mixture is soluble or emulsifiable in this solvent mixture.

According to a preferred embodiment, some of the organic chemical solvent or solvent mixture or an aliphatic polar organic chemical solvent or solvent mixture is replaced. Aliphatic organic chemical solvents containing hydroxyl and/or ester and/or ether groups, such as, for example, glycol ethers, esters or the like, are preferably used.

Organic chemical binders which are used in the context of the present invention are the synthetic resins and/or binding drying oils which are known per se, are water-dilutable and/or are soluble or dispersible or emulsifiable in the organic chemical solvents employed, in particular binders consisting of or comprising an acrylate resin, a vinyl resin, for example polyvinyl acetate, polyester resin, polycondensation or polyaddition resin, polyurethane resin, alkyd resin or modified alkyd resin, phenolic resin, hydrocarbon resin, such as indene-cumarone resin, silicone

resin, drying vegetable oils and/or drying oils and/or physically drying binders based on a natural and/or synthetic resin.

The synthetic resin used as the binder can be employed in the form of an emulsion, dispersion or solution. Bitumen or bituminous substances can also be used as binders in an amount of up to 10% by weight. Dyestuffs, pigments, water-repelling agents, odour correctants and inhibitors or anticorrosive agents and the like which are known per se can additionally be employed.

It is preferred according to the invention for the composition or concentrate to comprise, as the organic chemical binder, at least one alkyd resin or modified alkyd resin and/or one drying vegetable oil. Alkyd resins having an oil content of more than 45% by weight, preferably 50 to 68% by weight, are preferably used according to the invention.

All or some of the binder mentioned can be replaced by a fixing agent (mixture) or a plasticizer (mixture). These additives are intended to prevent evaporation of the active compounds and crystallization or precipitation. They preferably replace 0.01 to 30% of the binder (based on 100% of the binder employed).

The plasticizers originate from the chemical classes of phthalic acid esters, such as dibutyl, dioctyl or benzyl butyl phthalate, phosphoric acid esters, such as tributyl phosphate, adipic acid esters, such as di-(2-ethylhexyl) adipate, stearates, such as butyl stearate or amyl stearate, oleates, such as butyl oleate, glycerol ethers or higher molecular weight glycol ethers, glycerol esters and p-toluenesulphonic acid esters.

Fixing agents are based chemically on polyvinyl alkyl ethers, such as, for example, polyvinyl methyl ether or ketones, such as benzophenone or ethylenebenzophenone.

Possible solvents or diluents are, in particular, also water, if appropriate as a mixture with one or more of the abovementioned organic chemical solvents or diluents, emulsifiers and dispersing agents.

Particularly effective preservation of wood is achieved by impregnation processes on a large industrial scale, for example vacuum, double vacuum or pressure processes.

The ready-to-use compositions can also comprise other insecticides, if appropriate, and also one or more fungicides, if appropriate.

Possible additional mixing partners are, preferably, the insecticides and fungicides mentioned in WO 94/29 268. The compounds mentioned in this document are an explicit constituent of the present application.

Especially preferred mixing partners which may be mentioned are insecticides, such as chlorpyriphos, phoxim, silafluofin, alphamethrin, cyfluthrin, cypermethrin, deltamethrin, permethrin, imidacloprid, NI-25, flufenoxuron, hexaflumuron, transfluthrin, thiacloprid, methoxyphenoxide and triflumuron,

and also fungicides, such as epoxyconazole, hexaconazole, azaconazole, propiconazole, tebuconazole, cyproconazole, metconazole, imazalil, dichlorfluanid, tolylfluanid, 3-iodo-2-propinyl-butyl carbamate, N-octyl-isothiazolin-3-one and 4,5-dichloro-N-octylisothiazolin-3-one.

The compounds according to the invention can at the same time be employed for protecting objects which come into contact with saltwater or brackish water, such as hulls, screens, nets, buildings, moorings and signalling systems, against fouling.

Fouling by sessile Oligochaeta, such as Serpulidae, and by shells and species from the Ledamorpha group (goose barnacles), such as various Lepas and Scalpellum species, or by species from the Balanomorpha group (acorn barnacles), such as Balanus or Pollicipes species, increases the frictional drag of ships and, as a consequence, leads to a marked increase in operation costs owing to higher energy consumption and additionally frequent residence in the dry dock.

Apart from fouling by algae, for example Ectocarpus sp. and Ceramium sp., in particular fouling by sessile Entomostraka groups, which come under the generic term Cirripedia (cirriped crustaceans), is of particular importance.

Surprisingly, it has now been found that the compounds according to the invention, alone or in combination with other active compounds, have an outstanding antifouling action.

Using compounds according to the invention, alone or in combination with other active compounds, allows the use of heavy metals such as, for example, in bis(trialkyltin) sulphides, tri-*n*-butyltin laurate, tri-*n*-butyltin chloride, copper(I) oxide, triethyltin chloride, tri-*n*-butyl(2-phenyl-4-chlorophenoxy)tin, tributyltin oxide, molybdenum disulphide, antimony oxide, polymeric butyl titanate, phenyl-(bispyridine)bismuth chloride, tri-*n*-butyltin fluoride, manganese ethylenebisthiocarbamate, zinc dimethyldithiocarbamate, zinc ethylenebisthiocarbamate, zinc salts and copper salts of 2-pyridinethiol 1-oxide, bisdimethyldithiocarbamoylzinc ethylene-bisthiocarbamate, zinc oxide, copper(I) ethylene-bisdithiocarbamate, copper thiocyanate, copper naphthenate and

tributyltin halides to be dispensed with, or the concentration of these compounds to be substantially reduced.

If appropriate, the ready-to-use antifouling paints can additionally comprise other active compounds, preferably algicides, fungicides, herbicides, molluscicides, or other antifouling active compounds.

Preferably suitable components in combinations with the antifouling compositions according to the invention are:

algicides such as

2-*tert*-butylamino-4-cyclopropylamino-6-methylthio-1,3,5-triazine, dichlorophen, diuron, endothal, fentin acetate, isoproturon, methabenzthiazuron, oxyfluorfen, quinoclamine and terbutryn;

fungicides such as

benzo[*b*]thiophenecarboxylic acid cyclohexylamide S,S-dioxide, dichlofluanid, fluorfolpet, 3-iodo-2-propinyl butylcarbamate, tolylfluanid and azoles such as

azaconazole, cyproconazole, epoxyconazole, hexaconazole, metconazole, propiconazole and tebuconazole;

molluscicides such as

fentin acetate, metaldehyde, methiocarb, niclosamid, thiodicarb and trimethacarb;

or conventional antifouling active compounds such as

4,5-dichloro-2-octyl-4-isothiazolin-3-one, diiodomethylparatryl sulphone, 2-(N,N-dimethylthiocarbamoylthio)-5-nitrothiazyl, potassium, copper, sodium and zinc salts of 2-pyridinethiol 1-oxide, pyridine-triphenylborane, tetrabutyldistannoxane, 2,3,5,6-tetrachloro-4-(methylsulphonyl)-pyridine, 2,4,5,6-tetrachloroisophthalonitrile, tetramethylthiuram disulphide and 2,4,6-trichlorophenylmaleinimide.

The antifouling compositions used comprise the active compound according to the invention of the compounds according to the invention in a concentration of 0.001 to 50% by weight, in particular 0.01 to 20% by weight.

Moreover, the antifouling compositions according to the invention comprise the customary components such as, for example, those described in Ungerer, *Chem. Ind.* 1985, *37*, 730-732 and Williams, Antifouling Marine Coatings, Noyes, Park Ridge, 1973.

Besides the algicidal, fungicidal, molluscicidal active compounds and insecticidal active compounds according to the invention, antifouling paints comprise, in particular, binders.

Examples of recognized binders are polyvinyl chloride in a solvent system, chlorinated rubber in a solvent system, acrylic resins in a solvent system, in particular in an aqueous system, vinyl chloride/vinyl acetate copolymer systems in the form of aqueous dispersions or in the form of organic solvent systems, butadiene/styrene/acrylonitrile rubbers, drying oils such as linseed oil, resin esters or modified hardened resins in combination with tar or bitumens, asphalt and epoxy compounds, small amounts of chlorine rubber, chlorinated polypropylene and vinyl resins.

If appropriate, paints also comprise inorganic pigments, organic pigments or colorants which are preferably insoluble in salt water. Paints may furthermore comprise materials such as colophonium to allow controlled release of the active compounds. Furthermore, the paints may comprise plasticizers, modifiers which affect the rheological properties and other conventional constituents. The compounds according to the invention or the abovementioned mixtures may also be incorporated into self-polishing antifouling systems.

The active compounds are also suitable for controlling animal pests, in particular insects, arachnids and mites, which are found in enclosed spaces such as, for example, dwellings, factory halls, offices, vehicle cabins and the like. They can be employed alone or in combination with other active compounds and auxiliaries in domestic insecticide products for controlling these pests. They are active against sensitive and resistant species and against all developmental stages. These pests include:

From the order of the Scorpionides, for example, Buthus occitanus.

From the order of the Acarina, for example, Argas persicus, Argas reflexus, Bryobia ssp., Dermanyssus gallinae, Glyciphagus domesticus, Ornithodorus moubat, Rhipicephalus sanguineus, Trombicula alfreddugesi, Neutrombicula autumnalis, Dermatophagoides pteronissimus, Dermatophagoides forinae.

From the order of the Araneae, for example, Avicularidae, Araneidae.

From the order of the Opiliones, for example, Pseudoscorpiones chelifer, Pseudoscorpiones cheiridium, Opiliones phalangium.

From the order of the Isopoda, for example, Oniscus asellus, Porcellio scaber.

From the order of the Diplopoda, for example, Blaniulus guttulatus, Polydesmus spp.

From the order of the Chilopoda, for example, Geophilus spp.

From the order of the Zygentoma, for example, Ctenolepisma spp., Lepisma saccharina, *Lepismodes inquilinus*.

From the order of the Blattaria, for example, Blatta orientalies, Blattella germanica, Blattella asahinai, Leucophaea maderae, Panchlora spp., Parcoblatta spp., Periplaneta australasiae, Periplaneta americana, Periplaneta brunnea, Periplaneta fuliginosa, Supella longipalpa.

From the order of the Saltatoria, for example, Acheta domesticus.

From the order of the Dermaptera, for example, Forficula auricularia.

From the order of the Isoptera, for example, Kalotermes spp., Reticulitermes spp.

From the order of the Psocoptera, for example, Lepinatus spp., Liposcelis spp.

From the order of the Coleptera, for example, Anthrenus spp., Attagenus spp., Dermestes spp., Latheticus oryzae, Necrobia spp., Ptinus spp., Rhizopertha dominica, Sitophilus granarius, Sitophilus oryzae, Sitophilus zeamais, Stegobium paniceum.

From the order of the Diptera, for example, Aedes aegypti, Aedes albopictus, Aedes taeniorhynchus, Anopheles spp., Calliphora erythrocephala, Chrysozona pluvialis, Culex quinquefasciatus, Culex pipiens, Culex tarsalis, Drosophila spp., Fannia canicularis, Musca domestica, Phlebotomus spp., Sarcophaga carnaria, Simulium spp., Stomoxys calcitrans, Tipula paludosa.

From the order of the Lepidoptera, for example, Achroia grisella, Galleria mellonella, Plodia interpunctella, Tinea cloacella, Tinea pellionella, Tineola bisselliella.

From the order of the Siphonaptera, for example, Ctenocephalides canis, Ctenocephalides felis, Pulex irritans, Tunga penetrans, Xenopsylla cheopis.

From the order of the Hymenoptera, for example, Camponotus herculeanus, Lasius fuliginosus, Lasius niger, Lasius umbratus, Monomorium pharaonis, Paravespula spp., Tetramorium caespitum.

From the order of the Anoplura, for example, Pediculus humanus capitis, Pediculus humanus corporis, Phthirus pubis.

From the order of the Heteroptera, for example, Cimex hemipterus, Cimex lectularius, Rhodinus prolixus, Triatoma infestans.

In the field of household insecticides, they are used alone or in combination with other suitable active compounds, such as phosphoric acid esters, carbamates, pyrethroids, growth regulators or active compounds from other known classes of insecticide.

They are used as aerosols, pressure-free spray products, for example pump and atomizer sprays, automatic fogging systems, foggers, foams, gels, evaporator products with evaporator tablets made of cellulose or polymer, liquid evaporators, gel and membrane evaporators, propeller-driven evaporators, energy-free or passive evaporation systems, moth papers, moth bags and moth gels, as granules or dusts, in baits for spreading or in bait stations.

Examples

The following abbreviations are used in the descriptions

ACN	acetonitrile
aq.	aqueous
DCI	direct chemical ionisation
DCM	dichloromethane
DMF	N,N-dimethylformamide
DMSO	dimethylsulfoxide
EDTA	ethylenediamine tetra-acetic acid
ESI	electro-spray ionisation
FCS	Fetal calf serum
h	hour / hours
HPLC	high pressure liquid chromatography
LC/MS	liquid chromatography-coupled mass spectroscopy
min.	minute(s)
MS	mass spectroscopy
NMR	nuclear magnetic resonance spectroscopy
PBS	Phosphate buffered saline
RP	reverse phase (HPLC)
R_t	retention time (HPLC)
rt	room temperature
SDS	Sodium dodecyl sulphate
TFA	trifluoroacetic acid
THF	tetrahydrofuran
UV	ultraviolet
UV/Vis	ultraviolet-visual
% of th.	% of theoretical yield

General Experimental Procedures

Chemicals are obtained in analytical grade from Merck (Darmstadt, Germany) or Sigma-Aldrich (Deisenhofen, Germany). NMR spectra are recorded in DMSO-d_6 using a Bruker DRX 500 spectrometer (operating at 500.13 MHz proton frequency).

HPLC-MS analyses are performed using a Agilent HP1100 liquid chromatograph coupled with a LCT mass spectrometer (Micromass, Manchester, UK) in the positive and negative electrospray ionisation (ESI) mode, based on slight modification of a previously described method (M. Stadler et al., *Phytochemistry, 56,* 787-793). A Waters symmetry column is used as stationary phase. Mobile phase A: 0.1 % formic acid in water, mobile phase B: 0.1 % formic acid in acetonitrile; gradient: 0-1 min. 100 % A, from 1-6 min. to 90 % B, from 6 to 8 min to 100 %B, from 8-10min 100 % B. LC-MS spectra are recorded in the range of molecular weights between 150 and 1.600.

HPLC-UV/Vis analyses are carried out in analogy to M. Stadler et al., *Mycol. Res.,* 2001, *105,* 1190-1205 on a HP 1100 Series analytical HPLC system (Agilent, Waldbronn, Germany) comprising a G 1312A binary pump system, a G 1315A diode array detector, a G 1316A column compartment, a G 1322A degaser and a G 1313A autoinjector. As mobile phase, 0.01% phosphonic acid: acetonitrile is chosen, while a Merck (Darmstadt, Germany) Lichrospher RP 18 column (125 x 4 mm, particle size 7 µm) serves as stationary phase. Aliquots of the samples (representing 2 – 10 µg of methanol-soluble materials, according to the concentrations of main metabolites) are analysed at 40°C with a flow of 1 ml/min in the following gradient: Linear from 0% acetonitrile to 100% acetonitrile in 10 min, thereafter isocratic conditions at 100% acetonitrile for 5 min; followed by regeneration of the column for 5 min. HPLC-UV chromatograms are recorded at 210 nm with a reference wavelength of 550 nm and a bandwidth of 80 nm. Diode array detection (DAD) is employed to record HPLC-UV/Vis spectra in the range of 210 – 600 nm. The HP ChemStation software allows for an automated search for calibrated standard compounds in crude extracts.

Preparative HPLC is performed at room temperature on a preparative HPLC system (Gilson Abimed, Ratingen, Germany), comprising Gilson Unipoint software, 306 binary pump system, 205 fraction collector, 119 UV-Vis detector, 806 manometric module, and 811C dynamic mixer, using different gradients and stationary phases as described below.

NMR spectra are recorded on a Bruker DMX500, operating at 500.13 MHz proton frequency. All spectra are measured in DMSO-d_6 solution at 302 K. The solvent peak is used as internal reference for both proton and carbon chemical shifts (δ_H: 2.50, δ_C: 39.5).

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Characterisation and maintenance of strain JS360

Culture media

Yeast-Malt-Glucose (YMG) medium: D-glucose 0.4%, malt extract 1%, yeast extract 0.4%, pH 7.2.

Q6 medium: D-glucose 0.5%, glycerol 2%, cotton seed meal 1%, calcium carbonate 0.1%, tap water, no pH adjustment.

C medium: D-glucose 1%, yeast extract 1%, NZ amine (Sheffield Chemicals, Sheffield, U.K., Lot ONA 20 2) 0.5%, soluble starch 2%, after pH adjustment to pH 7,2 with sodium carbonate addition of calcium carbonate 0.4%.

GS medium: D-glucose 2%, deoiled soymeal (Soyamin 50 T, Degussa, Düsseldorf, Germany) 2%, soluble starch 2%, calcium carbonate 0.5%, sodium chloride 0.25%, magnesium sulfate 0.05%, monopotassium phosphate 0.025%, pH adjustment to 6.5-6.8.

MC medium: D-glucose 1%, yeast extract 0.5%, deoiled soymeal (Soyamin 50 T, Degussa, Düsseldorf, Germany) 1%, soluble starch 1%, sodium chloride 0.5%, calcium carbonate 0.3%, pH adjustment to 7.2 (0.1N sodium hydroxide solution).

MCPM medium: Diamalt Maltzin hell (Meistermarken GmbH, Bremen, Germany) 3.5%, NZ amine (Sheffield Chemicals, Sheffield, U.K., Lot ONA 20 2) 1%, sodium chloride 0.3%, monopotassium phosphate 0.1%, magnesium sulfate 0.05%, ferrous sulfate 0.01%, pH 6.8.

MS medium: Mannitol 2%, Soymeal defatted (Soyamin 50 T, Degussa, Düsseldorf, Germany) 2%, calcium carbonate 0.3%, pH adjustment to 7.5.

SP medium: Mannitol 3%, yeast extract 0.75%, soluble starch 0.2%, soy peptone (Merck, Darmstadt, Germany # 107212.0500)) 0.5%, pH adjustment to 6.0 (hydrochloric acid).

Strain JS360 is obtained from a soil sample collected in Japan. It is maintained at the Bayer AG culture collection (Wuppertal, Germany) in 10% glycerol under liquid nitrogen. It has also been deposited at DSMZ (Deutsche Sammlung für Mikroorganismen und Zellkulturen, Mascheroder Weg 1b, D-38124 Braunschweig, Germany), on November 27, 2002 under the designation number DSM 15324.

On YMG medium, single colonies of strain JS360 attain a diameter of 24 mm after incubation for 12 days. The colonies develope a white, fluffy aerial mycelium, while the substrate mycelium is

creamish. The reverse of the culture is reddish brown, and a reddish pigment is released into the medium.

Fermentation and extraction of strain JS360

1: Seed culture

Two ml of a 10% glycerol culture are used to inoculate 1 l Erlenmeyer flasks containing 150 ml of sterile YMG medium and propagated on a rotary shaker at 28°C and 240 rpm for 72-96 h.

2: Fermentation of strain JS360 in flask scale

After inoculation from a well-grown YMG seed culture (10 ml inoculum per flask), strain JS360 is propagated in ten 1 l Erlenmeyer flasks containing 150 ml of Q6 medium (see above) and propagated on a rotary shaker at 28°C and 240 rpm for 118 h. During fermentation, daily samples are taken. The pH is determined, and free glucose is estimated using Bayer Diastix Harnzuckerstreifen. The wet mycelium is separated from the fluid by centrifugation (10 min. at 3000x g) and extracted with 2 l of acetone. The acetone is evaporated in vacuo (40°C). The remaining aqueous residue is diluted with water to 500 ml and extracted three times with equal amounts of ethyl acetate. The combined organic phases are dried over sodium sulfate and evaporated in vacuo (40°C) to yield 830 mg of crude extract, which is thereafter subjected to preparative HPLC as described below (isolation).

The culture fluid is applied onto an adsorption column containing 500 ml of Bayer Lewapol CA 9225 resin and rinsed with 1 l water. The column is eluted with 1.5 l acetone:methanol 4:1. The solvent is evaporated in vacuo (40°C). The remaining aqueous residue is diluted with water to 500 ml and extracted three times with equal amounts of ethyl acetate. The combined organic phases are dried over sodium sulfate and evaporated in vacuo (40°C) to yield 650 mg of crude extract, which is thereafter subjected to preparative HPLC as described below (isolation).

3: Fermentation of strain JS360 in 30 l scale (stirring fermentor)

A 40 l Biostat P fermentor (Braun Bioengeneering, Melsungen, Germany) containing 30 l of Q6 medium is sterilized in situ (1 h at 121 °C and 1.1 bar) and inoculated with two well-grown 150 ml YMG seed cultures that have been propagated for 76 h. The production culture is grown under stirring (240 rpm) and aeration (0.3 vvm). The pH is determined, and free glucose is estimated using Bayer Diastix Harnzuckerstreifen. In addition, the fermentor is equipped with a Braun

oxygen electrode to determine oxygen saturation of the culture broth. Analytical HPLC of crude extracts prepared from 50 ml samples taken under sterile conditions and extracted with equal amounts of ethyl acetate serve as a means of detection for example 1. Examples 2 and 3 are also detected during fermentation by HPLC-MS but cannot be estimated in the native crude extracts, due to limited amounts and co-eluting other metabolites with similar retention times in the employed HPLC system. The ethyl acetate extracts are dried over sodium sulfate, evaporated to dryness, redissolved in methanol and analyzed using the HPLC-UV systems described in General Experimental Procedures. While the culture is fully saturated as deduced from the oxygen saturation values, the pH drops to values of ca. 4.5. After the free glucose in the medium is consumed, production of example 1 as estimated by analytical HPLC methodology starts at about 60 h of fermentation and reaches an optimum after 114 h. Then, the culture is harvested because at later stages degradation of example 1 is observed. After harvest of the culture, the fluid is separated from the mycelium by centrifugation (10 min. at 3000x g) and applied onto a column filled with Bayer Lewapol CA 9225 adsorption resin and rinsed with 5 l water. The column is thereafter eluted with 6 l acetone:methanol 4:1. The eluates are evaporated in vacuo (40°C) to yield an aqueous residue, which is diluted to 1 l with water and extracted three times with 1 l ethyl acetate. The organic phases are combined, dried over sodium sulfate and evaporated in vacuo (40°C). The resulting extract (22.7 g) is thereafter subjected to preparative HPLC as described below (isolation).

The mycelium is extracted three times with each 5 l of acetone, and the acetone is evaporated in vacuo (40°C) to yield an aqueous residue, which is diluted to 1 l with water and extracted three times with 1 l ethyl acetate. The organic phases are combined, dried over sodium sulfate and evaporated in vacuo (40°C). The resulting extract (13.4 g) is thereafter subjected to preparative HPLC as described below (isolation).

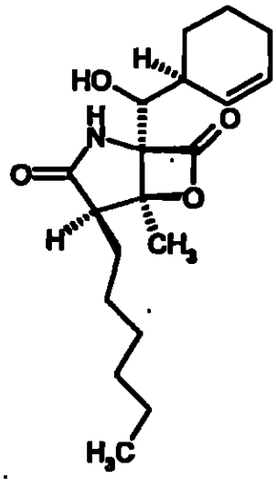
4. Fermentation in other culture media (flask scale)

Strain JS 360 is propagated in various other culture media in attempts to optimize production of example 1 and chemically related metabolites. For this purpose, shake flask fermentations are carried out in a similar manner as described for the one in Q6 medium (see 2. above). 1 l Erlenmeyer flasks containing 150 ml of the media are thus propagated on a rotary shaker at 28°C and 240 rpm for up to 118 h. During fermentation, daily samples are taken. The pH is determined, and free glucose is estimated using Bayer Diastix Harnzuckerstreifen. Aliquots of the culture broth (50 ml) are extracted with ethyl acetate. These ethyl acetate extracts are dried over sodium sulfate, evaporated to dryness, redissolved in methanol and analyzed using the HPLC-UV and HPLC-MS systems described in General Experimental Procedures. By comparison of retention times and

spectra, example 1 and related compounds are detected in the following culture media: YM medium, C medium, GS medium, MC medium, MCPM medium, MS medium, and SP medium after 72-96 hours of fermentation. The highest yields of example 1, however, are observed in Q6 and GS media.

Example 1

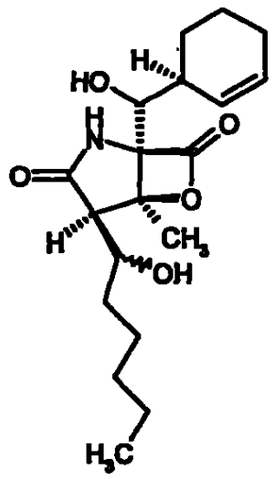
(1R,4R,5S)-1-[(S)-(1S)-2-cyclohexen-1-yl(hydroxy)methyl]-4-hexyl-5-methyl-6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione



Preparation see below.

Example 2

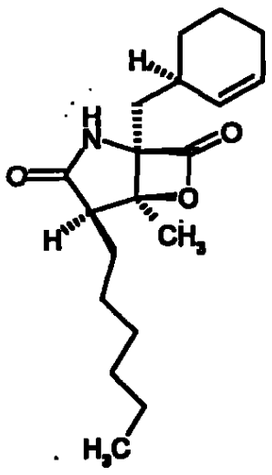
(1R,4R,5S)-1-[(S)-(1S)-2-cyclohexen-1-yl(hydroxy)methyl]-4-[1-hydroxy-hexyl]-5-methyl-6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione



Preparation see below.

Example 3

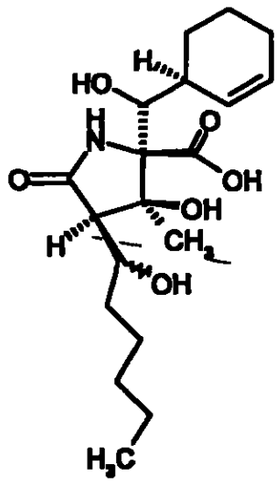
(1R,4R,5S)-1-[(1R)-2-cyclohexen-1-ylmethyl]-4-hexyl-5-methyl-6-oxa-2-aza-bicyclo[3.2.0]heptane-3,7-dione



Preparation see below.

Example 4

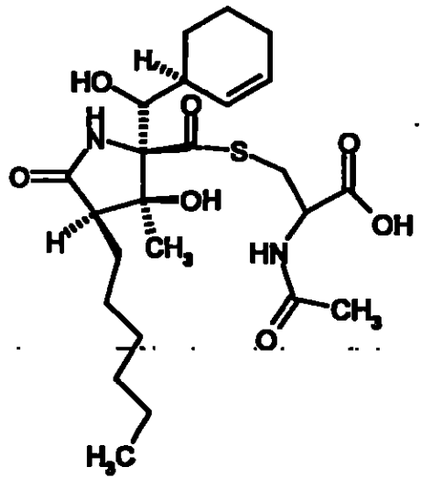
(3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-yl(hydroxy)methyl]-3-hydroxy-4-[1-hydroxy-hexyl]-3-methyl-5-oxo-D-proline



Preparation see below.

Example 5

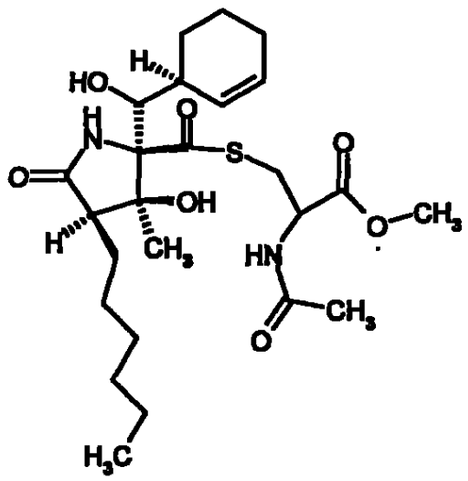
N-acetyl-S-({(2R,3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-yl(hydroxy)methyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinyl}carbonyl)cysteine



Preparation see below.

Example 6

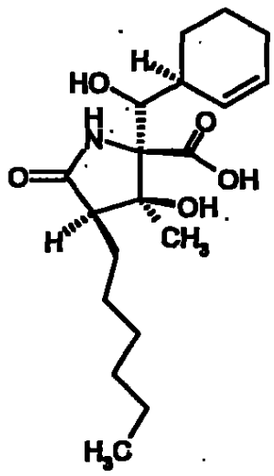
methyl N-acetyl-S-({(2R,3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-yl(hydroxy)methyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinyl}carbonyl)cysteinate



Preparation see below.

Example 7

(3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-yl(hydroxy)methyl]-3-hydroxy-4-hexyl-3-methyl-5-oxo-D-proline



The stereochemistry of examples 2 to 7 is drawn in analogy to the structure of example 1 which is determined via X-ray analysis.

Isolation of examples 1 to 7

1. Materials from shake flask fermentations

The crude extracts (620 mg from the mycelium and 830 mg from the culture fluid,

respectively) are dissolved in 5 ml of methanol, filtered through a Bond Elut C18 500 mg solid phase extraction cartridge (Baker, Deventer, The Netherlands) and applied onto a MZ Analysentechnik (Mainz, Germany) Kromasil RP 18 column (particle size, 7 µm; 250 x 40 mm). As mobile phase, a gradient of 0.01% TFA: acetonitrile is employed at a flow of 10 ml/min: 20 % acetonitrile at t = 0 min; linear gradient: 20% to 50% acetonitrile in 40 min; thereafter linear gradient from 50% to 100% acetonitrile in 20 min; thereafter isocratic conditions at 75% acetonitrile for 30 min, thereafter regeneration of the column. Fractions are combined according to UV adsorption at 210 nm. Example 1 is eluted at a retention time (R_t) of 80-83 min. and is obtained in amounts of 14 mg from the mycelial extract and 1.5 mg from the culture fluid extract, respectively. Examples 2 to 5 and 7 are located in minor intermediate fractions and not isolated to purity from this extract, while example 6 is not detected at all.

2: Materials from 30 l scale fermentation

Aliquots of 2.5-3 grams of the crude extracts which are prepared as described above (13.4 g from mycelium, 22.7 g from culture fluid) are dissolved in 5 ml of methanol, filtered through a Bond Elut C18 500 mg solid phase extraction cartridge (Baker, Deventer, The Netherlands) and applied onto a MZ Analysentechnik (Mainz, Germany) Kromasil RP 18 column (particle size, 7 µm; 250 x 40 mm; mobile phase, 0.01% TFA: acetonitrile). As mobile phase, a gradient of 0.01% TFA: acetonitrile is employed at a flow of 10 ml/min: 20 % acetonitrile at t = 0 min; linear gradient: 20% to 50% acetonitrile in 40 min; thereafter linear gradient from 50 % to 100% acetonitrile in 20 min; thereafter isocratic conditions at 75% acetonitrile for 30 min, thereafter regeneration of the column. Fractions are combined according to UV adsorption at 210 nm. Five bioactive intermediate products are thus obtained. Their retention times (R_t) in this gradient system are observed as follows: 61-64 min. for intermediate product 1 (containing example 4 and 7), 65-71 min. for intermediate product 2 (containing examples 5 and 6), 72-79 min. for intermediate product 3 (containing example 2), 79-85 min. for intermediate product 4 (containing example 1) and 86-93 min. for intermediate product 5 (containing example 3).

Final purification of active components in intermediate products 1 to 5 is obtained by preparative reversed phase HPLC, using a flow of 7 ml/min and a MZ Analysentechnik Inertsil C18 column (7 µm; 250 x 30 mm) as stationary phase and the following gradient. Isocratic conditions from t = 0 min => t = 30 min; thereafter linear gradient from 30% acetonitrile => 100% acetonitrile in 50 min, thereafter isocratic conditions (100%

acetonitrile) for 20 min, thereafter regeneration of the column. Yields and R_t of examples 1 to 6 are summarized in table 1.

Table 1

Example	Yield (Culture fluid extract)	Yield (Mycelial ectract)	R_t (min)
1	14 mg	160 mg	59-65
2	29 mg	43 mg	33-35
3	5 mg	18 mg	77-80
4	12 mg	17 mg	51-54
5	2 mg	14 mg	69-71
6	(not isolated)	2 mg	72-73
7	19 mg	(not isolated)	55-58

Characterization of example 1 to 7

Example 1 to 6 are detected by HPLC-UV and HPLC-MS using the methods described in General Experimental Procedures. Their characteristics in analytical HPLC systems are summarized in table 2. While examples 1, 2, 4 and 7 give conclusive results regarding their molecular peaks, the LC-MS of example 3 only reveals the molecular peak in the positive ESI mode, while due to loss of carbon dioxide in the negative ESI mode, a smaller major mass fragment is observed. In examples 5 and 6, dimers are readily formed under the employed HPLC-MS conditions, and the major LC-MS signal thus relates to these dimers, while the molecular peaks only constitute minor signals. These characteristics also serve to identify the examples by analytical HPLC in fermentation broths and intermediate fractions obtained during extraction, downstream processing and chromatography.

Table 2

Example	R_t (HPLC-UV-Vis) [min]	R_t (HPLC-MS) [min]	Molecular peak m/z (pos. ESI)	Molecular peak m/z (neg. ESI)
1	8.95-8.97	6.39-6.43	336 $(M+H)^+$	334 $(M-H)^-$
2	7.75-7.85	5.73-5.81	352 $(M+H)^+$	350 $(M-H)^-$
3	9.74-9.76	6.86-6.90	320 $(M+H)^+$	276 $(M-CO_2-H)^+$
4	6.85-6.87	5.28-5.30	368 $(M+H)^+$	370 $(M-H)^-$
5	7.41-7.43	5.61-5.63	499 $(M+H)^+$; 997 $(2M+H)^+$	497 $(M-H)^-$; 995 $(2M-H)^-$
6	8.00-8.05	5.81-5.84	513 $(M+H)^+$; 1025 $(2M+H)^+$	511 $(M-H)^-$
7	7.48-7.51	5.57-5.61	354 $(M+H)^+$	352 $(M-H)^-$

The structures of examples 1 to 7 are determined by low-resolution and high-resolution LC-MS spectrometry and by one- and two-dimensional NMR (nuclear magnetic resonance) spectroscopy. For instrumental parameters see General Experimental Procedures.

NMR data reveal the presence of a *cis*-double bond inside a cyclohexyl ring. The close analysis of HSQC, HMBC and COSY/TOCSY data allows to establish the bicyclic ring structure, which, together with the cyclohexenylcarbinol moiety, is identical to that found in *Salinosporamide A*. HSQC data point toward the presence of at least two methyl groups in each molecule. Together with TOCSY and HMBC, a non-branched hexyl moiety is identified. An unambiguous crosspeak in the COSY spectrum locates this chain at the 2-position in the heterocyclic ring system. Examples 7 (as compared to example 1) and example 4 (as compared to example 2), are revealed by NMR and MS data to constitute the respective *seco*-forms of the corresponding beta-lactone molecules. The presence of an additional hydroxyl group (compared to Salinosporamide *A*) at the

12-position (examples 2 and 4) becomes evident because of the multiplicity and the characteristic carbon and proton chemical shifts.

The NMR spectra of examples 5 and 6 show a complete new subset of signals that belong to an N-acylated cysteine moiety. The N-acetyl-cysteine is linked to the heterocylic ring structure via the carbonyl group of the former beta lactone ring, or the carboxyl group of example 7, respectively. The thioester link is identified by its carbonyl chemical shift (> 200 ppm) and HMBC derived connectivity to the cysteine beta-hydrogens. All connectivities inside the cysteine residue are established by assigning the corresponding signals in HMBC and COSY spectra. Thus, the structures of examples 5 and 6 are analogous to that of lactacystin.

Spectroscopic data

Example 1

^{1}H-NMR (500 MHz, DMSO-d_6): δ = 0.87 (t), 1.28 (m), 1.29 (m), 1.23 (m), 1.40 (m), 1.45 (m), 1.47 (m), 1.54 (m), 1.58 (m), 1.68 (m), 1.74 (s), 1.80 (m), 1.90 (m), 2.29 (m), 2.41 (t), 3.65 (m), 5.47 (m), 5.73 (m), 5.81 (m), 8.92 (s).

^{13}C-NMR (DMSO-d_6): δ = 13.8, 21.7, 21.8, 24.2, 25.2, 26.1, 26.8, 28.5, 30.8, 37.3, 47.5, 69.3, 78.4, 86.4, 127.8, 128.6, 169.1, 174.1.

Example 2

^{1}H-NMR (500 MHz, DMSO-d_6): δ = 0.88 (t), 1.27 (m), 1.29 (m), 1.35 (s), 1.37 (m), 1.49 (m), 1.58 (m), 1.59 (m), 1.71 (m), 1.75 (m), 1.93 (m), 2.35 (d), 2.76 (m), 3.49 (m), 4.00 (d), 4.68 (m), 5.70 (m), 5.91 (m), 6.11 (br.), 8.52 (s).

^{13}C-NMR (DMSO-d_6): δ = 13.4, 21.0, 21.4, 23.7, 24.2, 29.6, 30.1, 31.5, 36.1, 54.6, 69.4, 75.0, 76.0, 76.5, 127.9, 170.9, 172.3.

Example 3

^{1}H-NMR (500 MHz, DMSO-d_6): δ = 0.88 (t), 1.27 (m), 1.30 (m), 1.31 (m), 1.33 (m), 1.46 (m), 1.48 (m), 1.50 (m), 1.61 (s), 1.62 (m), 1.63 (m), 1.76 (m), 1.92 (m), 2.27 (m), 2.55 (t), 5.45 (m); 5.68 (m), 8.98 (s).

^{13}C-NMR (DMSO-d_6): δ = 13.3, 19.6, 21.4, 24.0, 24.2, 26.5, 28.2, 28.5, 29.9, 30.9, 32.5, 46.7, 74.0, 86.1, 127.7, 130.9, 170.4, 170.8.

Example 4

^{1}H-NMR (500 MHz, DMSO-d_6): δ = 0.82 (m), 1.17 (m), 1.20 (m), 1.24 (m), 1.32 (m), 1.47 (m), 1.60 (m), 1.62 (m), 1.63 (m), 1.84 (m), 2.08 (m) 2.44 (d), 3.68 (m), 3.80 (m), 5.60 (m), 5.76 (m).

^{13}C-NMR (DMSO-d_6): δ = 13.1, 20.1, 20.6, 21.0, 23.5, 23.6, 30.5, 33.5, 37.7, 52.7, 67.1, 73.6, 75.2, 80.1, 126.3, 128.6, 171.2, 176.5.

Example 5

^{1}H-NMR (500 MHz, DMSO-d_6): δ = 0.87 (m), 1.09 (m), 1.24 (m), 1.25 (m), 1.27 (m), 1.33 (m), 1.35 (m), 1.37 (m), 1.44 (m), 1.46 (m), 1.50 (m), 1.61 (m), 1.64 (m), 1.84 (s), 1.87 (m), 2.13 (m), 2.47 (t), 2.96 (m), 3.30 (m), 3.78 (m), 4.36 (m), 5.64 (m), 5.79 (m).

^{13}C-NMR (DMSO-d_6): δ = 13.9, 20.8, 21.7, 22.0, 22.1, 22.2, 23.4, 24.3, 26.8, 27.7, 28.7, 29.2, 31.1, 38.1, 50.3, 51.0, 75.3, 79.7, 80.6, 127.0, 129.3, 169.3, 178.9, 201.2.

Example 6

^{1}H-NMR (500 MHz, DMSO-d_6): δ = 0.87 (m), 1.09 (m), 1.24 (m), 1.25 (m), 1.27 (m), 1.33 (m), 1.35 (m), 1.37 (m), 1.44 (m), 1.46 (m), 1.50 (m), 1.61 (m), 1.64 (m), 1.84 (s), 1.87 (m), 2.13 (m), 2.47 (t), 3.00 (m), 3.24 (m), 3.64 (s), 3.78 (m), 4.39 (m), 5.64 (m), 5.79 (m).

^{13}C-NMR (DMSO-d_6): δ = 13.6, 20.8, 21.7, 22.0, 22.1, 23.4, 24.3, 26.8, 27.7, 28.7, 29.3, 31.1, 38.1, 50.3, 51.4, 51.8, 75.3, 79.7, 80.6, 127.0, 129.3, 169.3, 171.0, 178.9, 201.2.

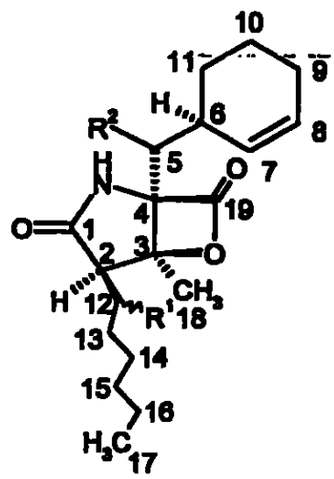
Example 7

^{1}H-NMR (500 MHz, DMSO-d_6): δ = 0.86 (t), 1.25 (m), 1.26 (m), 1.33 (m), 1.34 (m), 1.36 (m), 1.44 (m), 1.46 (s), 1.51 (m), 1.66 (m), 1.67 (m), 1.88 (m), 2.12 (m), 2.45 (t), 3.77 (d), 5.64 (m), 5.82 (m), 7.66 (s).

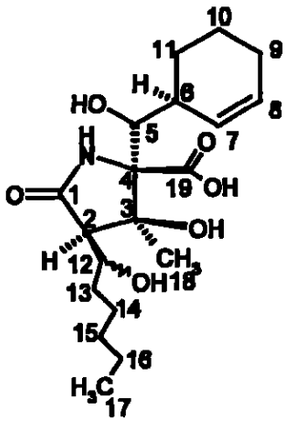
^{13}C-NMR (DMSO-d_6): δ = 13.8, 20.3, 21.5, 21.7, 23.3, 24.4, 26.5, 27.9, 28.9, 31.0, 38.5, 50.5, 74.6, 75.5, 80.4, 127.4, 129.7, 177.5.

Interpretation of the NMR-peak-lists:

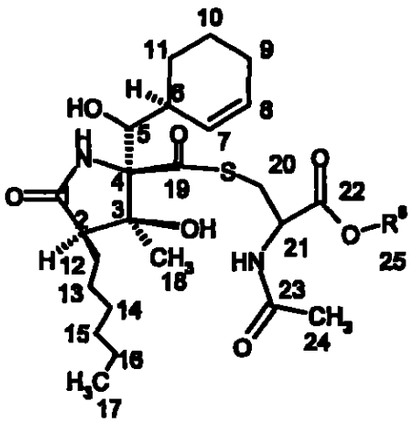
example 1: R^1 = H, R^2 = OH, example 2: R^1 = OH, R^2 = OH, example 3: R^1 = H, R^2 = H.



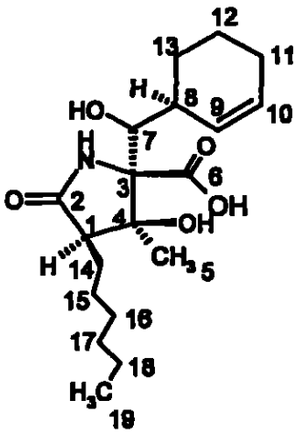
example 4, example 5: R^8 = H, example 6: R^8 = CH_3, example 7 (stereochemistry has not been determined by NMR).



example 4



example 5 and 6



example 7

Table 3a

Chemical shifts for the examples 1 to 3, as measured at 500 MHz, at 302 K in DMSO-d_6.

carbon	example 1	example 2	example 3
C-1	174.1	172.3	170.8
C-2	47.5	54.6	46.7
C-3	86.4	76.0**	86.1
C-4	78.4	69.4**	74.0
C-5	69.3	75.0	32.5
C-6	37.3	36.1	29.9
C-7	128.6	127.9	130.9
C-8	127.8	127.9	127.7
C-9	25.2	24.2	24.0
C-10	21.7	21.0	19.6
C-11	26.1	29.6	28.2
C-12	24.2	76.5	24.2
C-13	26.8	31.5	26.5
C-14	28.5	23.7	28.5
C-15	30.8	30.1	30.9
C-16	21.8	21.4	21.4

carbon	example 1	example 2	example 3
C-17	13.8	13.4	13.3
C-18	21.8	21.4	21.4
C-19	169.1	170.9	170.4

++ *These resonance assignments can be interchanged*

Table 3b

Chemical shifts for the examples 4 to 6, as measured at 500 MHz, at 302 K in DMSO-d_6.

carbon	example 4	example 5	example 6
C-1	176.5	178.9	178.9
C-2	52.7	50.3	50.3
C-3	80.1	80.6	80.6
C-4	75.2	79.7	79.7
C-5	73.6	75.3	75.3
C-6	37.7	38.1	38.1
C-7	128.6	129.3	129.3
C-8	126.3	127.0	127.0
C-9	23.5	24.3	24.3
C-10	20.6	21.7	21.7
C-11	23.6	26.8	26.8
C-12	67.1	23.4	23.4
C-13	33.5	27.7	27.7
C-14	23.6	28.7	28.7
C-15	30.5	31.1	31.1
C-16	21.0	22.0	22.0
C-17	13.1	13.9	13.6
C-18	20.1	20.8	20.8
C-19	171.2	201.2	201.2
C-20	-	29.2	29.3
C-21	-	51.0	51.4
C-22	-	169.3	171.0
C-23	-	22.2	169.3

carbon	example 4	example 5	example 6
C-24	-	22.1	22.1
C-25	-	-	51.8

Table 3c

Chemical shifts for the example 7, as measured at 500 MHz, at 302 K in DMSO-d_6.

carbon	example 7
C-1	50.5
C-2	177.5
C-3	75.5
C-4	80.4
C-5	20.3
C-6	-
C-7	74.6
C-8	38.5
C-9	129.7
C-10	127.4
C-11	24.4
C-12	21.5
C-13	26.5
C-14	23.3
C-15	27.9
C-16	28.9
C-17	31.0
C-18	21.7
C-19	13.8

Table 4a

Chemical shifts for the examples 1 to 3, as measured at 500 MHz, at 302 K in DMSO-d_6.

proton	example 1	example 2	example 3
H-1	-	-	-
H-2	2.41 t	2.35 d	2.55 t

proton	example 1	example 2	example 3
H-3	-	-	-
H-4	-	-	-
H-5	3.65 m	3.49 m	1.76 m
H-6	2.29 m	2.76 m	2.27 m
H-7	5.81 m	5.91 m	5.45 m
H-8	5.73 m	5.70 m	5.68 m
H-9	1.90,1.90 m	1.93, 1.93 m	1.92, 1.92 m
H-10	1.40, 1.68 m	1.75, 1.49 m	1.46, 1.63 m
H-11	1.23, 1.80 m	1.59, 1.71 m	1.33, 1.33 m
H-12	1.47, 1.58 m	4.68 m	1.62, 1.50 m
H-13	1.45, 1.54 m	1.58, 1.58 m	1.48, 1.48 m
H-14	1.29, 1.29 m	1.37, 1.37 m	1.31, 1.31 m
H-15	1.28, 1.28 m	1.27, 1.27 m	1.27, 1.27 m
H-16	1.28, 1.28 m	1.29, 1.29 m	1.30, 1.30 m
H-17	0.87 t	0.88 t	0.88 t
H-18	1.74 s	1.35 s	1.61 s
H-19	-	-	-
H-N	8.92 s	8.52 s	8.98 s
H-O-C-5	5.47	4.00 d	-
H-O-C-12	-	6.11 (ext.)	-

Table 4b

Chemical shifts for the examples 4 to 6, as measured at 500 MHz, at 302 K in DMSO-d_6.

proton	example 4	example 5	example 6
H-1	-	-	-
H-2	2.44 d	2.47 t	2.47 t
H-3	-	-	-
H-4	-	-	-
H-5	3.68 m	3.78 m	3.78 m
H-6	2.08 m	2.13 m	2.13 m
H-7	5.76 m	5.79 m	5.79 m
H-8	5.60 m	5.64 m	5.64 m

proton	example 4	example 5	example 6
H-9	1.84 m	1.87 m	1.87 m
H-10	1.62,1.32 m	1.61,1.33 m	1.61,1.33 m
H-11	1.63,1.17 m	1.64,1.09 m	1.64,1.09 m
H-12	3.80 m	1.46,1.37 m	1.46,1.37 m
H-13	1.60 m	1.50,1.35 m	1.50,1.35 m
H-14	1.32,1.20 m	1.24 m	1.24 m
H-15	1.20 m	1.25 m	1.25 m
H-16	1.24 m	1.27 m	1.27 m
H-17	0.82	0.87	0.87
H-18	1.47	1.44	1.44
H-19	-	-	-
H-20	-	3.30,2.96 m	3.24,3.00 m
H-21	-	4.36 m	4.39 m
H-22	-	-	-
H-23	-	-	-
H-24	-	1.84 s	1.84 s
H-25	-	-	3.64 s

Table 4c

Chemical shifts for the example 7, as measured at 500 MHz, at 302 K in DMSO-d_6.

proton	example 7
H-1	2.45 t
H-5	1.46 s
H-7	3.77 d
H-8	2.12 m
H-9	5.82 m
H-10	5.64 m
H-11	1.88, 1.88 m
H-12	1.36,1.66 m
H-13	1.67,1.25 m
H-14	1.34,1.44 m
H-15	1.33,1.51 m

H-16	1.25 m
H-17	1.25 m
H-18	1.26 m
H-19	0.86 t
N-H	7.66 s

High resolution mass spectrometry

example 1: ESI- ; Mass found: 334.1977, calculated: 334.2014 (corresponding to a deviation of 4.1 mDa for the molecular formula $C_{19}H_{28}NO_4$)

example 2: ESI- ; Mass found: 350.1968, calculated: 350.1967 (corresponding to a deviation of 0.1 mDa for the molecular formula $C_{19}H_{28}NO_5$)

example 3: ESI+ ; Mass found: 276.2388, calculated 276.2327 (corresponding to a deviation of 6.1 mDa for the molecular formula $C_{18}H_{30}NO$). Here, only the fragment (M – CO_2) could be observed under the ESI conditions.

example 4: ESI+ ; Mass found: 368.2107, calculated 368.2073 (corresponding to a deviation of 3.3 mDa for the molecular formula $C_{19}H_{31}NO_6$

example 5: ESI- ; Mass found: 497.2322, calculated: 497.2321 (corresponding to a deviation of 0.0 mDa for the molecular formula $C_{24}H_{38}N_2O_7S$)

example 6: ESI- ; Mass found: 511.2594, calculated: 511.2478 (corresponding to a deviation of 11.6 mDa for the molecular formula $C_{25}H_{40}N_2O_7S$)

example 7: ESI+ ; Mass found: 354.2268, calculated 354.2280 (corresponding to a deviation of 1.3 mDa for the molecular formula $C_{19}H_{32}NO_5$).

Examples for the synthesis of compounds according to the invention according to process B

Methyl 5*S*-isopropyl-2-phenyl-4,5-dihydro-1,3-oxazole-4*R*-carboxylate was synthesized by the method described in the literature (J. Am. Chem. Soc. 1999, 121, 9967-9976).

Methyl 4-[2-hydroxy-3-(methoxycarbonyl)-nonyl]-5*S*-isopropyl-2-phenyl-4,5-dihydro-1,3-oxazole-4*R*-carboxylate

To a solution of 2.00g (8.10 mmol) methyl 5*S*-isopropyl-2-phenyl-4,5-dihydro-1,3-oxazole-4*R*-carboxylate in dry THF (45 mL) was added 16.2 ml LHMDS (1M in THF, 16.2 mmol) at -80 °C. After 60 min 32.4 ml of dimethylaluminium chloride (1 M in hexane) was added dropwise over 45 min and stirring was continued for 90 min at -80 °C. A solution of 4.86 g (24.3 mmol) methyl 2-acetyloctanoate in 10 ml THF was added over a period of 15 min. The reaction mixture was then warmed up to -20 °C and stirring was continued for 60 min. After recooling to -75 °C 20 ml saturated aqueous ammonium chloride was added. The mixture was poured to 100 ml saturated aqueous ammonium chloride, 20 ml of 6N HCl and 100 ml ethyl acetate. The aqueous layer was extracted with ethyl acetate and the combines organic layers were washed successively with 100 ml water, 100 ml saturated aqueous NaHCO3 and brine and finally dried over NaSO4. After evaporation of the solvent the residue was purified by chromatography on silica (cyclohexane/ethyl acetate) yielding the four diastereomers:

Methyl 4-[2*S*-hydroxy-3*S*-(methoxycarbonyl)-nonyl]-5*S*-isopropyl-2-phenyl-4,5-dihydro-1,3-oxazole-4*R*-carboxylate: 365 mg, logP 5.93;

An inseparable mixture of Methyl 4-[2*S*-hydroxy-3*R*-(methoxycarbonyl)-nonyl]-5*S*-isopropyl-2-phenyl-4,5-dihydro-1,3-oxazole-4*R*-carboxylate (MATA107-4-3) and Methyl 4-[2*R*-hydroxy-3*S*-(methoxycarbonyl)-nonyl]-5*S*-isopropyl-2-phenyl-4,5-dihydro-1,3-oxazole-4*R*-carboxylate: 560 mg, logP 5.48 and 5.56;

Methyl 4-[2*R*-hydroxy-3*R*-(methoxycarbonyl)-nonyl]-5*S*-isopropyl-2-phenyl-4,5-dihydro-1,3-oxazole-4*R*-carboxylate: 520 mg, logP 5.32;

Methyl 4*R*-hexyl-3*S*-hydroxy-2*R*-[1*S*-hydroxy-2-methylpropyl]-3-methyl-5-oxo-pyrrolidine-2-carboxylate and Methyl 4*S*-hexyl-3*R*-hydroxy-2*R*-[1*S*-hydroxy-2-methylpropyl]-3-methyl-5-oxo-pyrrolidine-2-carboxylate

A solution of 500 mg of a inseparable mixture of methyl 4-[2*R*-hydroxy-3*R*-(methoxycarbonyl)-nonyl]-5*S*-isopropyl-2-phenyl-4,5-dihydro-1,3-oxazole-4*R*-carboxylate and 784 mg of 20 %

Pd(OH)2/C in 6 ml MeOH/AcOH (9:1) was stirred under 20 bar hydrogen for 72 h at ambient temperature. After filtration over silica the solvents were evaporated. The residue was dissolved in 20 ml ethyl acetate and washed successively with 10 ml saturated aqueous 4.5 M K2CO3 solution and 10 ml brine. The organic layer was dried over NaSO4 and evaporated in vacuo. The crude product was purified by chromatography on silica (cyclohexane/ethyl acetate) yielding Methyl 4*R*-hexyl-3*S*-hydroxy-2*R*-[1*S*-hydroxy-2-methylpropyl]-3-methyl-5-oxo-pyrrolidine-2-carboxylate and 4*S*-hexyl-3*R*-hydroxy-2*R*-[1*S*-hydroxy-2-methylpropyl]-3-methyl-5-oxo-pyrrolidine-2-carboxylate: (185 mg, logP 2.16 and 2.58).

4*R*-hexyl-3*S*-hydroxy-2*R*-[1*S*-hydroxy-2-methylpropyl]-3-methyl-5-oxo-pyrrolidine-2-carboxylic acid and 4*S*-hexyl-3*R*-hydroxy-2*R*-[1*S*-hydroxy-2-methylpropyl]-3-methyl-5-oxo-pyrrolidine-2-carboxylic acid

A solution of 180.0 mg Methyl 4*R*-hexyl-3*S*-hydroxy-2*R*-[1*S*-hydroxy-2-methylpropyl]-3-methyl-5-oxo-pyrrolidine-2-carboxylate, 4*S*-hexyl-3*R*-hydroxy-2*R*-[1*S*-hydroxy-2-methylpropyl]-3-methyl-5-oxo-pyrrolidine-2-carboxylate and 731 mg LiI in dry pyridine (18 mL) was heated to reflux for 3 h. After recooling the solvent was evaporated in vacuo. The residue was dissolved in water (20 mL) and extracted with ethyl acetate (10 mL). The aqueous layer was acidified with 0.5 M HCl to pH 2 and extracted with ethyl acetate (3x 15 ml). The organic layer was washed with brine, dried over NaSO4 and concentrated, yielding 90 mg of a mixture of inseparable isomers (logP 1.86 and 1.98).

Examples 8 and 9 (Table 1)

(1*R*,4*R*,5*S*)-4-hexyl-1-[(1*S*)-1-hydroxy-2-methylpropyl]-5-methyl-6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione (MATA121-1)and (1*R*,4*S*,5*S*)-4-hexyl-1-[(1*S*)-1-hydroxy-2-methylpropyl]-5-methyl-6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione

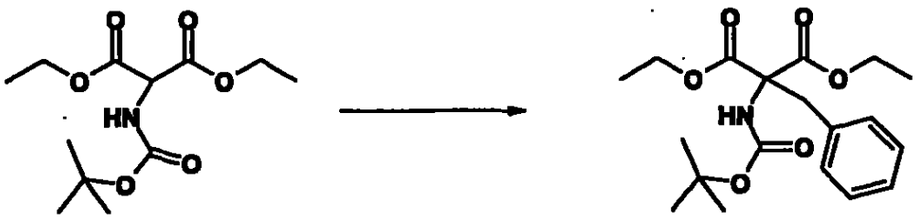
To a cold (< 5 °C) solution of 90 mg of a mixture of 4*R*-hexyl-3*S*-hydroxy-2-[1*S*-hydroxy-2-methylpropyl]-3-methyl-5-oxo-pyrrolidine-2-carboxylic acid and 4*S*-hexyl-3*S*-hydroxy-2-[1*S*-hydroxy-2-methylpropyl]-3-methyl-5-oxo-pyrrolidine-2-carboxylic acid in dry THF (4.5 mL), containing 60 µl triethylamine, was added dropwise isopropenyl chloroformate (38 mg). The reaction mixture was stirred for 60 min at < 5 °C and additionally 60 min at ambient temperature. Addition of ethyl acetate (10mL) afforded after 20 min stirring a suspension which was filtered and evaporated. The residue was purified by chromatography over silica (cyclhexane/ethyl acetate) yielding (1*R*,4*S*,5*S*)-4-hexyl-1-[(1*S*)-1-hydroxy-2-methylpropyl]-5-methyl-6-oxa-2-

azabicyclo[3.2.0]heptane-3,7-dione (12 mg; logP 2,79) and (1*R*,4*R*,5*S*)-4-hexyl-1-[(1*S*)-1-hydroxy-2-methylpropyl]-5-methyl-6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione (16 mg; logP 2,87).

Examples for the synthesis of compounds according to the invention according to process F

Diethyl-2-(tert-butoxycarbonylamino)malonate is commercionally availible or may be synthesized by conventional boc-protection of diethylaminomalonate hydrochloride.

1. Diethyl 2-benzyl-2-(tert-butoxycarbonylamino)malonate

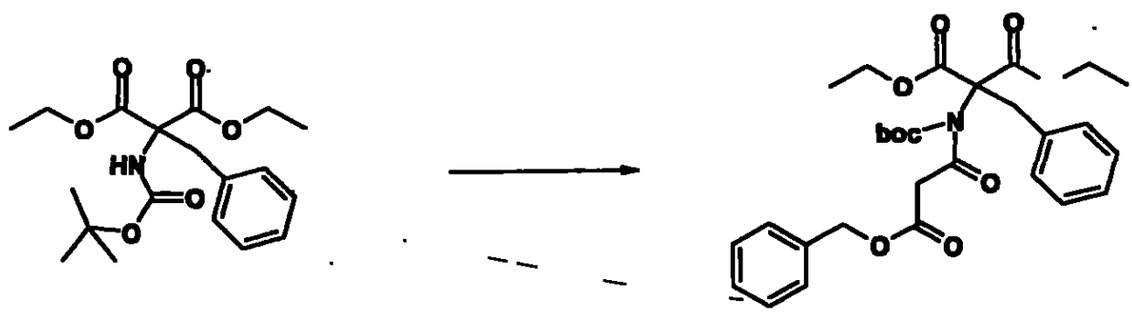


4.3 g (190 mmol) of sodium are dissolved in 600 ml of dry ethanol and slowly treated with a solution of 47 g (170 mmol) of diethyl-2-(tert-butoxycarbonylamino)malonate in 200 ml ethanol. After stirring for 30 min 29.2 g (170 mmol) of benzylbromide are added dropwise at room temperature. The reaction mixture is refluxed for 12 h followed by addition of aeq. HCl (pH 6-7), evaporation of the solvent and subsequent extraction with dichloromethane / water. The combined organic layers are dried over MgSO4 and the solvent is evaporated to yield the pure product in 88% yield (55 g).

^{1}H-NMR{400 MHz, DMSO-d_6}: 1.18 (t, $^3J_{HH}$= 7 Hz, 6H, CH_3); 1.42 (s, 9H, CH_3); 3.44 (s, 2H, CH_2); 4.18 (m, 4H, CH_2); 6.2 (b, 1H, NH); 7.01 (b, 2H, Ph-H); 7.26 (b, 3H, Ph-H).

LC: 87% purity, MS: 266 (M-boc)

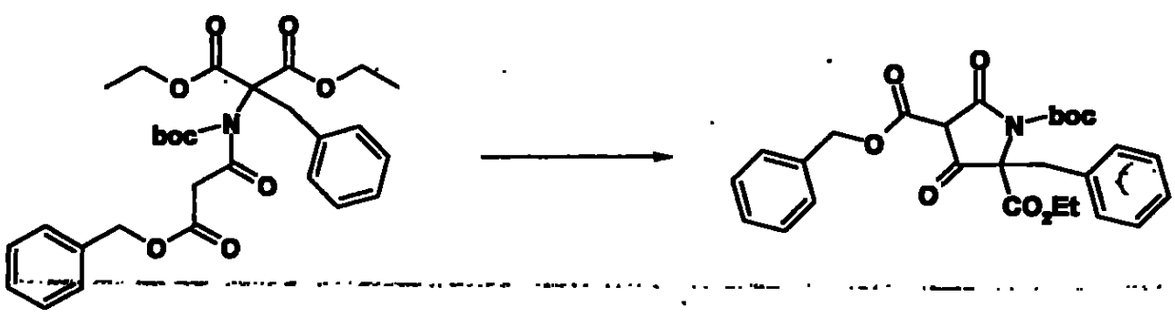
2. Diethyl benzyl[[3-benzyloxy-3-oxopropanoyl](tert-butoxycarbonyl)amino] malonate



28.2 g (77 mmol) of diethyl 2-benzyl-2-(tert-butoxycarbonylamino)malonate, 15 g (77 mmol) of monobenzylmalonate and 12.5 g (97 mmol) of N,N-diisopropylethylamine are dissolved in 300 ml of dichloromethane and treated with 14.8 g (77 mmol) of 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride at room temperature. The reaction mixture is stirred for 12 h, diluted with ethyl acetate, washed with aeq. 1N HCl (200 ml) and aeq. $NaHCO_3$ (2x200 ml) and dried over MgSO4. After evaporation of the solvent the product is obtained in 78% yield (32.5 g).

^{1}H-NMR{400 MHz, DMSO-d_6}: 1.18 (t, $^3J_{HH}$= 7 Hz, 6H, CH_3); 1.43 (s, 9H, CH_3); 3.64 (s, 2H, CH_2); 4.17 (m, 4H, CH_2); 5.15 (s, 2H, CH_2); 7.00 (b, 2H, Ph-H); 7.26 (b, 3H, Ph-H); 7.35 (b, 5H, Ph-H).

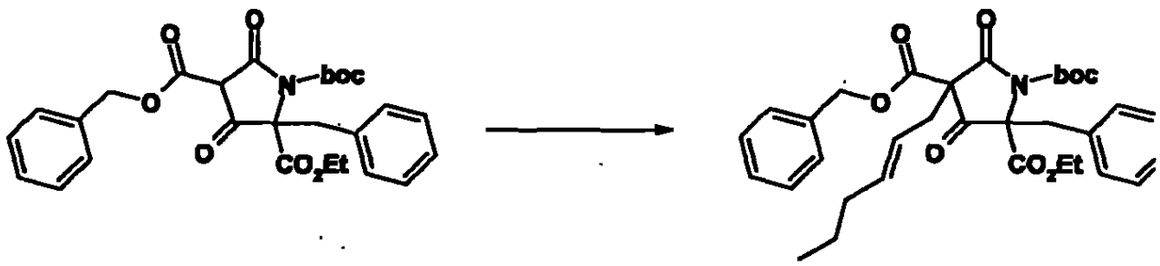
3. 4-Benzyl-1-tert-butyl-2-ethyl-2-benzyl-3,5-dioxopyrrolidine-1,2,4-tricarboxylate



6.0 g (11 mmol) of diethyl benzyl[[3-benzyloxy-3-oxopropanoyl](tert-butoxycarbonyl)-amino] malonate are dissolved in 100 ml of dimethylformamide and treated with 3.1 g (27 mmol) of sodium terbutylate at room temperature. The reaction mixture is stirred for 12 h at 50°C, diluted with dichloromethane, neutralized with aeq. 1N HCl, washed with water (1x50 ml) and aeq. $NaHCO_3$ (1x500 ml) and dried over MgSO4. After evaporation of the solvent the crude product is obtained as an oil which was purified by chromatography (cyclohexane:ethyl acetate 1:1) to yield 2.6 g (47 %) of product as a mixture of diastereoisomers.

^{1}H-NMR{400 MHz, DMSO-d_6}: 1.13 and 1.18 (t, 3H, $^3J_{HH}$= 7 Hz, CH_3); 1.39 and 1.43 (s, 9H, CH_3); 3.46 and 3.64 (s, 2H, CH_2); 4.15 (m, 2H, CH_2); 5.15 (s, 2H, CH_2); 7.03 (b, 2H, Ph-H); 7.26 (b, 3H, Ph-H); 7.35 (b, 5H, Ph-H).

4. 4-Benzyl-1-tert-butyl-2-ethyl-2-benzyl-4-[(2-E)-hex-2-en-1-yl]-3,5-dioxopyrrolidine-1,2,4-tricarboxylate



0.4 g (0.8 mmol) of 4-benzyl-1-tert-butyl-2-ethyl-2-benzyl-3,5-dioxopyrrolidine-1,2,4-tricarboxylate, 0.2 g (1.9 mmol) of trans-2-hexen-1-ol, 0.1 g (0.9 mmol) of triethylamine, 18 mg (0.08 mmol) of palladium acetate, 40 mg (0.16 mmol) of triphenylphosphine and 80 mg (0.8 mmol) of triethylborane are stirred in 20 ml of THF for 4 h. The reaction mixture is diluted with ethyl acetate, washed with aeq. 1N HCl (1x20 ml), water (2x20 ml) and aeq. $NaHCO_3$ (1x20 ml) and dried over MgSO4. After evaporation of the solvent the crude product is obtained as a mixture of diastereoisomers (0.43 g, 92%).

^{1}H-NMR{400 MHz, DMSO-d_6}: 0.88 (t, 3H, $^3J_{HH}$= 7 Hz, CH_3); 1.13 and 1.18 (t, 3H, $^3J_{HH}$= 7 Hz, CH_3); 1.20-1.35 (m, 4H, CH_2); 1.39 and 1.42 (s, 9H, CH_3); 1.90 (m, 2H, CH_2); 3.46 and 3.64 (s, 2H, CH_2); 4.15 (m, 2H, CH_2); 5.14 (s, 2H, CH_2); 5.54 (m, 2H, CH); 7.02 (b, 2H, Ph-H); 7.25 (b, 3H, Ph-H); 7.33 (b, 5H, Ph-H).

5. 4-Benzyl-1-tert-butyl-2-ethyl-2-benzyl-4-[(2-E)-hex-2-en-1-yl]-3-hydroxy-5-oxopyrrolidine-1,2,4-tricarboxylate (Example 462)

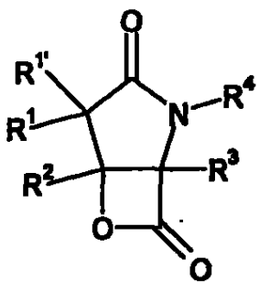


2.1 g (3.6 mmol) of 4-benzyl-1-tert-butyl-2-ethyl-2-benzyl-4-[(2-E)-hex-2-en-1-yl]-3,5-dioxopyrrolidine-1,2,4-tricarboxylate and 770 mg (3.6 mmol) of $NaBH(OAc)_3$ are stirred in 40 ml of glacial acetic acid at room temperature for 36 h. The reaction mixture is diluted with water and extracted with dichloromethane. The combined organic layers are washed with water (2x20 ml) and aeq. $NaHCO_3$ (1x20 ml) and dried over MgSO4. After evaporation of the solvent the crude product is obtained as a mixture of diastereoisomers (1.25 g, 60 %).

^{1}H-NMR{400 MHz, DMSO-d_6}: 0.89 (t, 3H, $^3J_{HH}$= 7 Hz, CH_3); 1.14 and 1.18 (t, 3H, $^3J_{HH}$= 7 Hz, CH_3); 1.20-1.35 (m, 4H, CH_2); 1.39 and 1.42 (s, 9H, CH_3); 1.90 (m, 2H, CH_2); 3.42, 3.46 and 3.64 (s, 2H, CH_2); 4.15 (m, 2H, CH_2); 5.14 (s, 2H, CH_2); 5.54 (m, 2H, CH); 7.02 (b, 2H, Ph-H); 7.25 (b, 3H, Ph-H); 7.33 (b, 5H, Ph-H), OH not detected.

MS: 480 (M-boc)

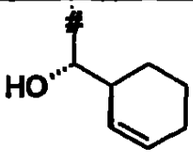
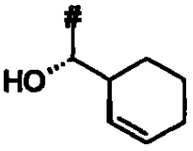
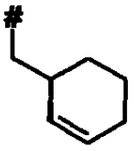
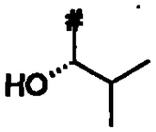
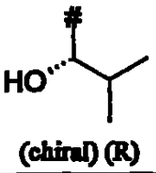
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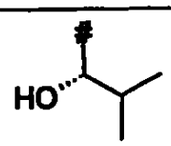
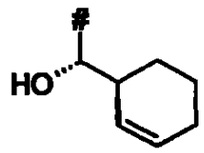
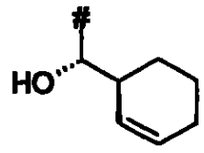
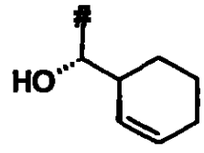
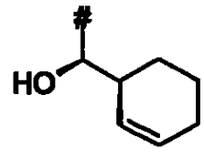
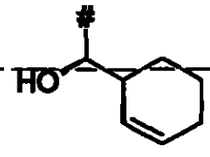
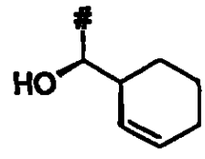
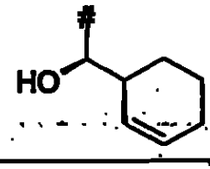


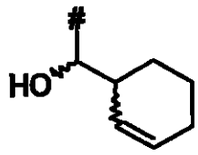
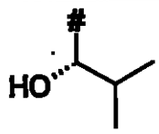
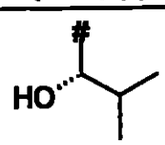
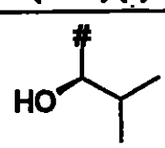
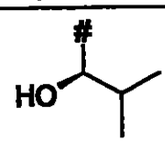
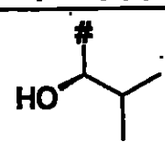
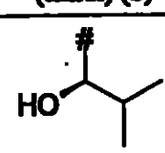
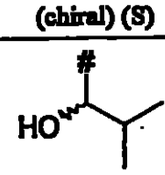
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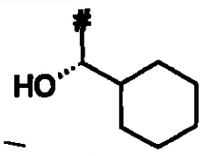
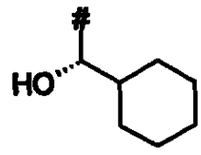
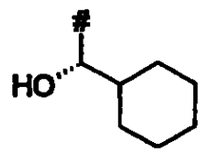
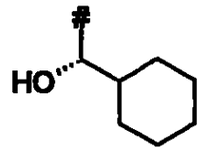
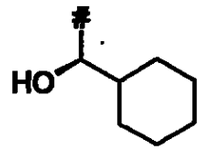
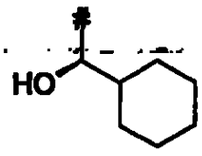
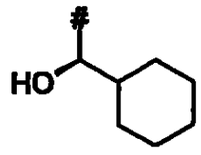
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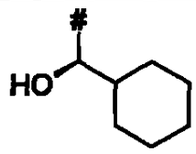
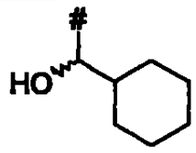
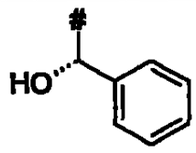
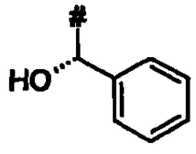
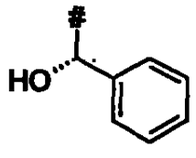
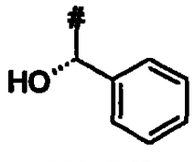
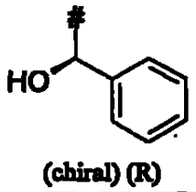
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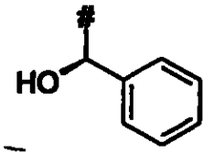
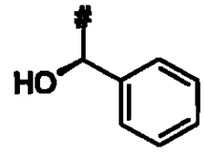
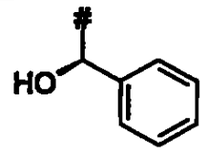
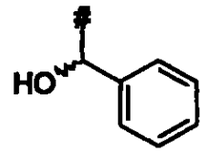
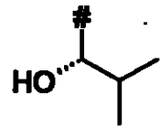
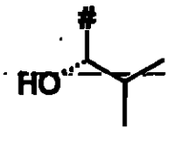
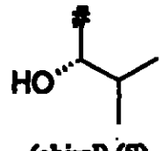
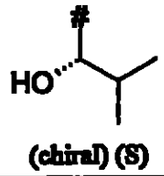
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
1	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
2	1-hydroxy-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
3	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
8	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	2,87
9	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	2,79

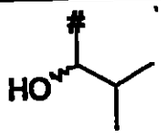
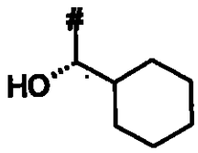
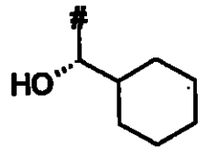
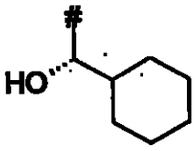
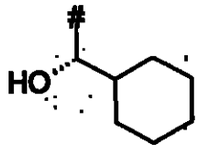
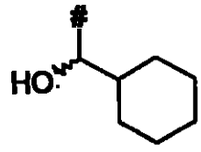
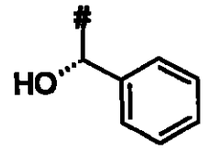
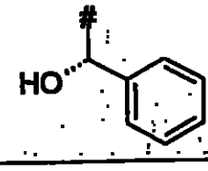
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
10	CH_3 / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
11	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
12	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
13	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
14	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
15	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
16	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
17	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)		H	

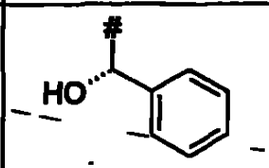
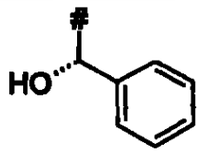
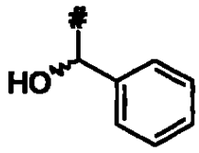
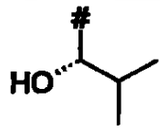
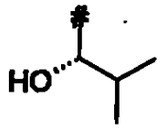
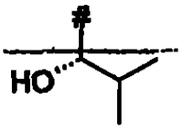
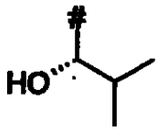
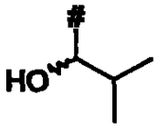
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
			(chiral) (S)		
18	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
19	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
20	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
21	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
22	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
23	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
24	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
25	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	

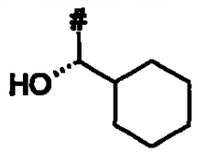
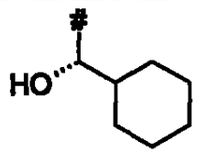
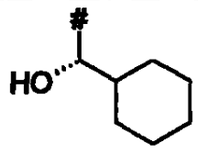
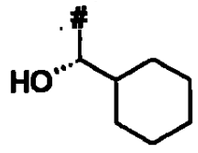
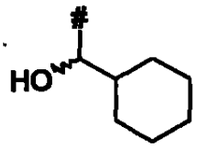
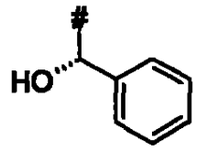
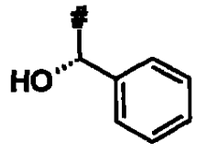
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
26	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
27	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
28	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
29	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
30	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
31	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
32	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	

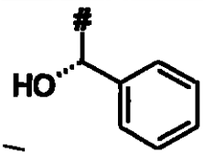
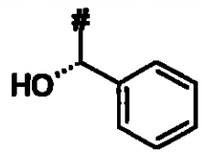
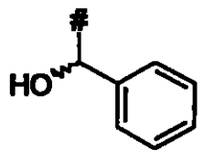
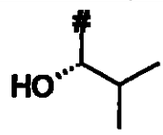
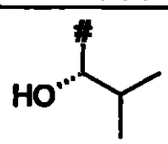
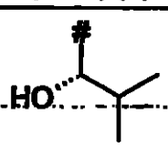
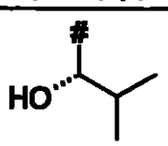
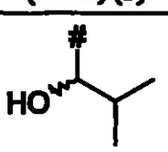
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
33	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
34	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
35	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
36	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
37	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
38	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
39	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	

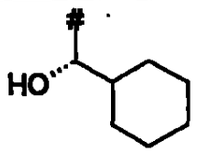
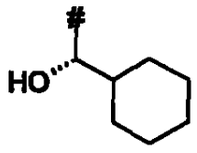
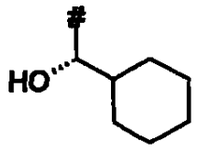
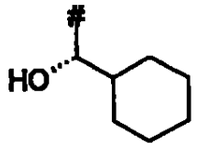
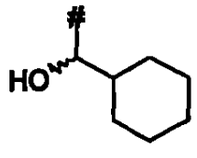
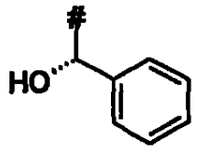
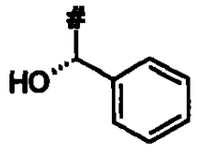
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
40	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
41	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
42	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
43	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
44	chloroethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
45	chloroethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
46	chloroethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
47	chloroethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	

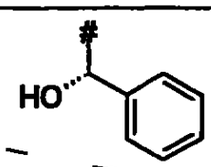
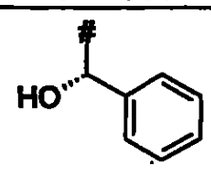
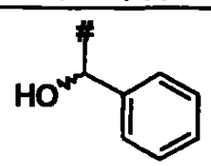
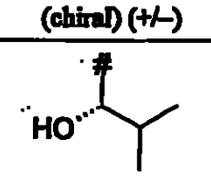
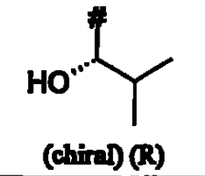
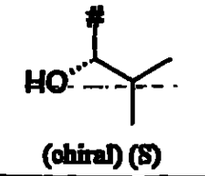
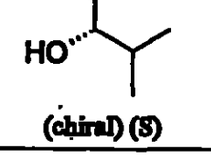
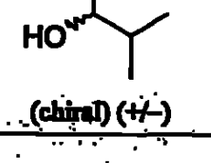
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
48	chloroethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
49	chloroethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
50	chloroethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
51	chloroethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
52	chloroethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
53	chloroethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
54	chloroethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
55	chloroethyl / H (chiral) (S)	CH_3 (chiral) (S)		H	

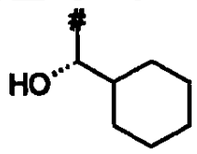
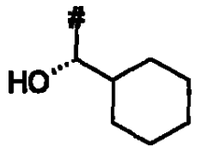
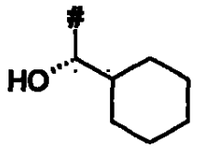
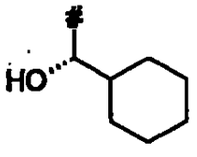
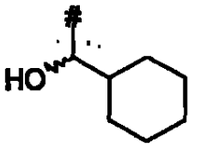
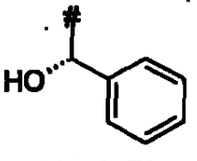
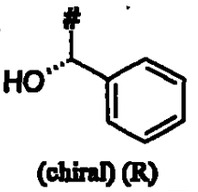
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
			(chiral) (R)		
56	chloroethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
57	chloroethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
58	chloroethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
59	bromoethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
60	bromoethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
61	bromoethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
62	bromoethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
63	bromoethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	

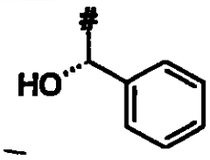
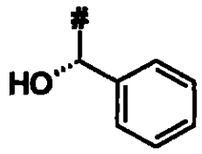
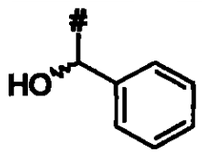
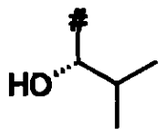
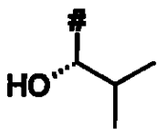
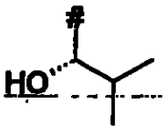
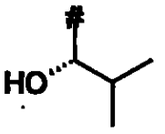
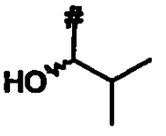
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
64	bromoethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
65	bromoethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
66	bromoethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
67	bromoethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
68	bromoethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
69	bromoethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
70	bromoethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

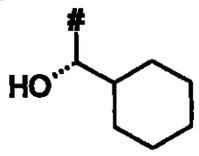
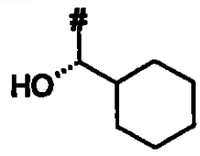
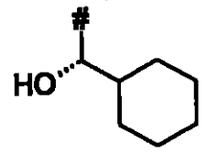
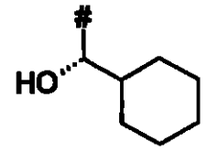
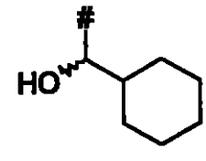
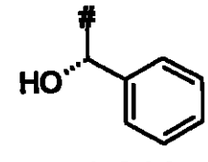
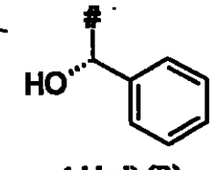
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
71	bromoethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
72	bromoethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
73	bromoethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
74	iodoethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
75	iodoethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
76	iodoethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
77	iodoethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
78	iodoethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	

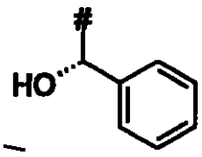
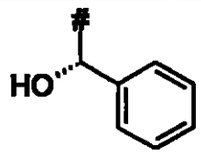
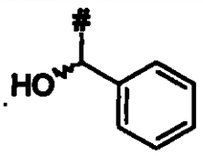
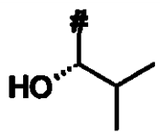
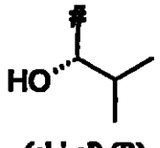
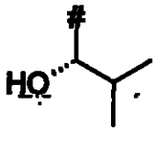
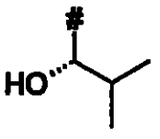
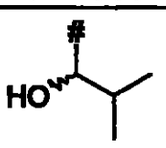
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
79	iodoethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
80	iodoethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
81	iodoethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
82	iodoethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
83	iodoethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
84	iodoethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
85	iodoethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

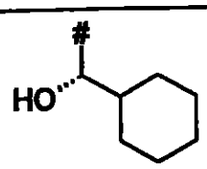
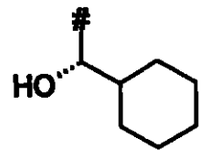
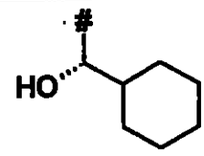
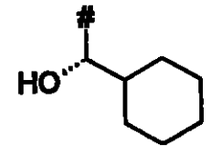
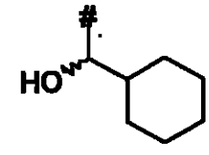
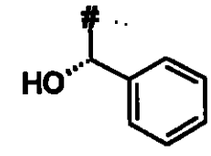
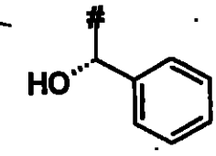
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
86	iodoethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
87	iodoethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
88	iodoethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
89	hydroxyethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
90	hydroxyethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
91	hydroxyethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
92	hydroxyethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
93	hydroxyethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	

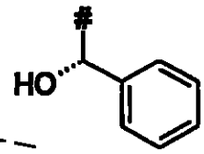
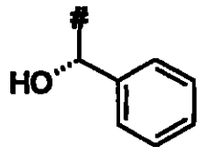
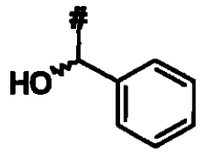
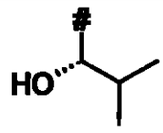
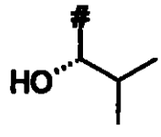
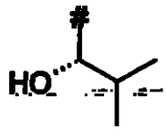
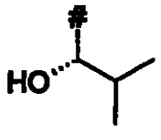
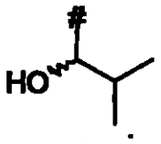
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
94	hydroxyethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
95	hydroxyethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
96	hydroxyethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
97	hydroxyethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
98	hydroxyethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
99	hydroxyethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
100	hydroxyethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

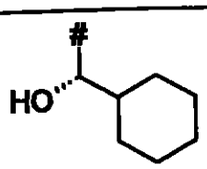
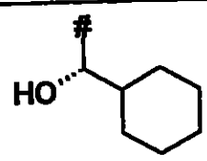
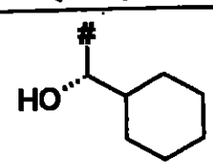
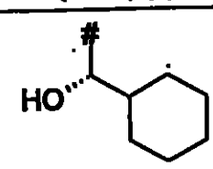
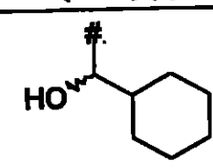
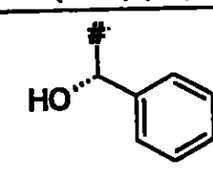
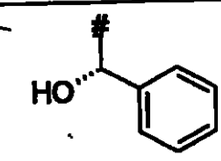
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
101	hydroxyethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
102	hydroxyethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
103	hydroxyethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
104	n-butyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
105	n-butyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
106	n-butyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
107	n-butyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
108	n-butyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	

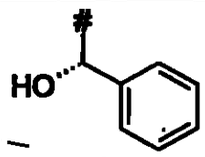
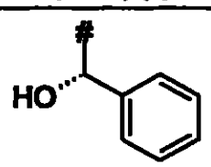
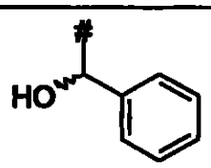
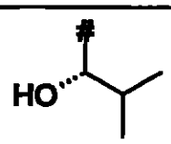
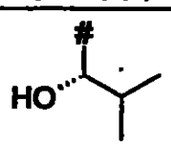
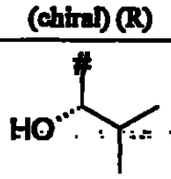
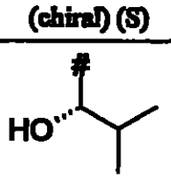
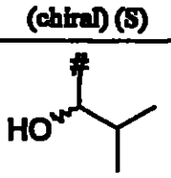
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
109	n-butyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
110	n-butyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
111	n-butyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
112	n-butyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
113	n-butyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
114	n-butyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
115	n-butyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

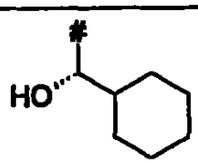
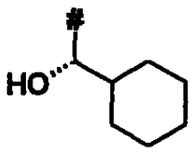
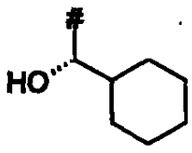
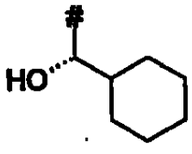
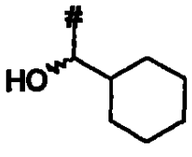
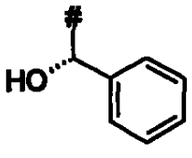
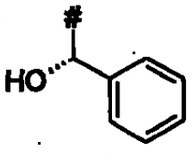
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
116	n-butyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
117	n-butyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
118	n-butyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
119	ethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
120	ethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
121	ethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
122	ethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
123	ethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	

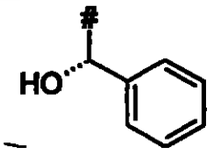
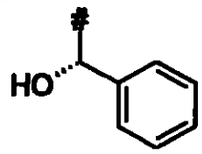
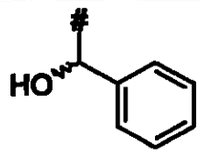
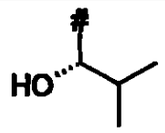
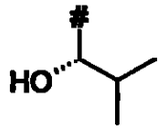
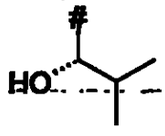
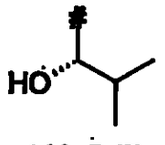
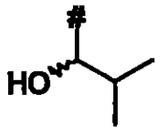
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
124	ethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
125	ethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
126	ethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
127	ethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
128	ethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
129	ethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
130	ethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

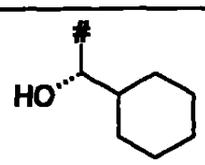
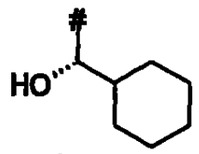
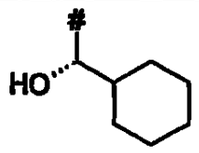
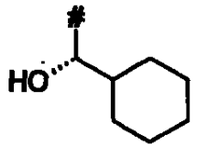
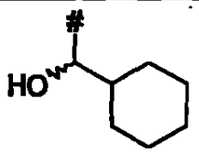
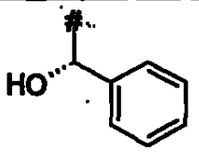
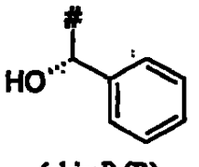
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
131	ethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
132	ethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
133	ethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
134	n-propyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
135	n-propyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
136	n-propyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
137	n-propyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
138	n-propyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	

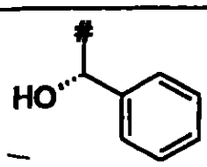
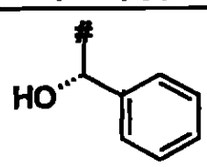
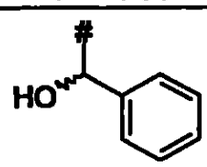
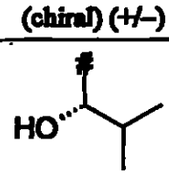
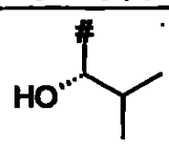
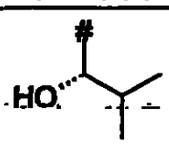
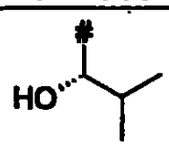
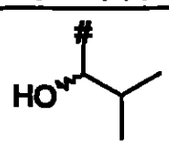
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
139	n-propyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
140	n-propyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
141	n-propyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
142	n-propyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
143	n-propyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
144	n-propyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
145	n-propyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

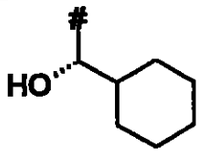
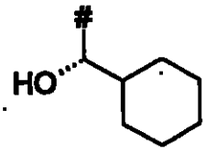
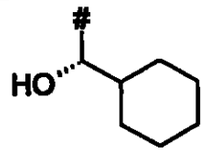
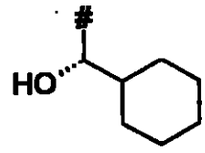
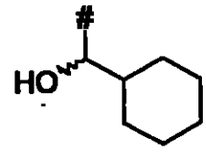
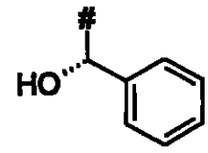
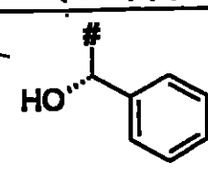
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
146	n-propyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
147	n-propyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
148	n-propyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
149	3-chloro-n-propyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
150	3-chloro-n-propyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
151	3-chloro-n-propyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
152	3-chloro-n-propyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
153	3-chloro-n-propyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	

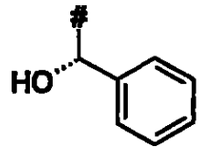
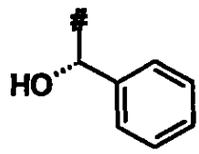
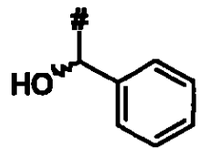
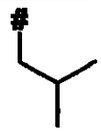
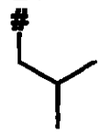
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
154	3-chloro-n-propyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
155	3-chloro-n-propyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
156	3-chloro-n-propyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
157	3-chloro-n-propyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
158	3-chloro-n-propyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
159	3-chloro-n-propyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
160	3-chloro-n-propyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

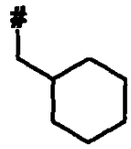
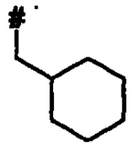
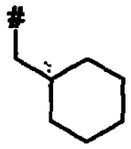
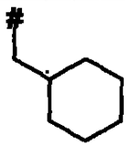
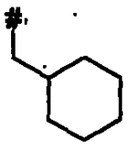
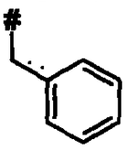
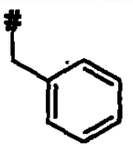
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
161	3-chloro-n-propyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
162	3-chloro-n-propyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
163	3-chloro-n-propyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
164	4-chloro-n-butyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
165	4-chloro-n-butyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
166	4-chloro-n-butyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
167	4-chloro-n-butyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
168	4-chloro-n-butyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	

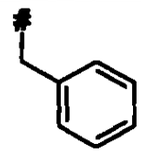
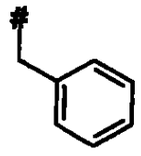
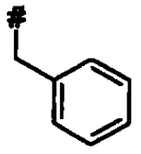
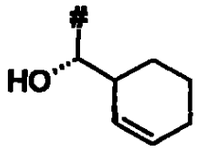
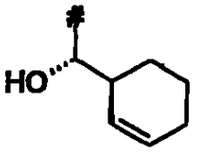
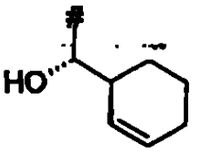
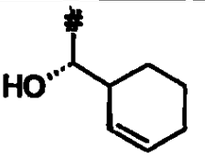
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
169	4-chloro-n-butyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
170	4-chloro-n-butyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
171	4-chloro-n-butyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
172	4-chloro-n-butyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
173	4-chloro-n-butyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
174	4-chloro-n-butyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
175	4-chloro-n-butyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

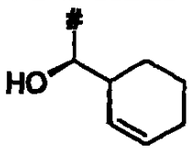
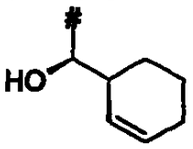
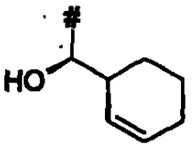
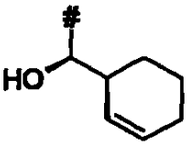
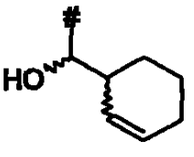
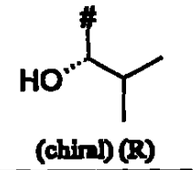
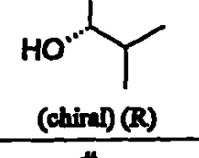
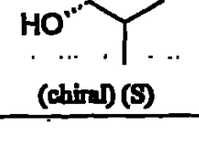
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
176	4-chloro-n-butyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
177	4-chloro-n-butyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
178	4-chloro-n-butyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
179	2-propionyloxy-ethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
180	2-propionyloxy-ethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
181	2-propionyloxy-ethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
182	2-propionyloxy-ethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
183	2-propionyloxy-ethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	

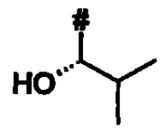
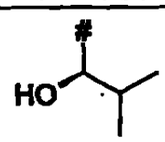
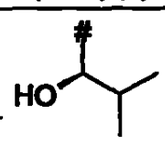
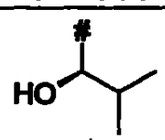
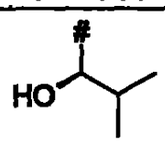
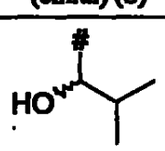
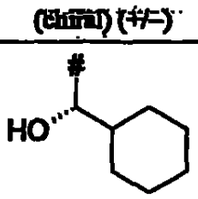
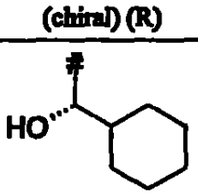
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
184	2-propionyloxy-ethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
185	2-propionyloxy-ethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
186	2-propionyloxy-ethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
187	2-propionyloxy-ethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
188	2-propionyloxy-ethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
189	2-propionyloxy-ethyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
190	2-propionyloxy-ethyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

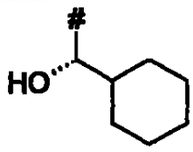
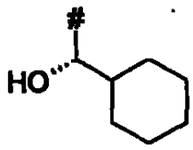
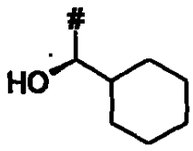
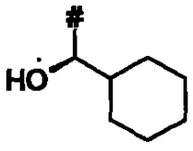
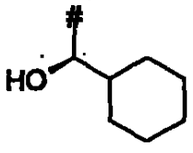
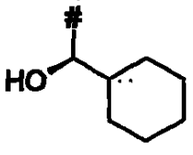
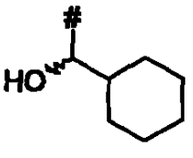
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
191	2-propionyloxy-ethyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
192	2-propionyloxy-ethyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
193	2-propionyloxy-ethyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
194	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
195	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
196	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
197	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
198	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	

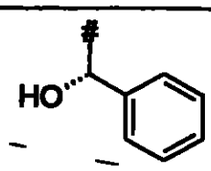
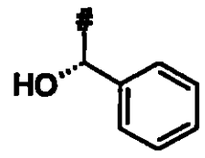
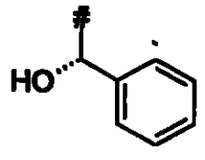
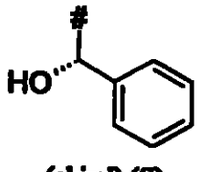
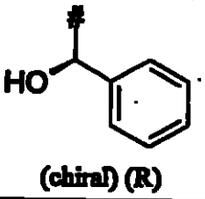
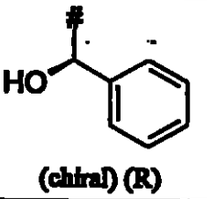
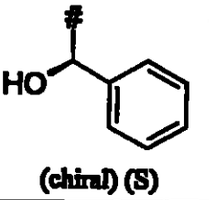
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
199	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
200	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
201	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
202	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
203	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
204	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
205	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

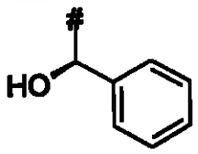
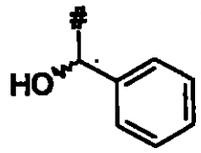
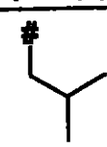
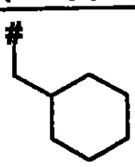
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
206	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
207	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
208	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
209	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
210	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
211	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
212	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	

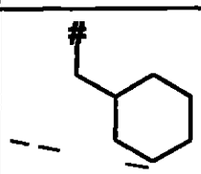
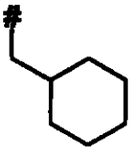
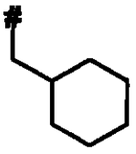
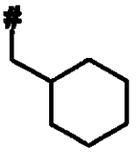
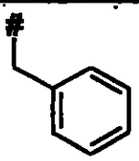
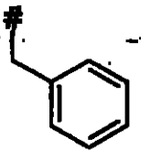
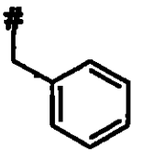
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
213	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
214	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
215	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
216	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
217	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
218	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
219	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
220	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	

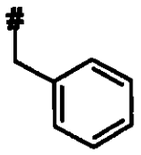
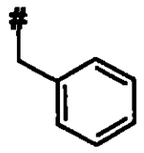
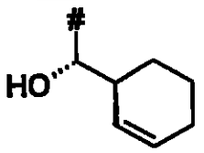
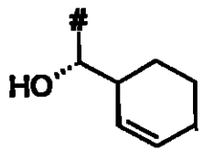
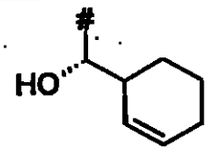
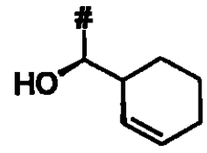
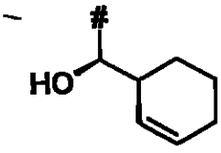
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
221	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
222	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
223	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
224	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
225	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
226	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
227	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
228	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	

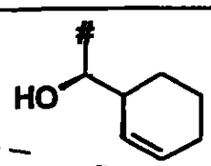
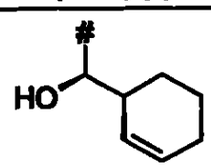
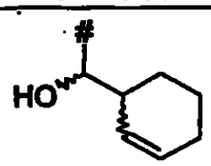
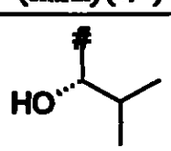
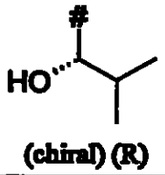
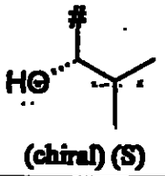
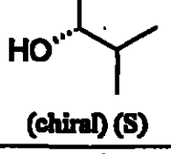
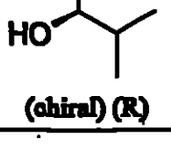
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
229	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
230	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
231	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
232	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
233	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
234	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
235	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	

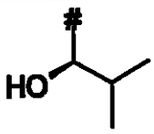
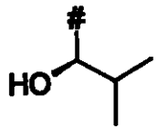
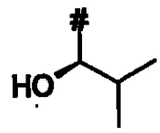
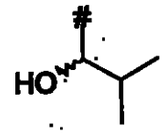
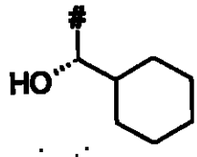
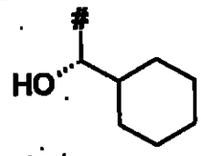
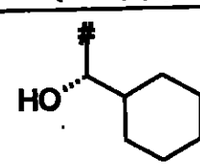
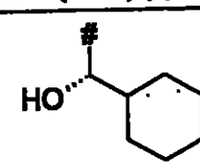
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
236	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
237	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
238	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
239	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
240	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
241	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
242	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	

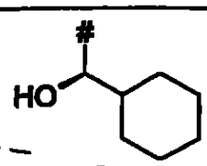
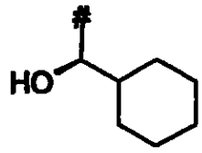
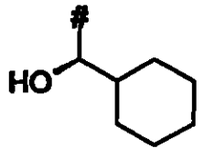
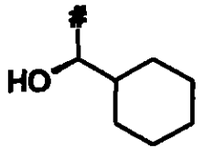
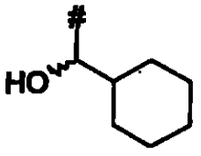
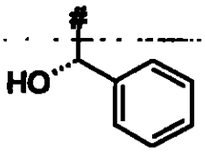
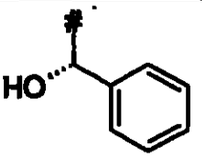
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
243	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
244	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
245	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
246	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
247	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
248	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
249	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
250	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	

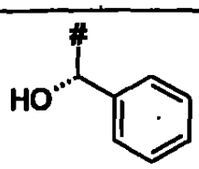
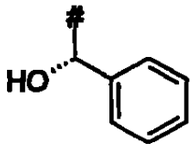
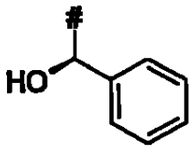
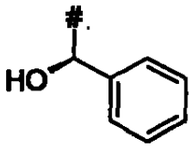
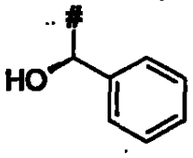
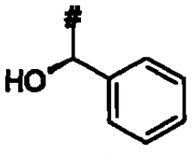
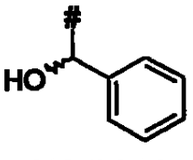
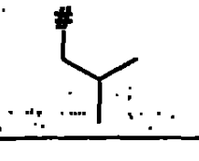
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
251	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
252	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
253	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
254	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
255	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
256	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
257	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	

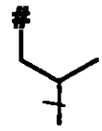
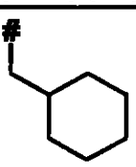
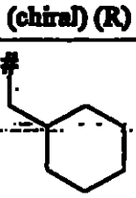
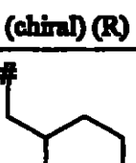
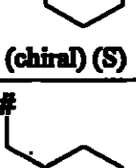
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
258	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
259	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
260	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
261	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
262	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
263	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
264	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

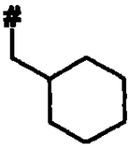
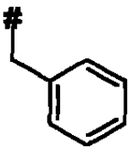
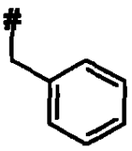
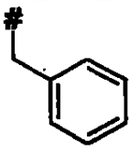
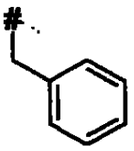
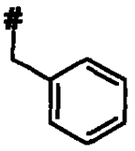
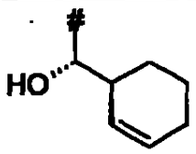
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
265	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
266	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
267	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
268	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
269	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
270	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
271	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
272	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	

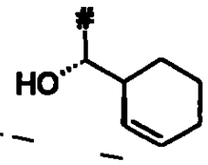
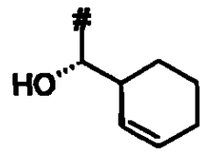
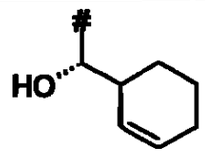
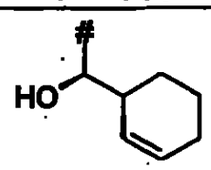
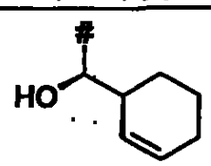
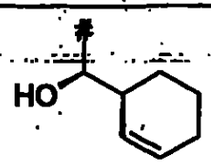
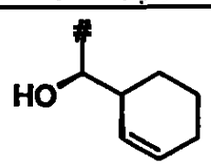
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
273	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
274	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
275	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
276	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
277	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
278	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
279	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
280	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	

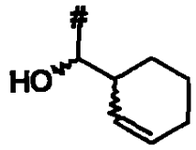
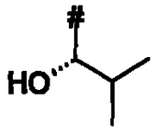
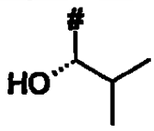
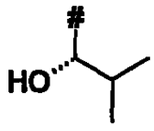
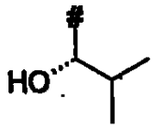
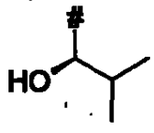
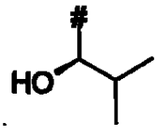
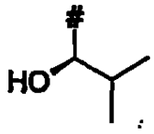
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
281	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
282	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
283	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
284	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
285	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
286	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
287	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

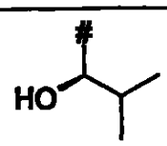
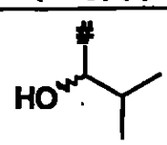
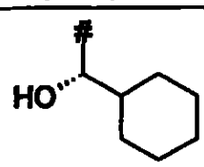
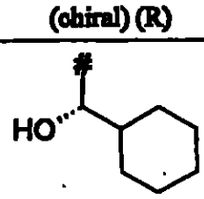
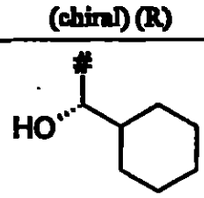
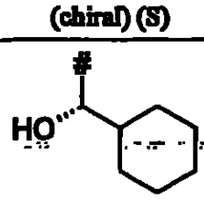
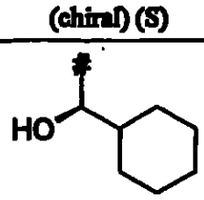
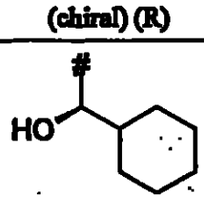
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
288	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
289	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
290	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
291	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
292	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
293	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
294	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
295	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)		H	

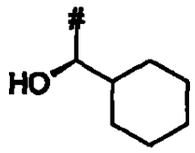
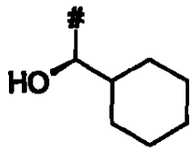
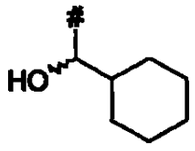
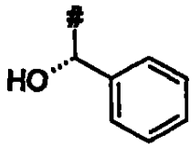
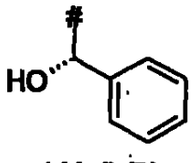
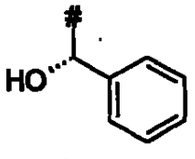
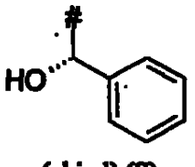
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
			(chiral) (R)		
296	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
297	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
298	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
299	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
300	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
301	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
302	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
303	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)		H	

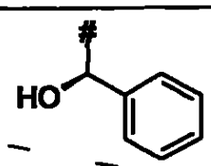
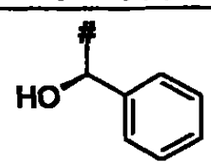
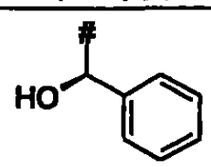
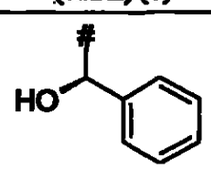
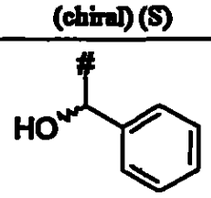
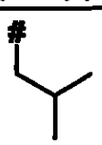
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
			(chiral) (S)		
304	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
305	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
306	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
307	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
308	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
309	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
310	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	

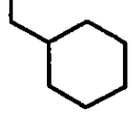
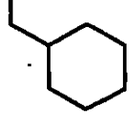
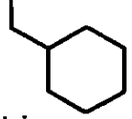
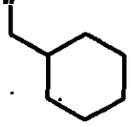
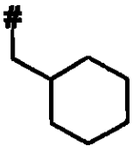
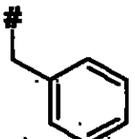
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
311	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
312	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
313	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
314	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
315	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
316	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
317	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	

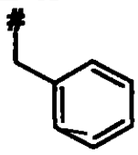
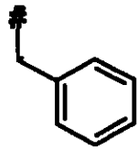
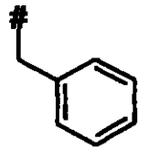
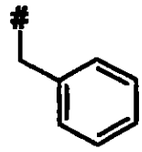
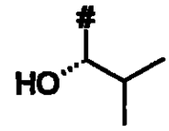
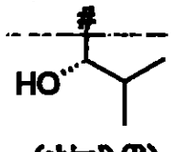
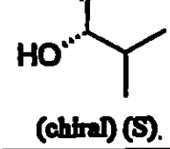
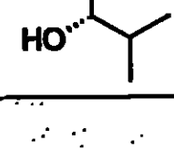
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
318	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
319	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
320	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
321	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
322	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
323	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
324	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
325	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	

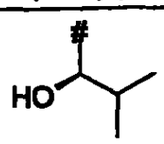
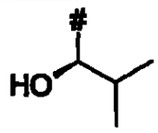
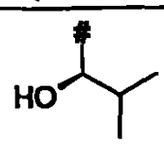
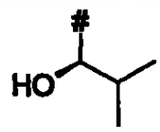
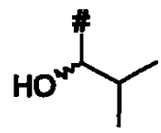
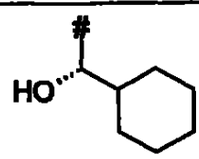
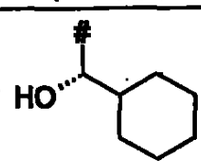
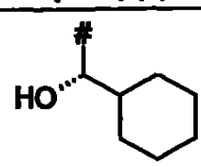
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
326	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
327	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
328	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
329	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
330	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
331	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
332	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
333	n-pentyl / H (chiral) (S)	H (chiral) (S)		H	

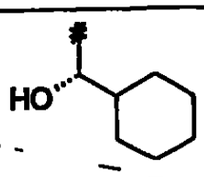
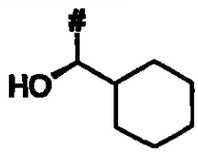
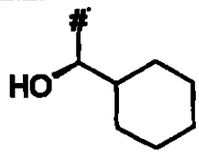
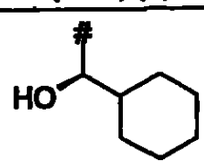
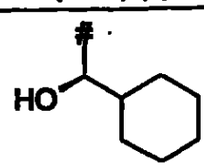
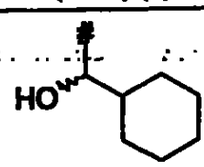
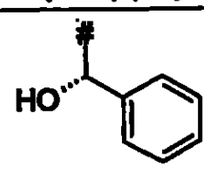
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
			(chiral) (R)		
334	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
335	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
336	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
337	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
338	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
339	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
340	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	

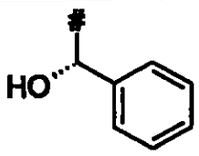
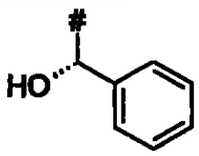
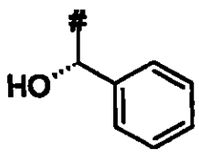
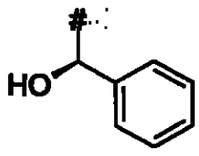
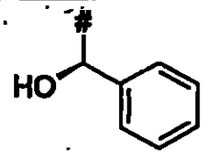
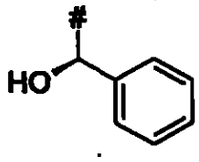
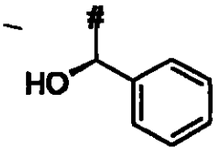
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
341	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
342	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
343	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
344	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
345	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
346	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
347	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
348	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	

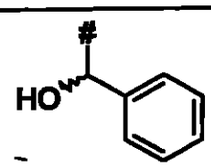
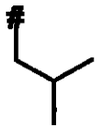
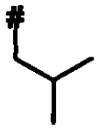
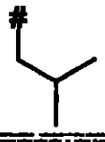
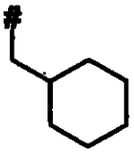
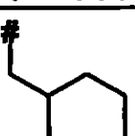
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
349	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
350	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
351	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
352	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
353	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
354	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
355	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
356	n-pentyl / H (chiral) (R)	H (chiral) (S)		H	

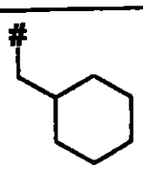
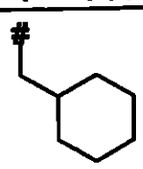
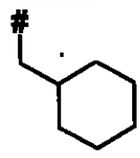
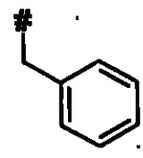
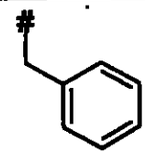
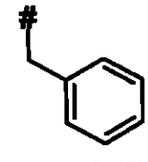
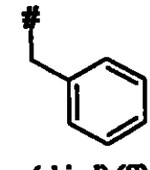
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
			(chiral) (R)		
357	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
358	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
359	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
360	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
361	CH_3 / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
362	CH_3 / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
363	CH_3 / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
364	CH_3 / H (chiral) (S)	CH_3 (chiral) (R)		H	

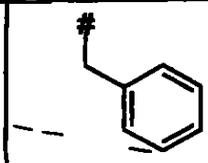
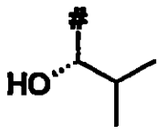
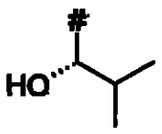
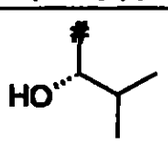
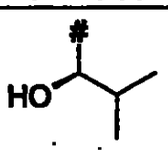
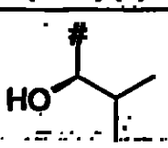
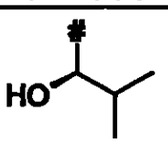
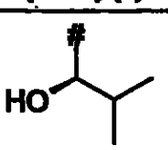
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
			(chiral) (S)		
365	CH_3 / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
366	CH_3 / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
367	CH_3 / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
368	CH_3 / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
369	CH_3 / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
370	CH_3 / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
371	CH_3 / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
372	CH_3 / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	

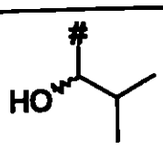
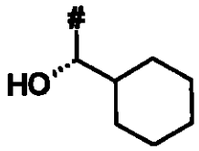
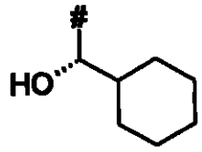
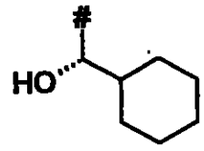
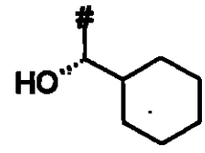
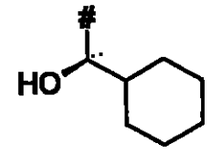
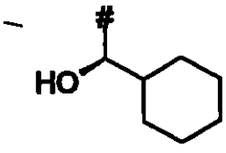
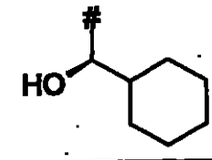
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
373	CH_3 / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
374	CH_3 / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
375	CH_3 / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
376	CH_3 / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
377	CH_3 / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
378	CH_3 / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
379	CH_3 / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

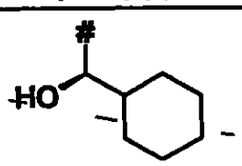
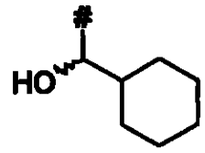
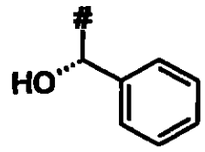
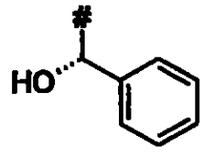
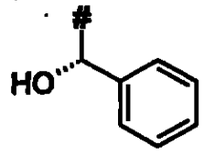
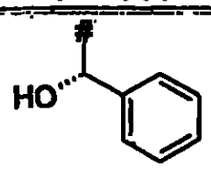
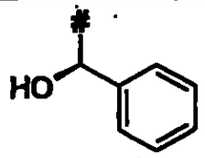
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
380	CH_3 / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
381	CH_3 / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
382	CH_3 / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
383	CH_3 / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
384	CH_3 / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
385	CH_3 / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
386	CH_3 / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	

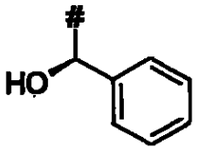
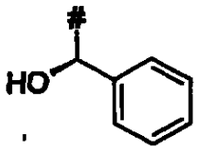
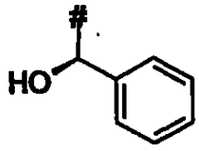
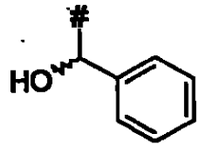
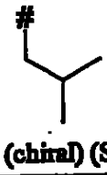
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
387	CH_3 / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
388	CH_3 / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
389	CH_3 / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
390	CH_3 / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
391	CH_3 / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
392	CH_3 / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
393	CH_3 / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
394	CH_3 / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	

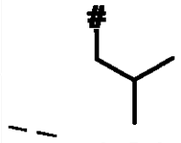
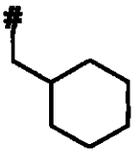
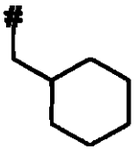
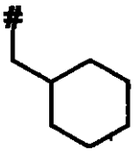
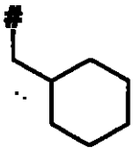
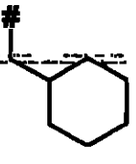
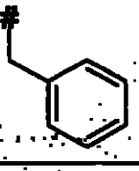
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
395	CH_3 / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
396	CH_3 / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	
397	CH_3 / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
398	CH_3 / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	
399	CH_3 / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	
400	CH_3 / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	
401	CH_3 / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	

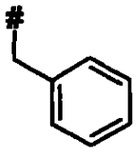
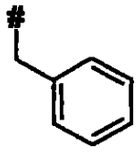
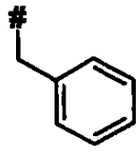
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
402	CH_3 / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	
403	CH_3 / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
404	CH_3 / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
405	CH_3 / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
406	CH_3 / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
407	CH_3 / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
408	CH_3 / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
409	CH_3 / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	

Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
410	CH_3 / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
411	CH_3 / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
412	CH_3 / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
413	CH_3 / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
414	CH_3 / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
415	CH_3 / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
416	CH_3 / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
417	CH_3 / H (chiral) (R)	H (chiral) (R)		H	

Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
			(chiral) (S)		
418	CH_3 / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
419	CH_3 / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	
420	CH_3 / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
421	CH_3 / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
422	CH_3 / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
423	CH_3 / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
424	CH_3 / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	

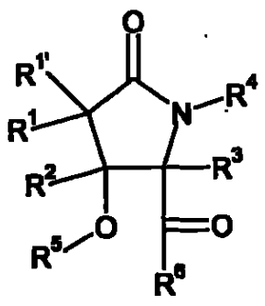
Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
425	CH_3 / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
426	CH_3 / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
427	CH_3 / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
428	CH_3 / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
429	CH_3 / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
430	CH_3 / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
431	CH_3 / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
432	CH_3 / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	

Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
433	CH_3 / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
434	CH_3 / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
435	CH_3 / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	
436	CH_3 / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	
437	CH_3 / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	
438	CH_3 / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	
439	CH_3 / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	
440	CH_3 / H (chiral) (S)	H (chiral) (S)		H	

Example	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
			(chiral) (R)		
441	CH_3 / H (chiral) (R)	H (chiral) (R)	#  (chiral) (S)	H	
442	CH_3 / H (chiral) (S)	H (chiral) (R)	#  (chiral) (S)	H	
443	CH_3 / H (chiral) (+/–)	H (chiral) (+/–)	#  (chiral) (+/–)	H	

Determination of logP-values was made according to EEC-Directive 79/831. Annex V. A8 by HPLC (gradient method, acetonitrile/0.1% aqueous phosphoric acid).

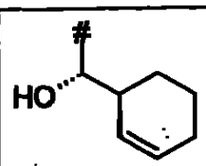
According to the methods mentioned before the lactames of the formula

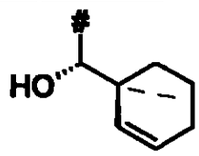
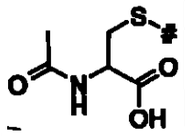
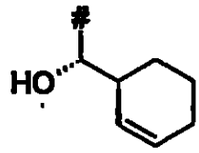
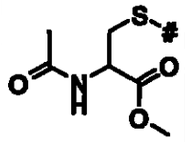
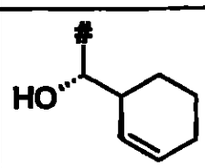
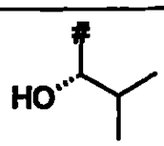
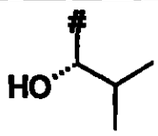
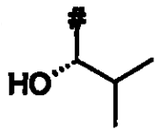
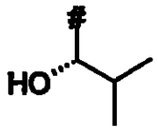


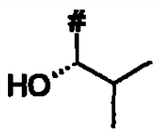
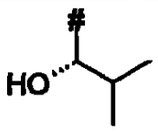
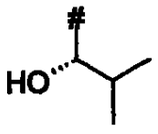
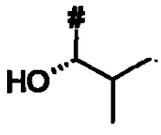
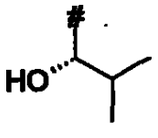
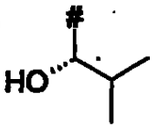
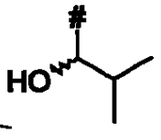
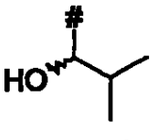
(I)

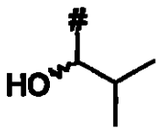
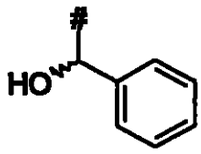
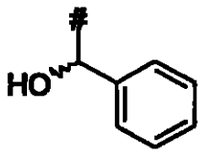
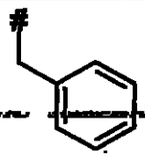
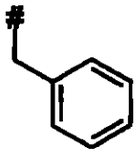
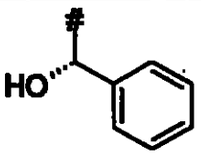
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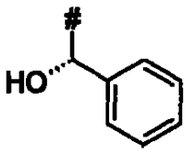
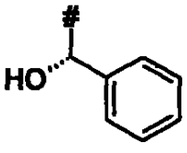
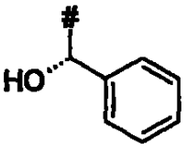
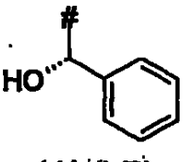
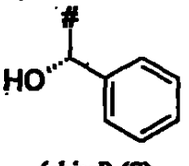
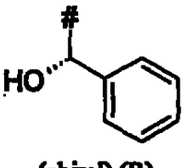
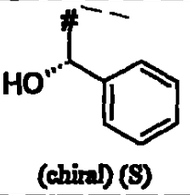
Table 6

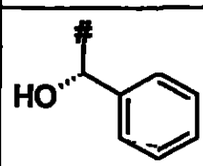
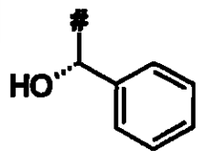
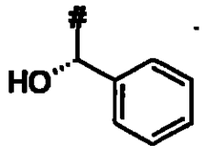
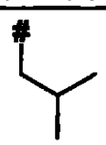
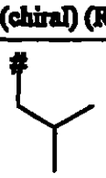
Example	R^1 / $R^{1'}$	R^2	R^3	$R^{4'}$	R^5	R^6	logP*)
4	1-hydroxy-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	# 	H	H	OH	

Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (R)				
5	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H		
6	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H		
7	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	
444	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	2,30
445	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
446	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	2,58
447	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	

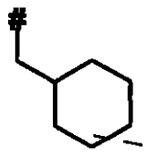
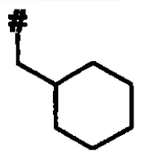
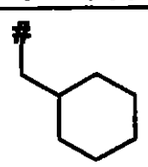
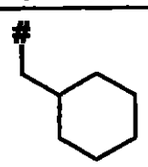
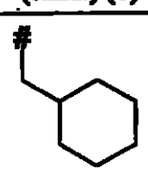
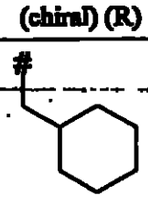
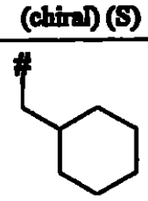
Example	R^1 / R^{1a}	R^2	R^3	R^{4aa}	R^5	R^6	logP[a])
448	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
449	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
450	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	2,16
451	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
452	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	
453	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
454	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
455	n-hexenyl / BnOCO (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	BOC	H	OCH_3	

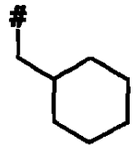
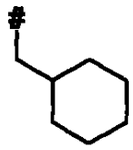
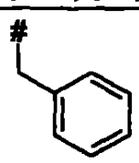
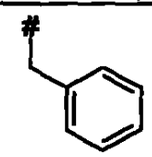
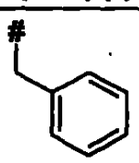
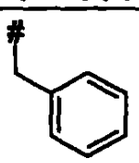
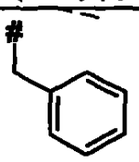
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
456	n-hexenyl / BnOCO (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	BOC	H	OCH_2CH_3	
457	n-hexenyl / BnOCO (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	BOC	H	OCH_3	
458	n-hexenyl / BnOCO (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	BOC	H	OCH_2CH_3	
459	n-hexenyl / BnOCO (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	BOC	H	OCH_3	
460	n-hexenyl / BnOCO (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	BOC	H	OCH_2CH_3	
461	n-hexenyl / BnOCO (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	BOC	H	OCH_3	
462	n-hexenyl / BnOCO (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	BOC	H	OCH_2CH_3	
463	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	

Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
464	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
465	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
466	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
467	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
468	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
469	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
470	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	

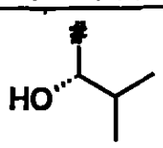
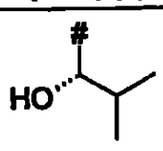
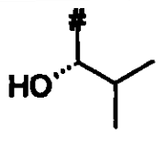
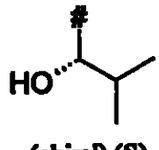
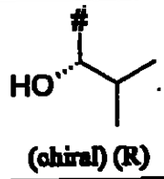
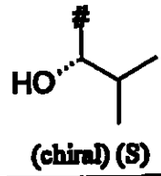
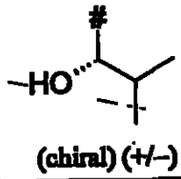
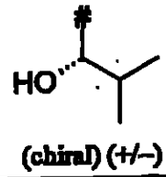
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
471	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	
472	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
473	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
474	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
475	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
476	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
477	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
478	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	

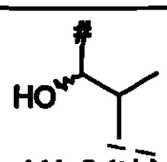
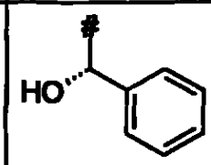
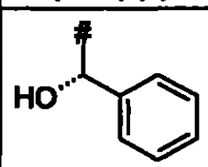
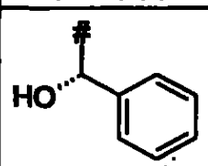
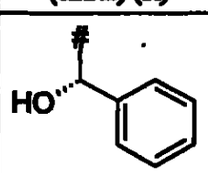
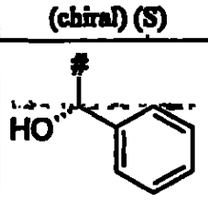
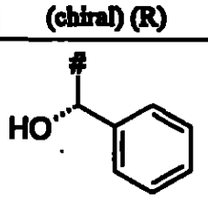
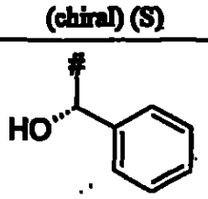
Example	R^1 / R^{1a}	R^2	R^3	R^{4a}	R^5	R^6	logP*)
479	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	# (chiral) (S)	H	H	OCH_3	
480	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	# (chiral) (R)	H	H	OCH_3	
481	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	# (chiral) (S)	H	H	OCH_3	
482	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	# (chiral) (+/–)	H	H	OCH_3	
483	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	# (chiral) (+/–)	H	H	OCH_3	
484	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	# (chiral) (+/–)	H	H	OCH_3	
485	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	# (chiral) (R)	H	H	OCH_3	
486	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	# (chiral) (S)	H	H	OCH_3	

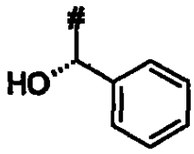
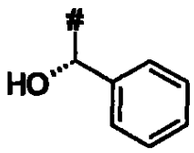
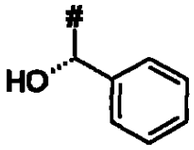
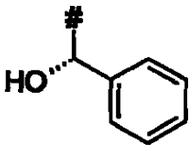
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	log$P^{*)}$
487	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
488	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
489	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
490	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
491	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
492	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
493	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	

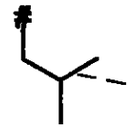
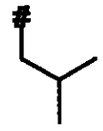
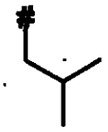
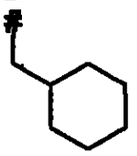
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
494	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
495	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
496	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
497	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
498	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
499	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
500	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	

Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
501	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	# (chiral) (S)	H	H	OCH_3	
502	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	# (chiral) (R)	H	H	OCH_3	
503	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	# (chiral) (S)	H	H	OCH_3	
504	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	# (chiral) (+/–)	H	H	OCH_3	
505	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	# (chiral) (+/–)	H	H	OCH_3	
506	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	# (chiral) (+/–)	H	H	OCH_3	
507	n-hexyl / H (chiral) (R)	H (chiral) (R)	# HO (chiral) (R)	H	H	OCH_3	
508	n-hexyl / H (chiral) (R)	H (chiral) (R)	# HO	H	H	OCH_3	

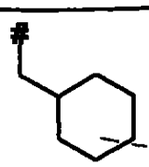
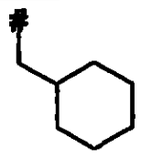
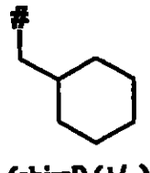
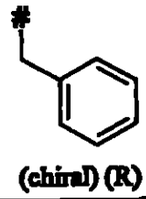
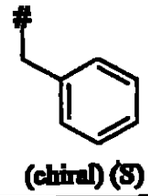
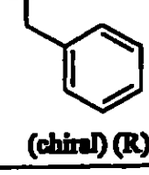
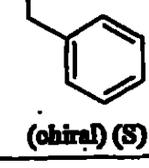
Example	R^1 / R^{1a}	R^2	R^3	R^{4a}	R^5	R^6	logP*)
			(chiral) (S)				
509	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
510	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
511	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
512	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
513	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
514	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
515	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	
516	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	

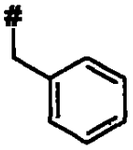
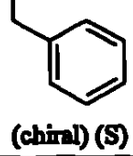
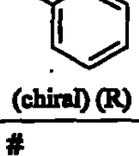
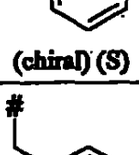
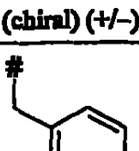
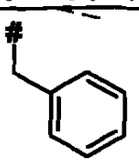
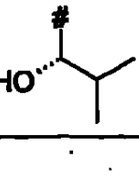
Example	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
517	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
518	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
519	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
520	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
521	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
522	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
523	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
524	n-hexyl / H (chiral) (S)	H (chiral) (S)		H	H	OCH_3	

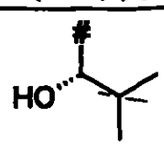
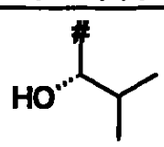
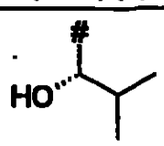
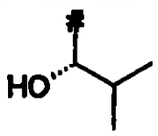
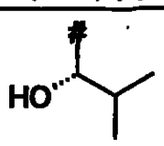
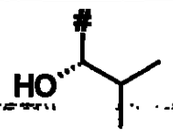
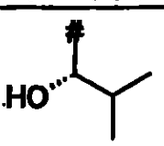
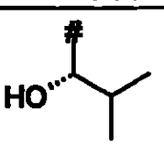
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	log$P^{a)}$
			(chiral) (R)				
525	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
526	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	
527	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
528	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
529	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
530	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
531	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
532	n-hexyl / H (chiral) (R)	H (chiral) (S)		H	H	OCH_3	

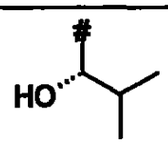
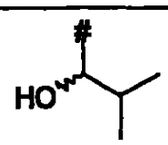
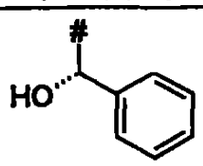
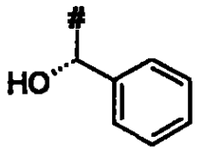
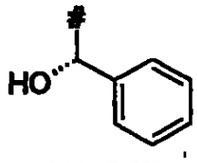
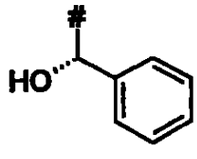
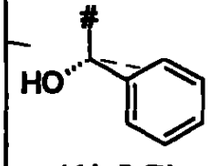
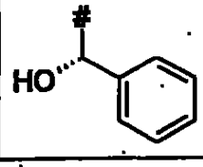
Example	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP*)
			(chiral) (S)				
533	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
534	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
535	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
536	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
537	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	
538	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
539	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
540	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	

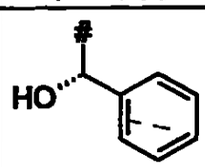
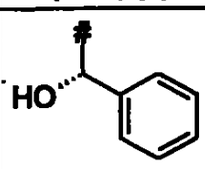
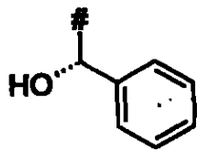
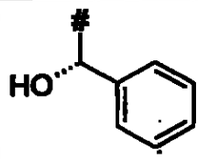
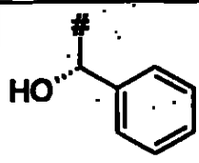
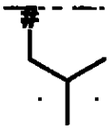
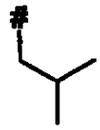
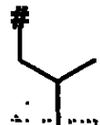
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
541	n-hexyl / H (chiral) (R)	H (chiral) (R)	# (chiral) (S)	H	H	OCH_3	
542	n-hexyl / H (chiral) (R)	H (chiral) (S)	# (chiral) (R)	H	H	OCH_3	
543	n-hexyl / H (chiral) (R)	H (chiral) (S)	# (chiral) (S)	H	H	OCH_3	
544	n-hexyl / H (chiral) (S)	H (chiral) (R)	# (chiral) (R)	H	H	OCH_3	
545	n-hexyl / H (chiral) (S)	H (chiral) (R)	# (chiral) (S)	H	H	OCH_3	
546	n-hexyl / H (chiral) (S)	H (chiral) (S)	# (chiral) (R)	H	H	OCH_3	
547	n-hexyl / H (chiral) (S)	H (chiral) (S)	# (chiral) (S)	H	H	OCH_3	

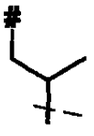
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
548	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	
549	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
550	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
551	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
552	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
553	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
554	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	

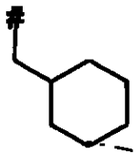
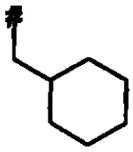
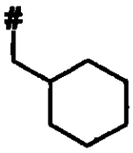
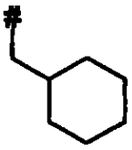
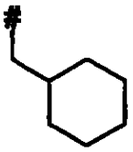
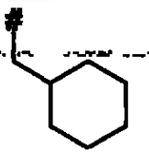
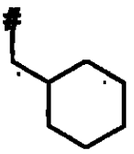
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
555	n-hexyl / H (chiral) (S)	H (chiral) (R)	#  (chiral) (R)	H	H	OCH_3	
556	n-hexyl / H (chiral) (S)	H (chiral) (R)	#  (chiral) (S)	H	H	OCH_3	
557	n-hexyl / H (chiral) (S)	H (chiral) (S)	#  (chiral) (R)	H	H	OCH_3	
558	n-hexyl / H (chiral) (S)	H (chiral) (S)	#  (chiral) (S)	H	H	OCH_3	
559	n-hexyl / H (chiral) (R)	H (chiral) (S)	#  (chiral) (+/–)	H	H	OCH_3	
560	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	#  (chiral) (+/–)	H	H	OCH_3	
561	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	#  (chiral) (+/–)	H	H	OCH_3	
562	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	#	H	H	OCH_3	

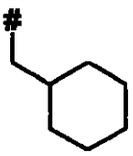
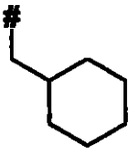
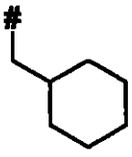
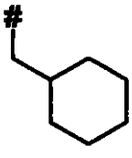
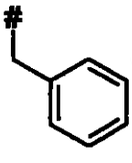
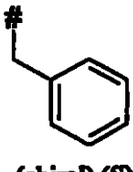
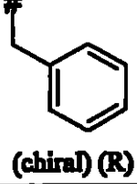
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (R)				
563	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
564	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
565	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
566	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
567	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
568	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
569	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
570	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/-)	H	H	OCH_3	

Example	R^1 / R^{1a}	R^2	R^3	R^{4a}	R^5	R^6	logP*)
571	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
572	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
573	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
574	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
575	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
576	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
577	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
578	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)		H	H	OCH_3	

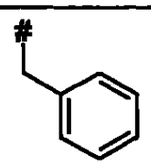
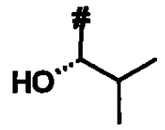
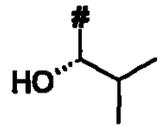
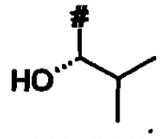
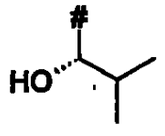
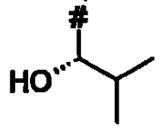
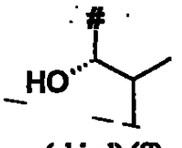
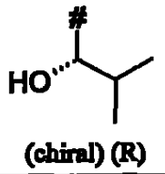
Example	R^1 / R^{1*}	R^2	R^3	R^{4a}	R^5	R^6	logP[b])
			(chiral) (S)				
579	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
580	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
581	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	
582	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
583	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
584	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
585	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
586	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)		H	H	OCH_3	

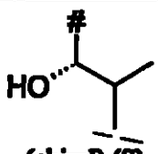
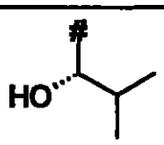
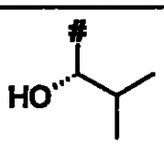
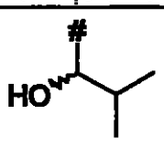
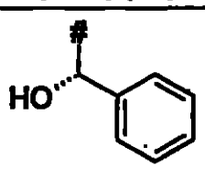
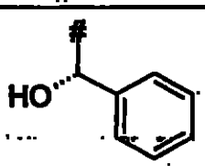
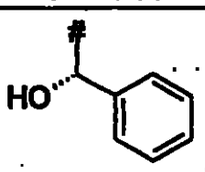
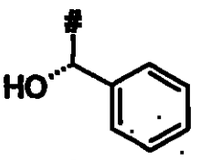
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (R)				
587	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
588	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
589	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
590	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
591	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
592	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	
593	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
594	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	

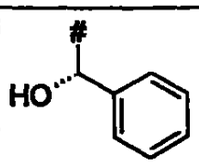
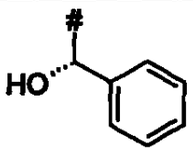
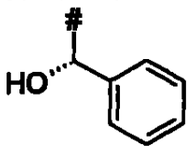
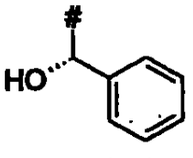
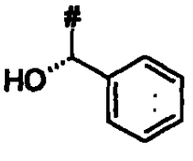
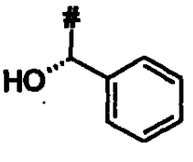
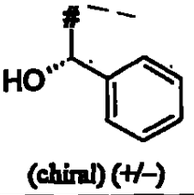
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
595	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
596	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
597	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
598	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
599	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
600	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
601	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	

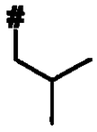
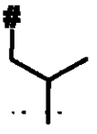
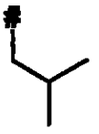
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
602	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
603	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	
604	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
605	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
606	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
607	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
608	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_3	

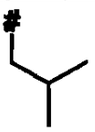
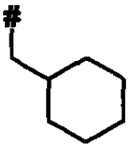
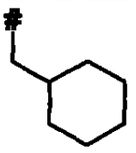
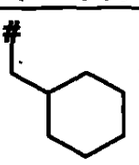
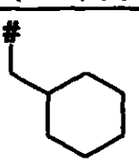
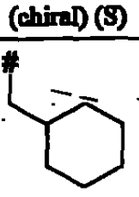
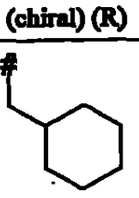
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP^{**})
609	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	# (chiral) (S)	H	H	OCH_3	
610	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	# (chiral) (R)	H	H	OCH_3	
611	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	# (chiral) (S)	H	H	OCH_3	
612	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	# (chiral) (R)	H	H	OCH_3	
613	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	# (chiral) (S)	H	H	OCH_3	
614	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	# (chiral) (+/–)	H	H	OCH_3	
615	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	# (chiral) (+/–)	H	H	OCH_3	

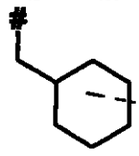
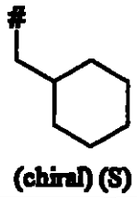
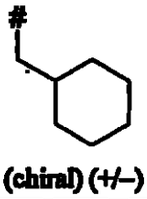
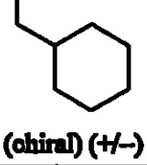
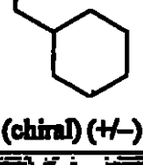
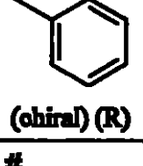
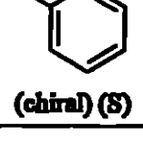
Example	R^1 / R^{1a}	R^2	R^3	R^{4aa}	R^5	R^6	logP*)
616	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
617	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
618	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
619	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
620	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
621	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
622	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
623	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	

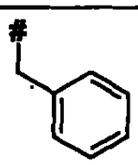
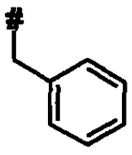
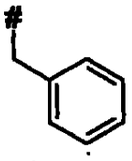
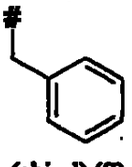
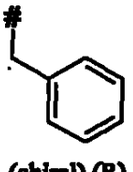
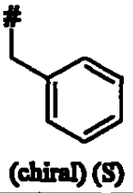
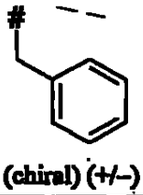
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
624	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
625	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	
626	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
627	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
628	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
629	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
630	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
631	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	

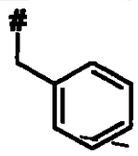
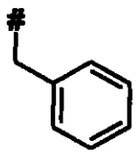
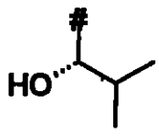
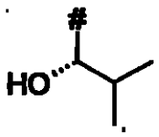
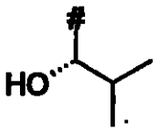
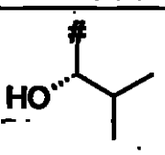
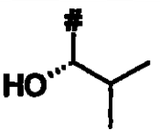
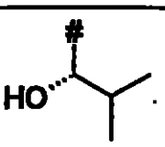
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
632	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
633	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
634	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
635	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
636	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	
637	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
638	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
639	n-pentyl / H (chiral) (R)	H (chiral) (R)		H	H	OCH_3	

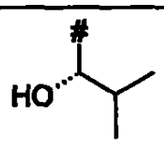
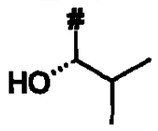
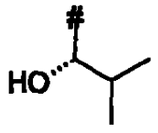
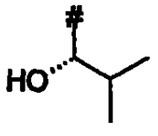
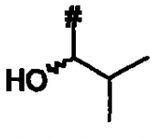
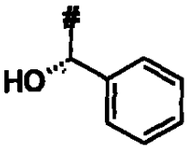
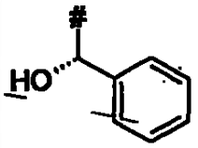
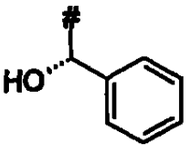
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (R)				
640	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
641	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
642	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
643	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
644	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
645	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
646	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
647	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/-)	H	H	OCH_3	

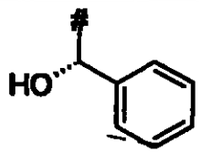
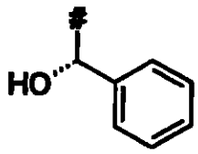
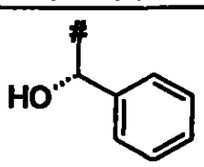
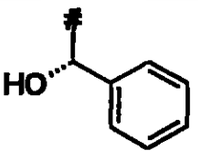
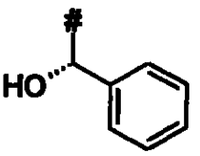
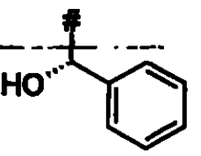
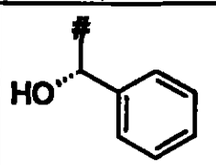
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
648	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
649	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
650	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
651	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
652	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
653	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
654	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
655	n-pentyl / H (chiral) (S)	H (chiral) (R)		H	H	OCH_3	

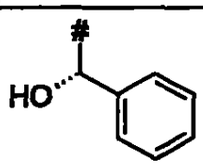
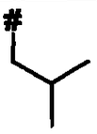
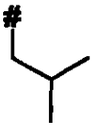
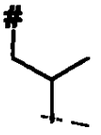
Example	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
			(chiral) (S)				
656	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
657	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
658	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	
659	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
660	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
661	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
662	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	

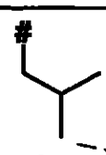
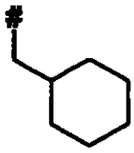
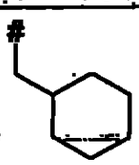
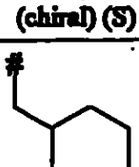
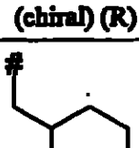
Example	R^1 / R^{1*}	R^2	R^3	R^{4a}	R^5	R^6	logP*)
663	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
664	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
665	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_3	
666	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_3	
667	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_3	
668	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_3	
669	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_3	

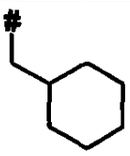
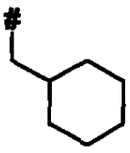
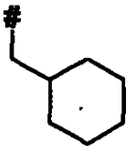
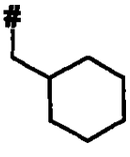
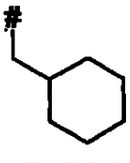
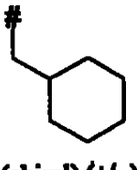
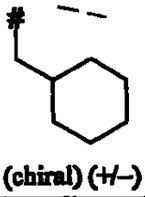
Example	R^1 / R^{1*}	R^2	R^3	R^{4a}	R^5	R^6	logP*)
670	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
671	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_3	
672	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
673	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
674	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	
675	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
676	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
677	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	

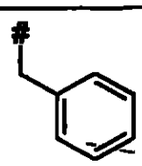
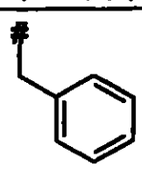
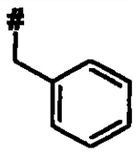
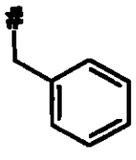
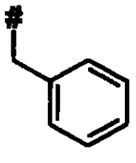
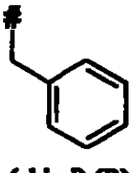
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
678	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	
679	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
680	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OH	
681	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
682	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
683	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
684	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
685	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	

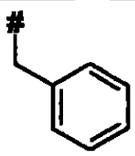
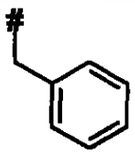
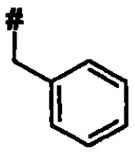
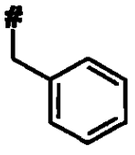
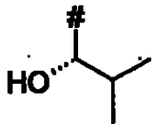
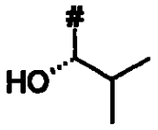
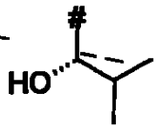
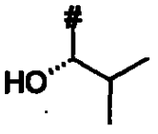
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
686	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
687	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
688	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
689	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	
690	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
691	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OH	
692	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	

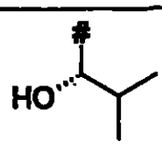
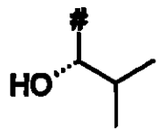
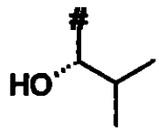
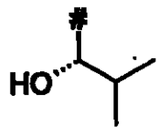
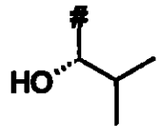
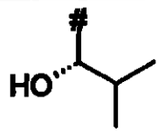
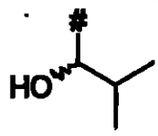
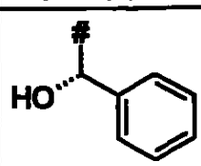
Example	R^1 / R^{1a}	R^2	R^3	R^{4aa}	R^5	R^6	logP*)
693	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
694	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
695	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
696	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	
697	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
698	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
699	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
700	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	

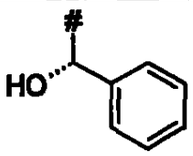
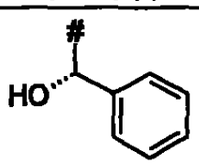
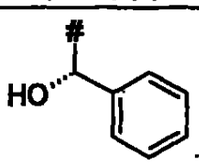
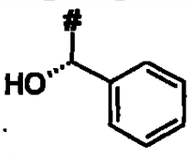
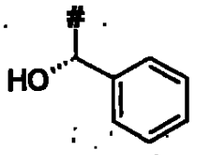
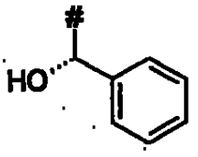
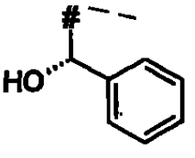
Example	R^1 / R^{1*}	R^2	R^3	R^{4a}	R^5	R^6	log$P^{a)}$
701	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
702	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OH	
703	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
704	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
705	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
706	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
707	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	
708	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	

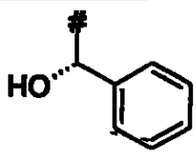
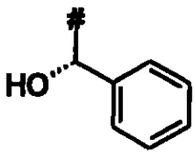
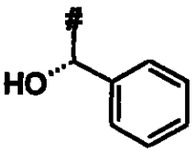
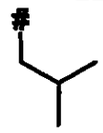
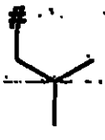
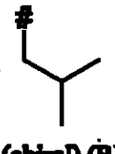
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
709	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
710	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
711	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	
712	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
713	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OH	
714	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
715	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	

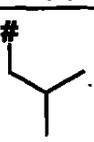
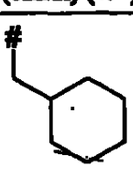
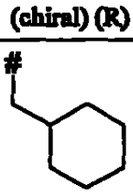
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
716	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
717	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
718	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	
719	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
720	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
721	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
722	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	

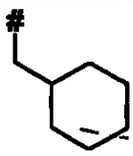
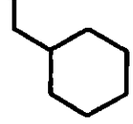
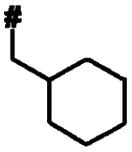
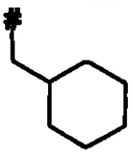
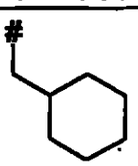
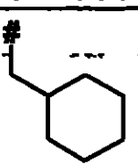
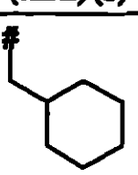
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
723	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
724	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OH	
725	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
726	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
727	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
728	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
729	n-hexyl / H (chiral) (R)	– H (chiral) (S)	 (chiral) (R)	H	H	OH	
730	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OH	

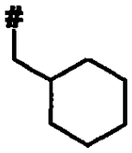
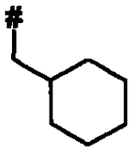
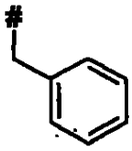
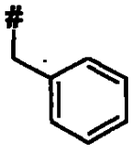
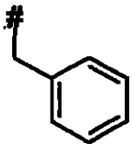
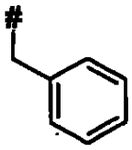
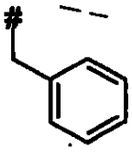
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
731	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
732	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
733	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
734	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
735	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OH	
736	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
737	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
738	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OH	

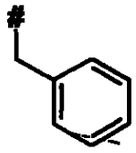
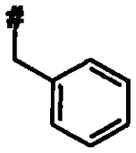
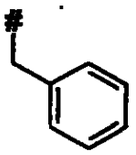
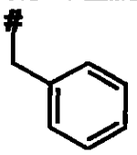
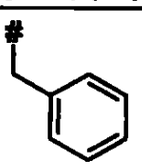
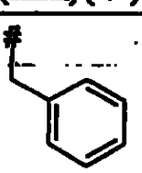
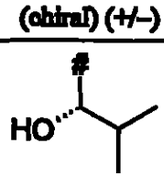
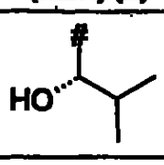
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
739	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
740	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
741	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
742	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
743	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
744	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
745	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OH	

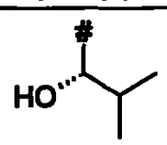
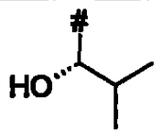
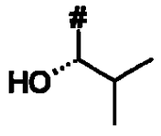
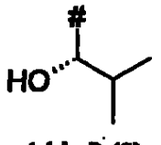
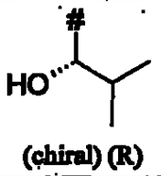
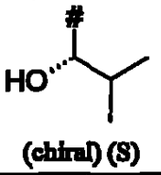
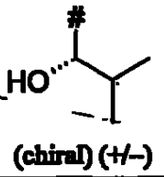
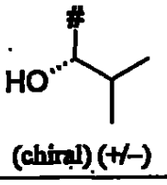
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
746	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OH	
747	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
748	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
749	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
750	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
751	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
752	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
753	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OH	

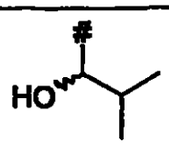
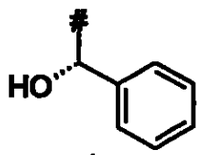
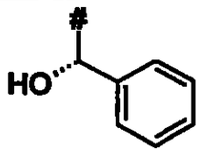
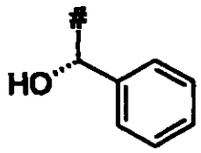
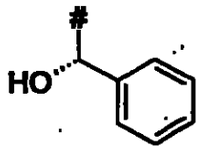
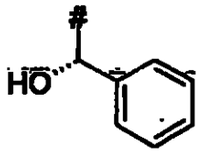
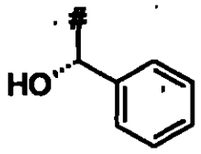
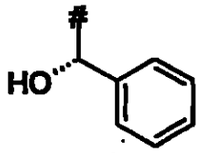
Example	R^1 / R^{1a}	R^2	R^3	R^{4aa}	R^5	R^6	logP*)
754	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
755	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
756	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
757	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OH	
758	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
759	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
760	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
761	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OH	

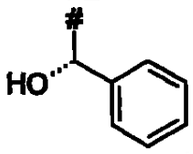
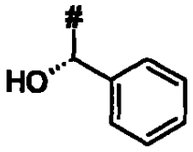
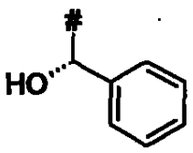
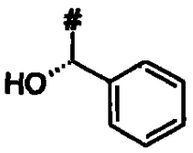
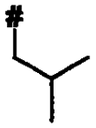
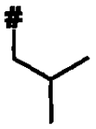
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP^{**})
762	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
763	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
764	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
765	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
766	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
767	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
768	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OH	

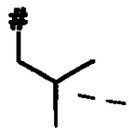
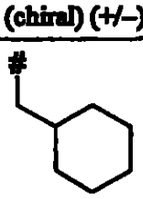
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
769	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
770	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
771	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
772	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
773	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
774	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
775	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OH	

Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
776	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
777	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
778	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
779	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OH	
780	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
781	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
782	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
783	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)		H	H	OH	

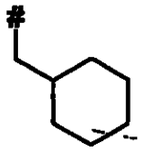
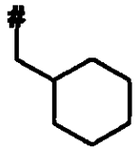
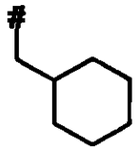
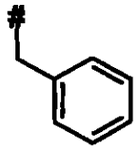
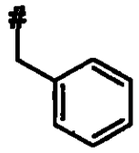
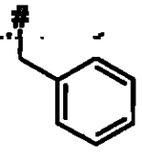
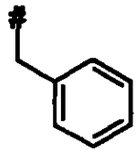
Example	R^1 / R^{1a}	R^2	R^3	R^{4aa}	R^5	R^6	logP[a])
			(chiral) (S)				
784	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	
785	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
786	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
787	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
788	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	
789	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
790	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OH	
791	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	

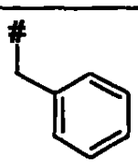
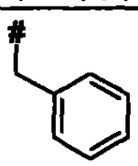
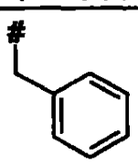
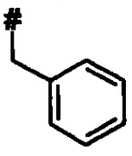
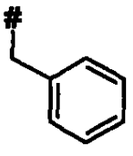
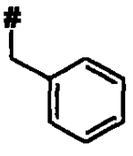
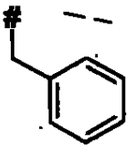
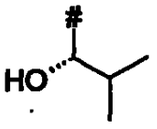
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
792	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
793	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
794	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
795	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	
796	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
797	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
798	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
799	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)		H	H	OH	

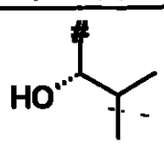
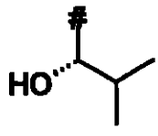
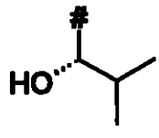
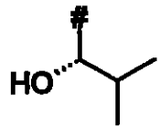
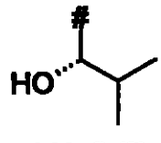
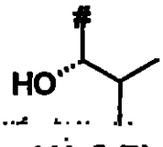
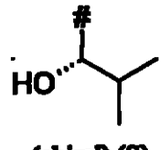
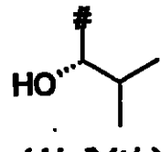
Example	R^1 / R^{1*}	R^2	R^3	R^{4*}	R^5	R^6	logP[a])
			(chiral) (R)				
800	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OH	
801	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OH	
802	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
803	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
804	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OH	
805	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OH	
806	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OH	
807	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)		H	H	OH	

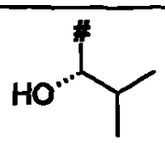
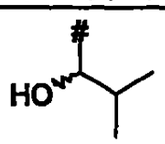
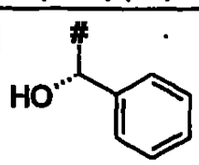
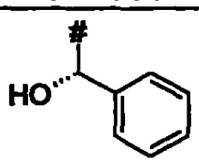
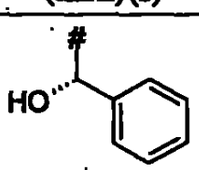
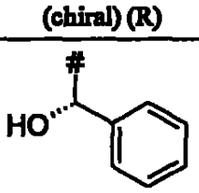
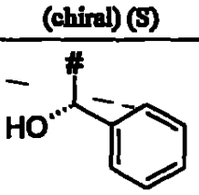
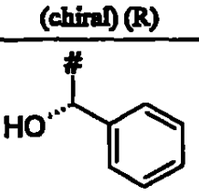
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (S)				
808	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	#  (chiral) (R)	H	H	OH	
809	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	#  (chiral) (S)	H	H	OH	
810	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	#  (chiral) (R)	H	H	OH	
811	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	#  (chiral) (S)	H	H	OH	
812	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (+/–)	H	H	OH	
813	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	OH	
814	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	OH	
815	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	#  (chiral) (R)	H	H	OH	

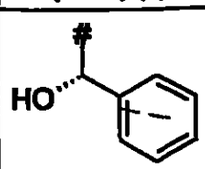
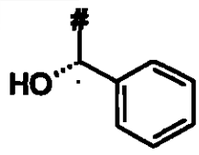
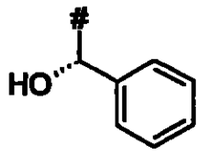
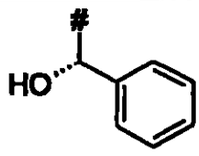
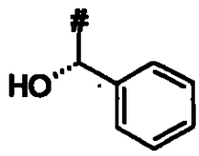
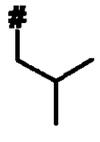
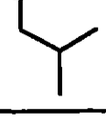
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
816	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	# (chiral) (S)	H	H	OH	
817	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	# (chiral) (R)	H	H	OH	
818	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	# (chiral) (S)	H	H	OH	
819	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	# (chiral) (R)	H	H	OH	
820	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	# (chiral) (S)	H	H	OH	
821	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	# (chiral) (R)	H	H	OH	
822	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	# (chiral) (S)	H	H	OH	

Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
823	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (+/–)	H	H	OH	
824	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	OH	
825	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	OH	
826	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	#  (chiral) (R)	H	H	OH	
827	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	#  (chiral) (S)	H	H	OH	
828	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (R)	H	H	OH	
829	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (S)	H	H	OH	

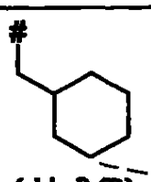
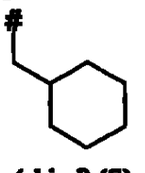
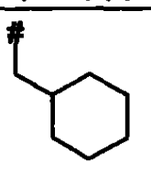
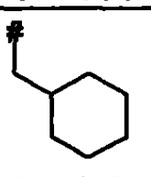
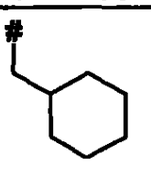
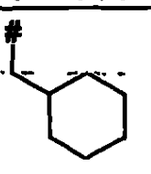
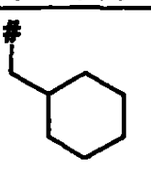
Example	R^1 / R^{1*}	R^2	R^3	R^{4a}	R^5	R^6	logP*)
830	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	#  (chiral) (R)	H	H	OH	
831	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	#  (chiral) (S)	H	H	OH	
832	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	#  (chiral) (R)	H	H	OH	
833	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	#  (chiral) (S)	H	H	OH	
834	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (+/–)	H	H	OH	
835	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	OH	
836	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	OH	
837	n-pentyl / H (chiral) (R)	H (chiral) (R)	# 	H	H	OH	

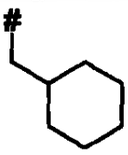
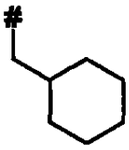
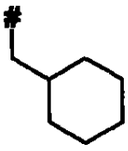
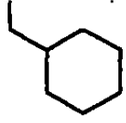
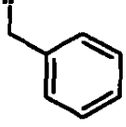
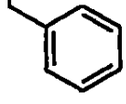
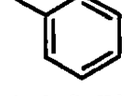
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (R)				
838	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
839	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
840	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
841	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
842	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
843	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
844	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
845	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OH	

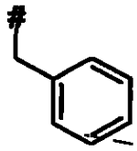
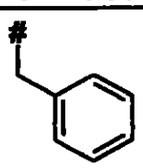
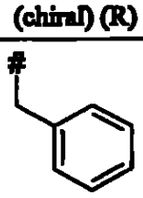
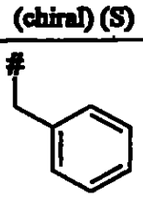
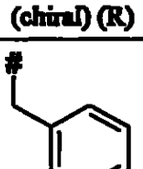
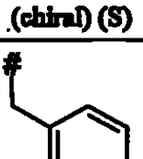
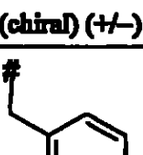
Example	R^1 / R^{1a}	R^2	R^3	R^{4a}	R^5	R^6	logP*)
846	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
847	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
848	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
849	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
850	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
851	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
852	n-pentyl / H (chiral) (S)	~H (chiral) (R)	 (chiral) (R)	H	H	OH	
853	n-pentyl / H (chiral) (S)	H (chiral) (R)		H	H	OH	

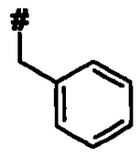
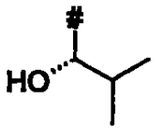
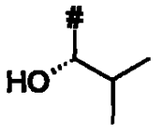
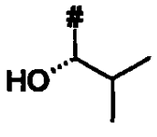
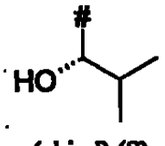
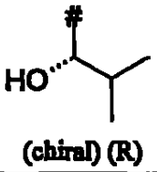
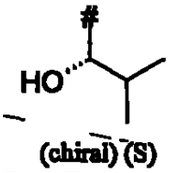
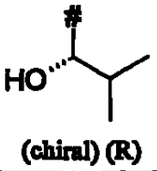
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (S)				
854	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
855	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
856	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OH	
857	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
858	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
859	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
860	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
861	n-pentyl / H (chiral) (R)	H (chiral) (S)		H	H	OH	

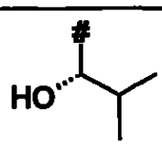
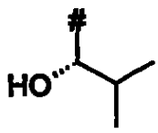
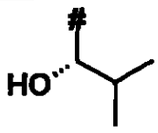
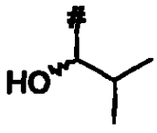
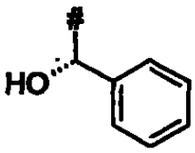
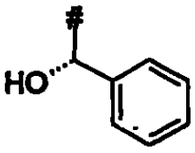
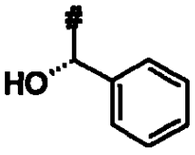
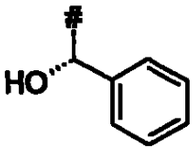
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (R)				
862	n-pentyl / H (chiral) (R)	H (chiral) (S)	# (chiral) (S)	H	H	OH	
863	n-pentyl / H (chiral) (S)	H (chiral) (R)	# (chiral) (R)	H	H	OH	
864	n-pentyl / H (chiral) (S)	H (chiral) (R)	# (chiral) (S)	H	H	OH	
865	n-pentyl / H (chiral) (S)	H (chiral) (S)	# (chiral) (R)	H	H	OH	
866	n-pentyl / H (chiral) (S)	H (chiral) (S)	# (chiral) (S)	H	H	OH	
867	n-pentyl / H (chiral) (R)	H (chiral) (S)	# (chiral) (+/–)	H	H	OH	
868	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	# (chiral) (+/–)	H	H	OH	
869	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	# (chiral) (+/–)	H	H	OH	

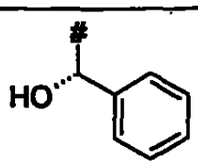
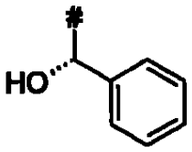
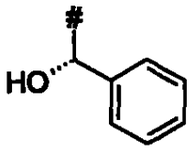
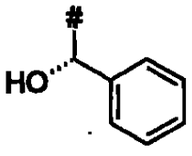
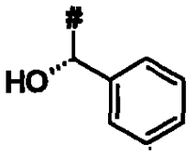
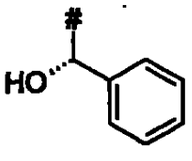
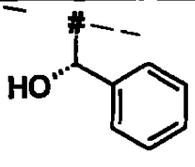
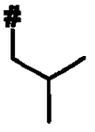
Example	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
870	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
871	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
872	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
873	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
874	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
875	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
876	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OH	

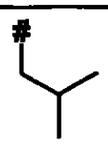
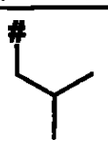
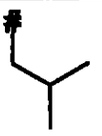
Example	R^1 / R^{1*}	R^2	R^3	R^{4aa}	R^5	R^6	logP[a])
877	n-pentyl / H (chiral) (S)	H (chiral) (S)	#  (chiral) (S)	H	H	OH	
878	n-pentyl / H (chiral) (R)	H (chiral) (S)	#  (chiral) (+/–)	H	H	OH	
879	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	#  (chiral) (+/–)	H	H	OH	
880	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	#  (chiral) (+/–)	H	H	OH	
881	n-pentyl / H (chiral) (R)	H (chiral) (R)	#  (chiral) (R)	H	H	OH	
882	n-pentyl / H (chiral) (R)	H (chiral) (R)	#  (chiral) (S)	H	H	OH	
883	n-pentyl / H (chiral) (R)	H (chiral) (S)	#  (chiral) (R)	H	H	OH	

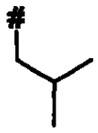
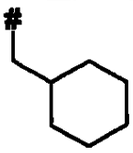
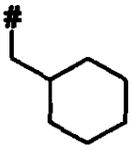
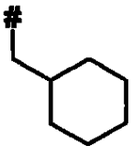
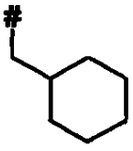
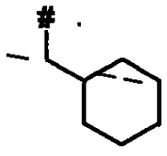
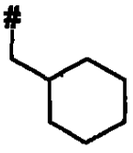
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
884	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
885	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OH	
886	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OH	
887	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OH	
888	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OH	
889	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OH	
890	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	

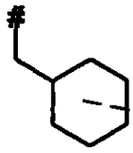
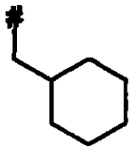
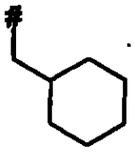
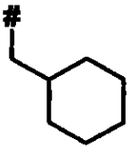
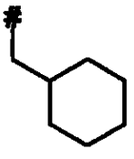
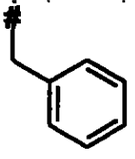
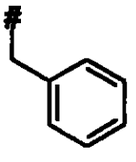
Example	R^1 / R^{1a}	R^2	R^3	R^{4a}	R^5	R^6	log$P^{a)}$
891	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OH	
892	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
893	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
894	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
895	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
896	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
897	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
898	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	

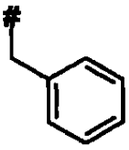
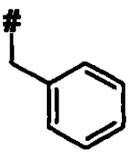
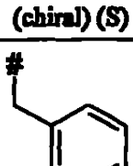
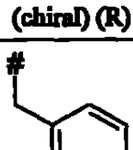
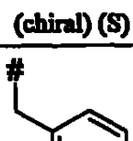
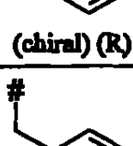
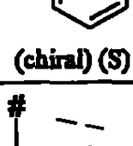
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
899	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
900	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
901	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
902	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
903	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
904	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
905	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
906	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	

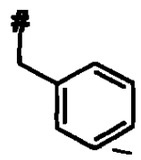
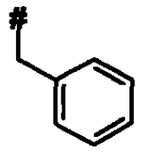
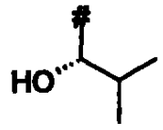
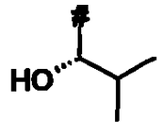
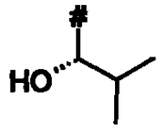
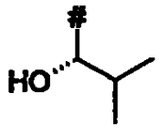
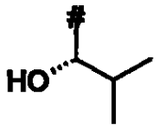
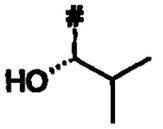
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
907	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
908	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
909	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
910	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
911	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
912	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
913	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
914	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)		H	H	OCH_2CH_3	

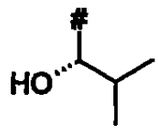
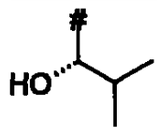
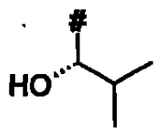
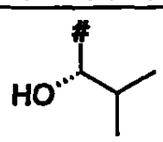
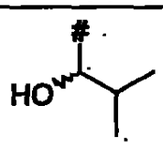
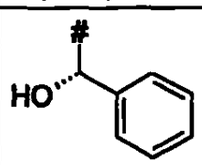
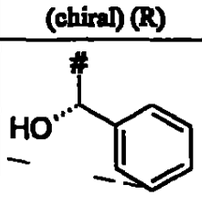
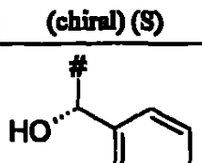
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (R)				
915	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
916	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
917	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
918	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
919	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
920	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
921	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
922	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	

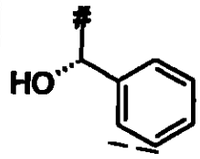
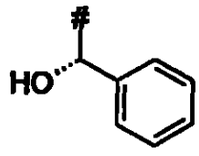
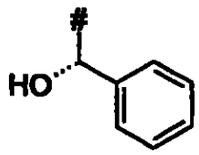
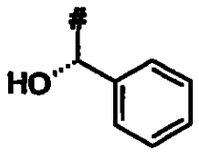
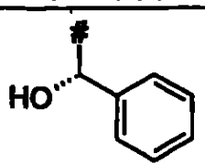
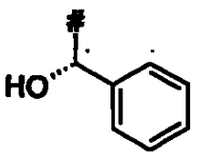
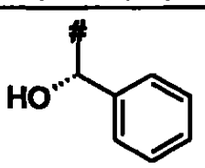
Example	R^1 / R^{1*}	R^2	R^3	R^{4a}	R^5	R^6	logP*)
923	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
924	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
925	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
926	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
927	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
928	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
929	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
930	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)		H	H	OCH_2CH_3	

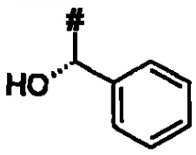
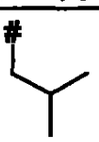
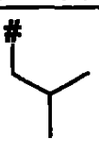
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (S)				
931	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
932	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
933	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
934	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
935	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
936	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
937	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	

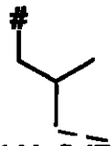
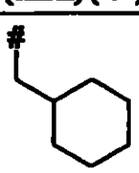
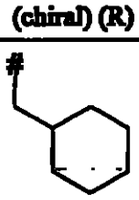
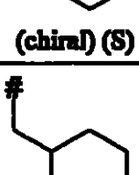
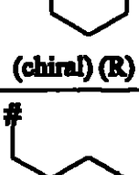
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
938	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (R)	H	H	OCH_2CH_3	
939	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (S)	H	H	OCH_2CH_3	
940	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	#  (chiral) (R)	H	H	OCH_2CH_3	
941	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	#  (chiral) (S)	H	H	OCH_2CH_3	
942	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	#  (chiral) (R)	H	H	OCH_2CH_3	
943	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	#  (chiral) (S)	H	H	OCH_2CH_3	
944	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (+/–)	H	H	OCH_2CH_3	

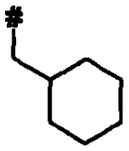
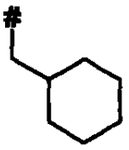
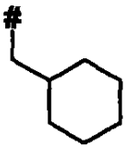
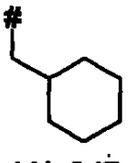
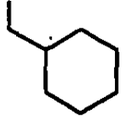
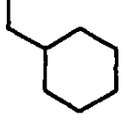
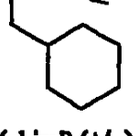
Example	R^1 / R^{1*}	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
945	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
946	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
947	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
948	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
949	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
950	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
951	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
952	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	

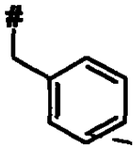
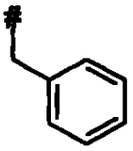
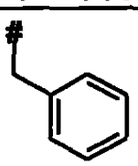
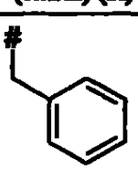
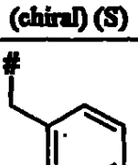
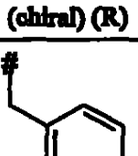
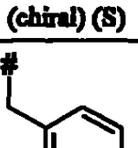
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
953	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
954	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
955	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
956	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
957	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
958	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
959	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
960	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	

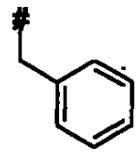
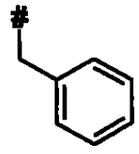
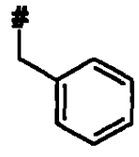
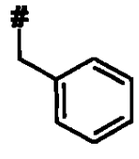
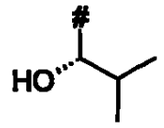
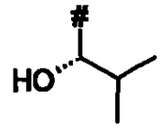
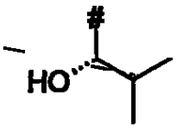
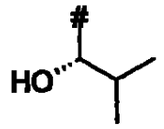
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
961	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
962	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
963	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
964	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
965	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
966	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
967	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	

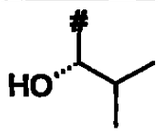
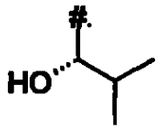
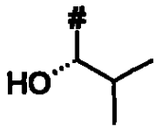
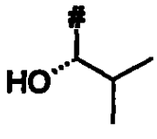
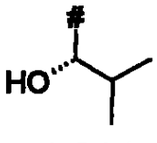
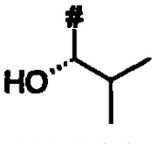
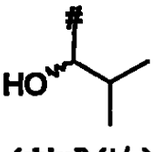
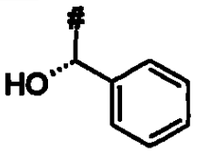
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
968	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
969	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
970	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
971	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
972	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
973	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
974	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
975	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	

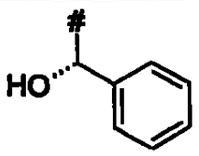
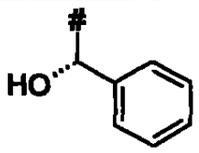
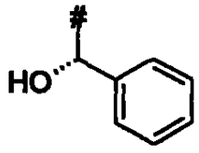
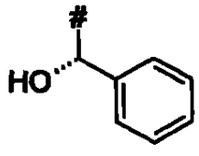
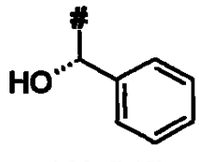
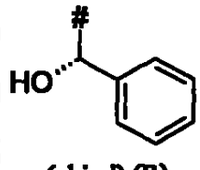
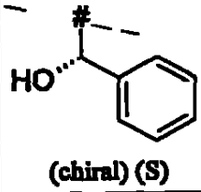
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
976	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
977	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
978	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
979	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
980	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
981	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
982	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
983	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	

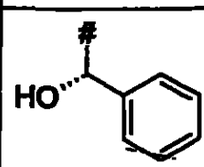
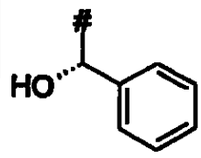
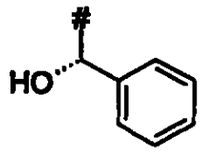
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
984	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
985	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
986	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
987	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
988	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
989	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
990	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	

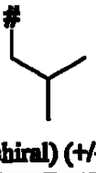
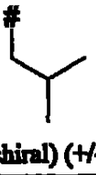
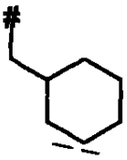
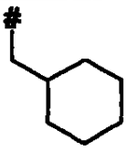
Example	R^1 / $R^{1'}$	R^2	R^3	R^{4aa}	R^5	R^6	logP[a])
991	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
992	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
993	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
994	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
995	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
996	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
997	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	

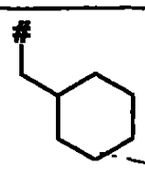
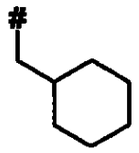
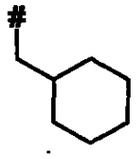
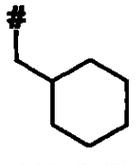
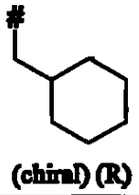
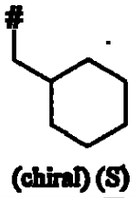
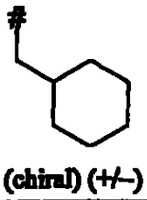
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
998	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
999	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1000	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1001	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1002	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
1003	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1004	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1005	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	

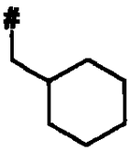
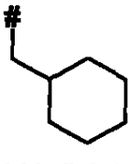
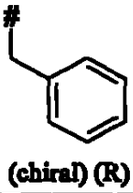
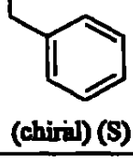
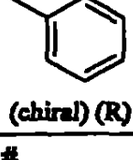
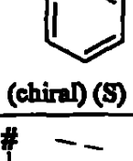
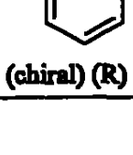
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1006	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
1007	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1008	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1009	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
1010	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1011	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1012	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1013	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	

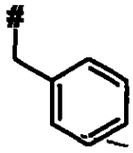
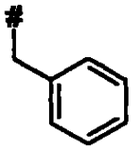
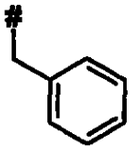
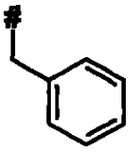
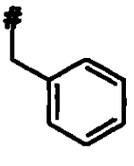
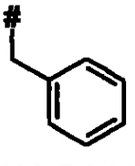
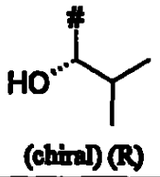
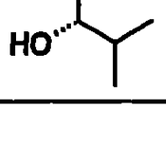
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1014	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1015	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1016	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
1017	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
1018	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1019	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1020	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	

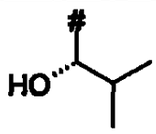
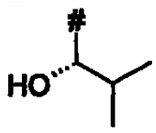
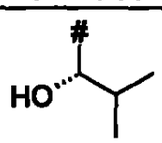
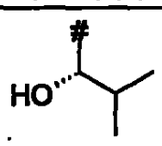
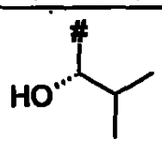
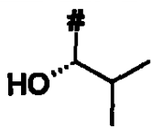
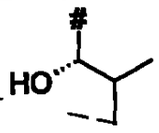
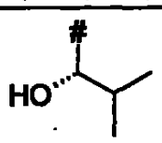
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1021	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1022	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1023	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1024	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
1025	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1026	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1027	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
1028	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	

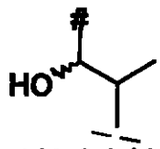
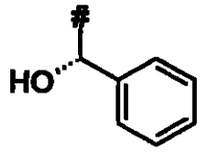
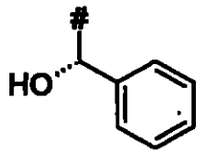
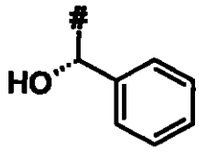
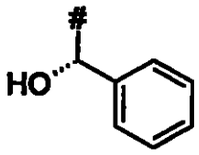
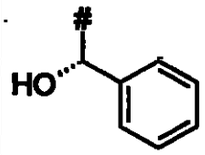
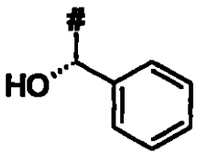
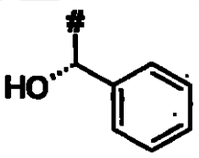
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1029	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1030	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1031	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
1032	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1033	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1034	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1035	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
1036	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	

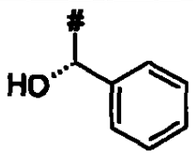
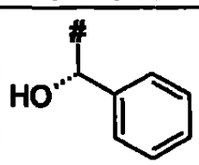
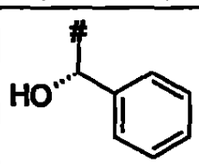
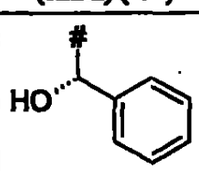
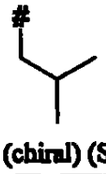
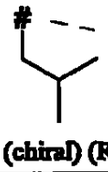
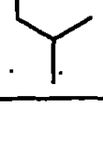
Example	R^1 / R^{1*}	R^2	R^3	R^{4a}	R^5	R^6	logP*)
1037	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1038	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
1039	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
1040	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1041	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1042	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
1043	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	

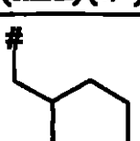
Example	R^1 / R^{1*}	R^2	R^3	R^{4*}	R^5	R^6	logP*)
1044	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	OCH_2CH_3	
1045	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	OCH_2CH_3	
1046	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	#  (chiral) (R)	H	H	OCH_2CH_3	
1047	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	#  (chiral) (S)	H	H	OCH_2CH_3	
1048	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (R)	H	H	OCH_2CH_3	
1049	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (S)	H	H	OCH_2CH_3	
1050	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	#  (chiral) (R)	H	H	OCH_2CH_3	

Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1051	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	#  (chiral) (S)	H	H	OCH_2CH_3	
1052	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	#  (chiral) (R)	H	H	OCH_2CH_3	
1053	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	#  (chiral) (S)	H	H	OCH_2CH_3	
1054	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (+/–)	H	H	OCH_2CH_3	
1055	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	OCH_2CH_3	
1056	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	OCH_2CH_3	
1057	n-pentyl / H (chiral) (R)	H (chiral) (R)	#  (chiral) (R)	H	H	OCH_2CH_3	
1058	n-pentyl / H (chiral) (R)	H (chiral) (R)	# 	H	H	OCH_2CH_3	

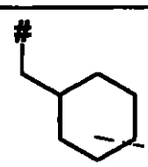
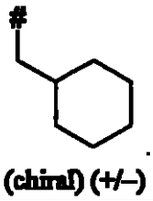
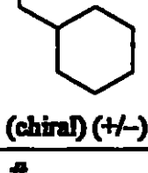
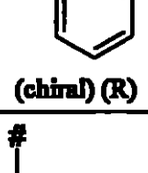
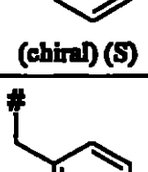
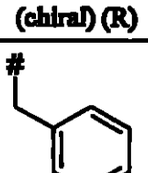
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (S)				
1059	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1060	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
1061	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
1062	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1063	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1064	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
1065	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1066	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	

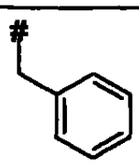
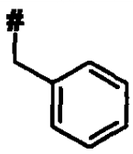
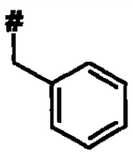
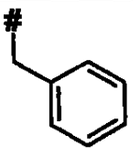
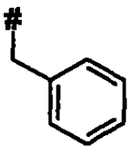
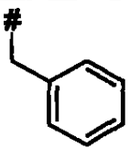
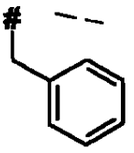
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1067	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1068	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
1069	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1070	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1071	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
1072	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
1073	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1074	n-pentyl / H (chiral) (S)	H (chiral) (S)		H	H	OCH_2CH_3	

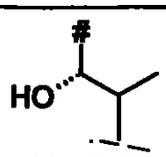
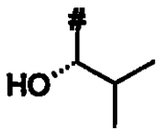
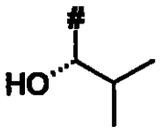
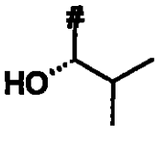
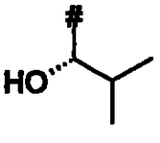
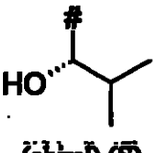
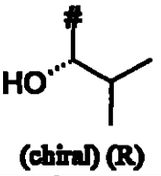
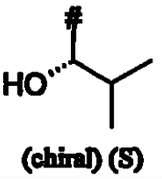
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (R)				
1075	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
1076	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1077	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1078	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1079	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
1080	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1081	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1082	n-pentyl / H (chiral) (R)	H (chiral) (S)		H	H	OCH_2CH_3	

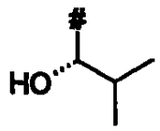
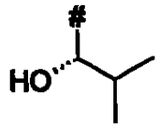
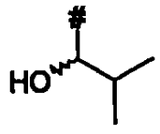
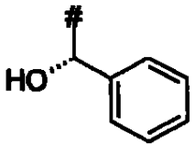
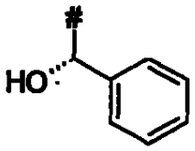
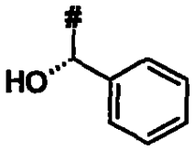
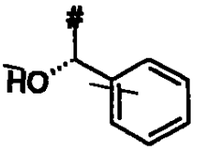
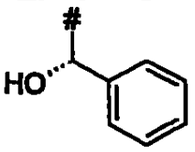
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (S)				
1083	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
1084	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1085	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1086	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	OCH_2CH_3	
1087	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1088	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1089	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1090	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	

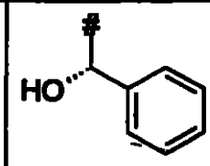
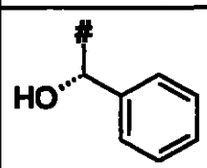
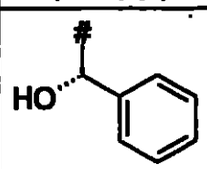
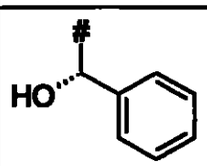
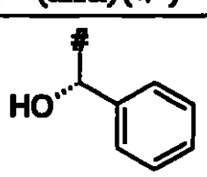
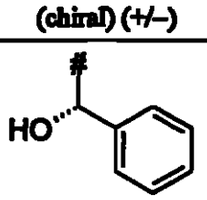
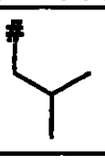
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1091	n-pentyl / H (chiral) (R)	H (chiral) (R)	# (chiral) (S)	H	H	OCH_2CH_3	
1092	n-pentyl / H (chiral) (R)	H (chiral) (S)	# (chiral) (R)	H	H	OCH_2CH_3	
1093	n-pentyl / H (chiral) (R)	H (chiral) (S)	# (chiral) (S)	H	H	OCH_2CH_3	
1094	n-pentyl / H (chiral) (S)	H (chiral) (R)	# (chiral) (R)	H	H	OCH_2CH_3	
1095	n-pentyl / H (chiral) (S)	H (chiral) (R)	# (chiral) (S)	H	H	OCH_2CH_3	
1096	n-pentyl / H (chiral) (S)	H (chiral) (S)	# (chiral) (R)	H	H	OCH_2CH_3	
1097	n-pentyl / H (chiral) (S)	H (chiral) (S)	# (chiral) (S)	H	H	OCH_2CH_3	

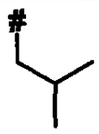
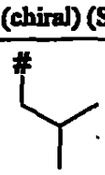
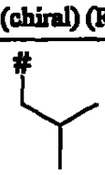
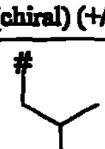
Example	R^1 / R^{1*}	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
1098	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1099	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1100	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	OCH_2CH_3	
1101	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	OCH_2CH_3	
1102	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	OCH_2CH_3	
1103	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	OCH_2CH_3	
1104	n-pentyl / H (chiral) (R)	H (chiral) (S)	(chiral) (S)	H	H	OCH_2CH_3	

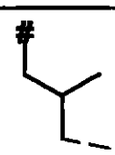
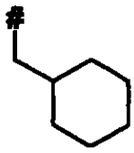
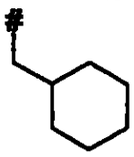
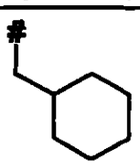
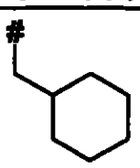
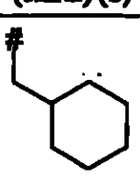
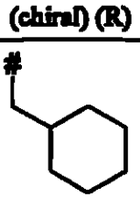
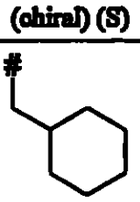
Example	R^1 / R^{1a}	R^2	R^3	R^{4aa}	R^5	R^6	logP*)
1105	n-pentyl / H (chiral) (S)	H (chiral) (R)	#  (chiral) (R)	H	H	OCH_2CH_3	
1106	n-pentyl / H (chiral) (S)	H (chiral) (R)	#  (chiral) (S)	H	H	OCH_2CH_3	
1107	n-pentyl / H (chiral) (S)	H (chiral) (S)	#  (chiral) (R)	H	H	OCH_2CH_3	
1108	n-pentyl / H (chiral) (S)	H (chiral) (S)	#  (chiral) (S)	H	H	OCH_2CH_3	
1109	n-pentyl / H (chiral) (R)	H (chiral) (S)	#  (chiral) (+/–)	H	H	OCH_2CH_3	
1110	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	#  (chiral) (+/–)	H	H	OCH_2CH_3	
1111	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	#  (chiral) (+/–)	H	H	OCH_2CH_3	
1112							

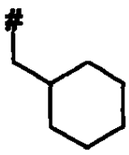
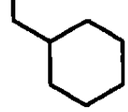
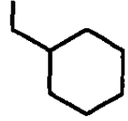
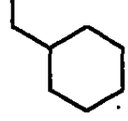
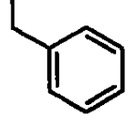
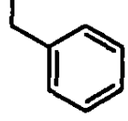
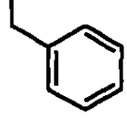
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP[a])
1113	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1114	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1115	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1116	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1117	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1118	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1119	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1120	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	

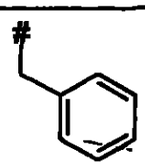
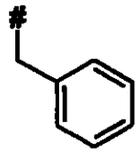
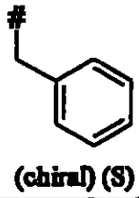
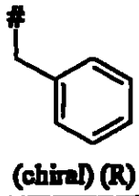
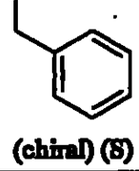
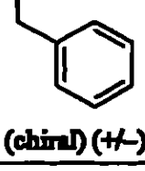
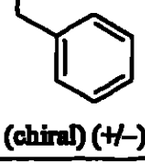
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1121	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1122	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1123	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1124	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1125	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1126	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1127	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1128	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	

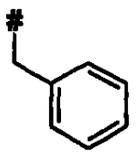
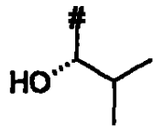
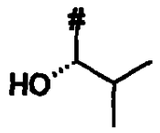
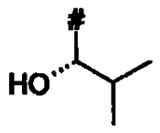
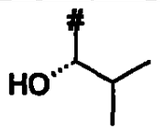
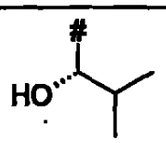
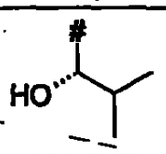
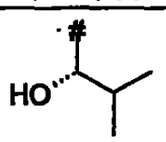
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP^{**})
1129	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1130	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1131	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1132	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1133	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1134	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1135	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1136	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)		H	H	SCH_3	

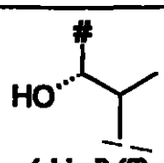
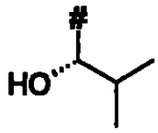
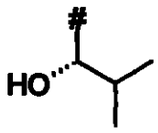
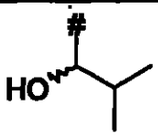
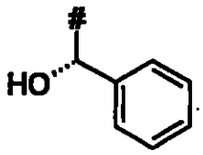
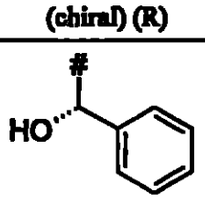
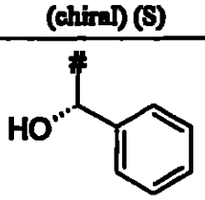
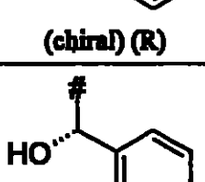
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (S)				
1137	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1138	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1139	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1140	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1141	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1142	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1143	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1144	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	

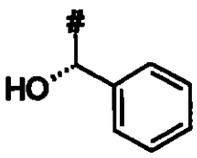
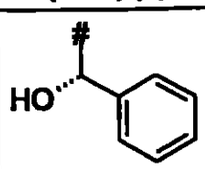
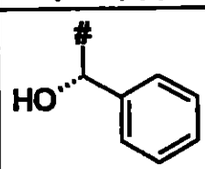
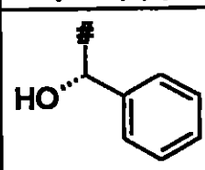
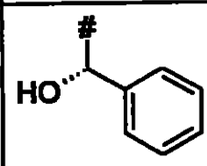
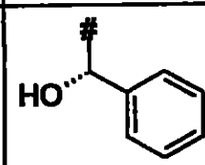
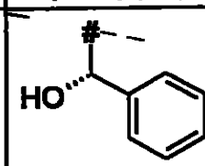
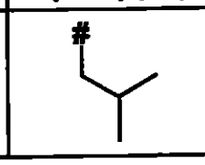
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1145	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1146	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1147	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1148	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1149	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1150	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1151	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1152	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)		H	H	SCH_3	

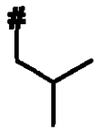
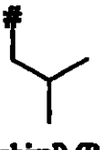
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (R)				
1153	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	#  (chiral) (S)	H	H	SCH_3	
1154	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (+/–)	H	H	SCH_3	
1155	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	SCH_3	
1156	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	SCH_3	
1157	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	#  (chiral) (R)	H	H	SCH_3	
1158	n-hexyl / H (chiral) (R)	CH_3 (chiral) (R)	#  (chiral) (S)	H	H	SCH_3	
1159	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (R)	H	H	SCH_3	

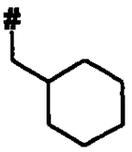
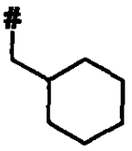
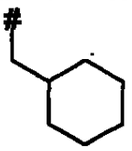
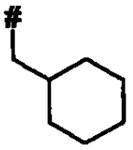
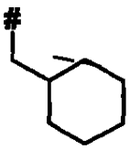
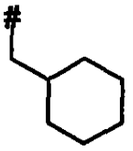
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1160	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1161	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1162	n-hexyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1163	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1164	n-hexyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1165	n-hexyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1166	n-hexyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	

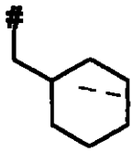
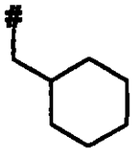
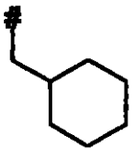
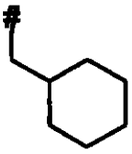
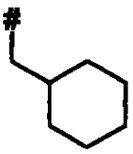
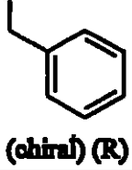
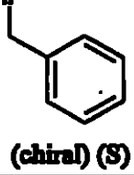
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1167	n-hexyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1168	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1169	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1170	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1171	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1172	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1173	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1174	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	

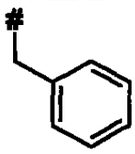
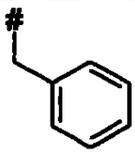
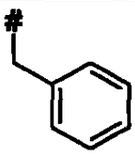
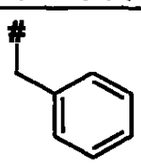
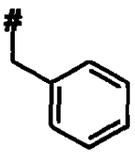
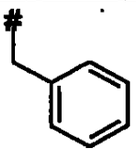
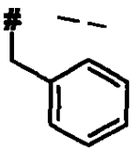
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1175	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1176	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1177	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1178	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1179	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1180	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1181	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1182	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	

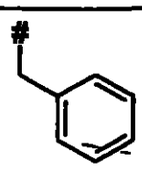
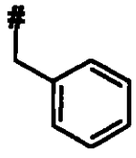
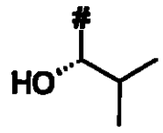
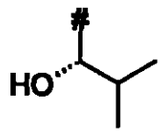
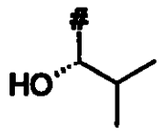
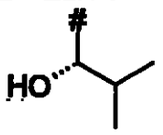
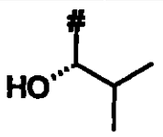
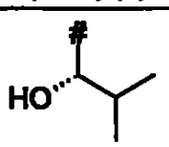
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1183	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1184	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1185	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1186	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1187	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1188	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1189	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1190	n-hexyl / H (chiral) (R)	H (chiral) (R)		H	H	SCH_3	

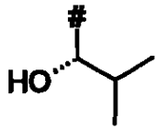
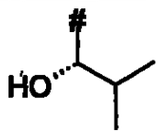
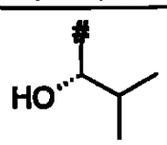
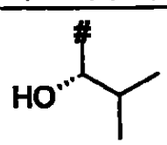
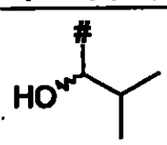
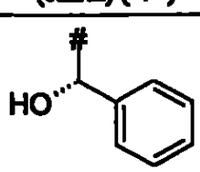
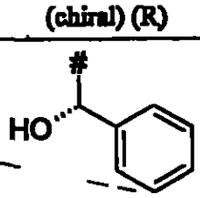
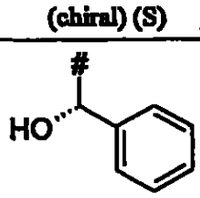
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (R)				
1191	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1192	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1193	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1194	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1195	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1196	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1197	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1198	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	

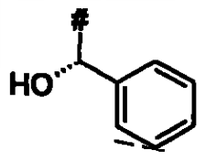
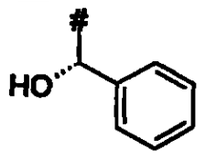
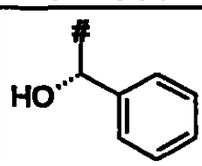
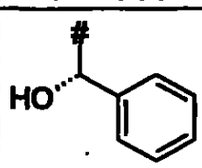
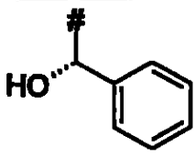
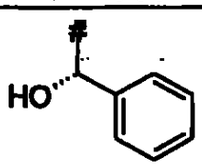
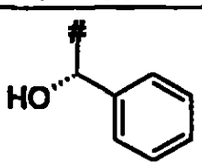
Example	R^1 / R^{1a}	R^2	R^3	R^{4aa}	R^5	R^6	logP[a])
1199	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1200	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1201	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1202	n-hexyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1203	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1204	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1205	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1206	n-hexyl / H (chiral) (S)	H (chiral) (R)		H	H	SCH_3	

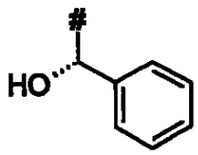
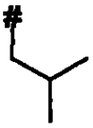
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
			(chiral) (S)				
1207	n-hexyl / H (chiral) (S)	H (chiral) (S)	#  (chiral) (R)	H	H	SCH_3	
1208	n-hexyl / H (chiral) (S)	H (chiral) (S)	#  (chiral) (S)	H	H	SCH_3	
1209	n-hexyl / H (chiral) (R)	H (chiral) (S)	#  (chiral) (+/–)	H	H	SCH_3	
1210	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	#  (chiral) (+/–)	H	H	SCH_3	
1211	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	#  (chiral) (+/–)	H	H	SCH_3	
1212	n-hexyl / H (chiral) (R)	H (chiral) (R)	#  (chiral) (R)	H	H	SCH_3	
1213	n-hexyl / H (chiral) (R)	H (chiral) (R)	#  (chiral) (S)	H	H	SCH_3	

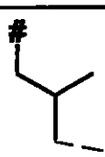
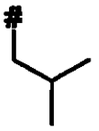
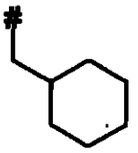
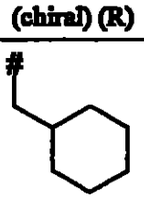
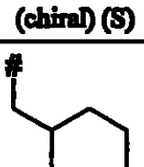
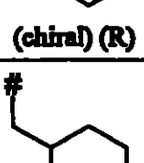
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1214	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1215	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1216	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1217	n-hexyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1218	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1219	n-hexyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1220	n-hexyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	

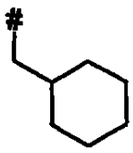
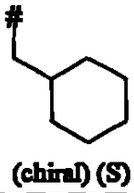
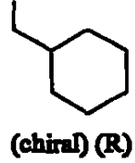
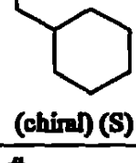
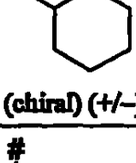
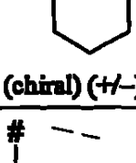
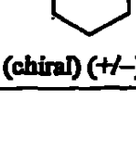
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP[a])
1221	n-hexyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1222	n-hexyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1223	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1224	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1225	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1226	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1227	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1228	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	

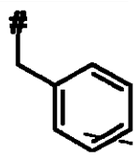
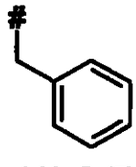
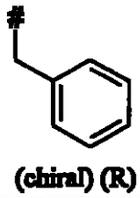
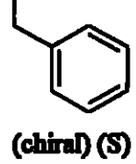
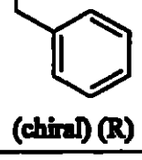
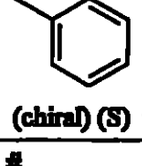
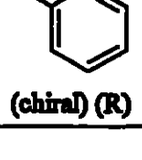
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1229	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1230	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1231	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1232	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1233	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1234	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1235	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1236	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	

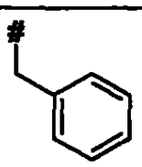
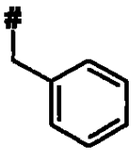
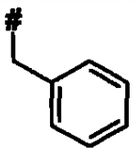
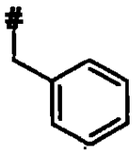
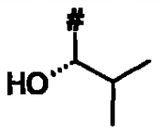
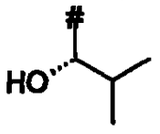
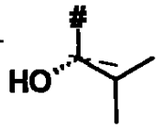
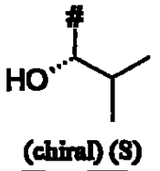
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1237	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1238	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1239	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1240	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1241	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1242	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1243	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	

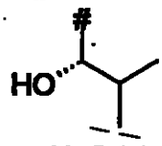
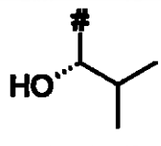
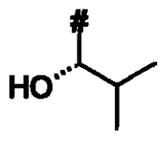
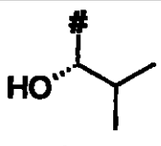
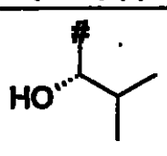
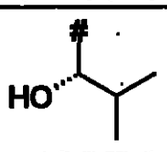
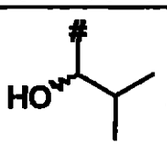
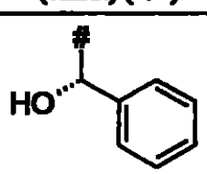
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1244	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1245	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1246	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1247	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1248	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1249	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1250	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1251	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	

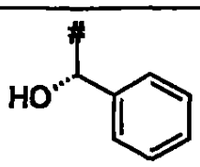
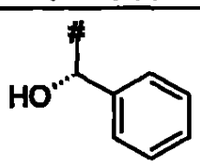
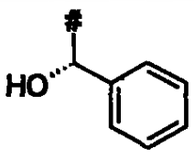
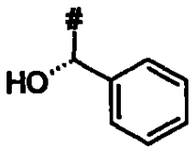
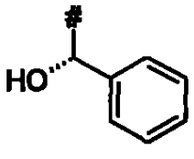
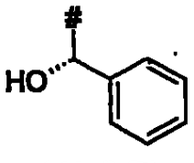
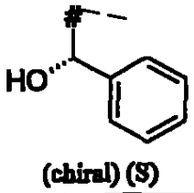
Example	R^1 / $R^{1'}$	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1252	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1253	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1254	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1255	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1256	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1257	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1258	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1259	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	

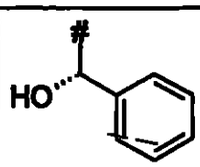
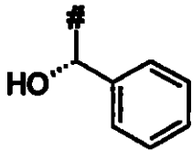
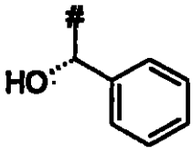
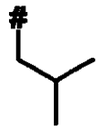
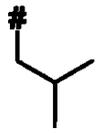
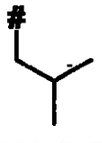
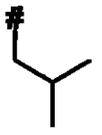
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1260	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	#  (chiral) (R)	H	H	SCH_3	
1261	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	#  (chiral) (S)	H	H	SCH_3	
1262	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	#  (chiral) (R)	H	H	SCH_3	
1263	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	#  (chiral) (S)	H	H	SCH_3	
1264	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	#  (chiral) (+/–)	H	H	SCH_3	
1265	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	SCH_3	
1266	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	#  (chiral) (+/–)	H	H	SCH_3	

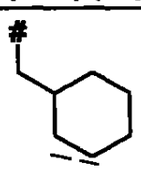
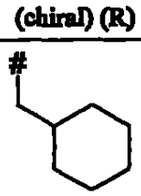
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1267	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1268	n-pentyl / H (chiral) (R)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1269	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1270	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1271	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1272	n-pentyl / H (chiral) (S)	CH_3 (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1273	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (R)	H	H	SCH_3	

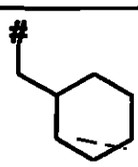
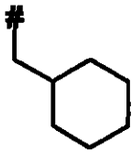
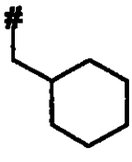
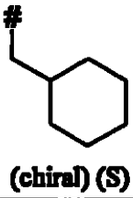
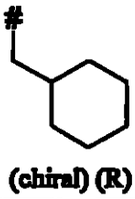
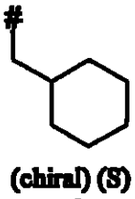
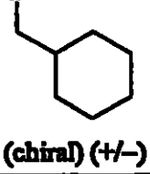
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1274	n-pentyl / H (chiral) (S)	CH_3 (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1275	n-pentyl / H (chiral) (R)	CH_3 (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1276	n-pentyl / H (chiral) (R)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1277	n-pentyl / H (chiral) (+/–)	CH_3 (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1278	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1279	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1280	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1281	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	

Example	R^1 / R^{1*}	R^2	R^3	R^{4a}	R^5	R^6	logP*)
1282	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1283	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1284	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1285	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1286	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1287	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1288	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1289	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	

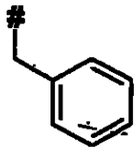
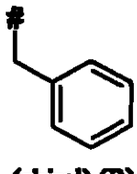
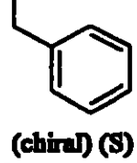
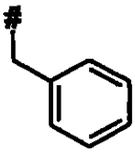
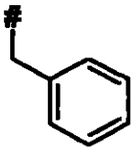
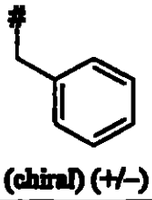
Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1290	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1291	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1292	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1293	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1294	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1295	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1296	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	

Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1297	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1298	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1299	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1300	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1301	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1302	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1303	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1304	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	

Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1305	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1306	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1307	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1308	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1309	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1310	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1311	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1312	n-pentyl / H (chiral) (R)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	

Example	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
1313	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1314	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1315	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (R)	H	H	SCH_3	
1316	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1317	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1318	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1319	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	

Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1320	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	# (chiral) (+/–)	H	H	SCH_3	
1321	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	# (chiral) (+/–)	H	H	SCH_3	
1322	n-pentyl / H (chiral) (R)	H (chiral) (R)	# (chiral) (R)	H	H	SCH_3	
1323	n-pentyl / H (chiral) (R)	H (chiral) (R)	# (chiral) (S)	H	H	SCH_3	
1324	n-pentyl / H (chiral) (R)	H (chiral) (S)	# (chiral) (R)	H	H	SCH_3	
1325	n-pentyl / H (chiral) (R)	H (chiral) (S)	# (chiral) (S)	H	H	SCH_3	
1326	n-pentyl / H (chiral) (S)	H (chiral) (R)	# (chiral) (R)	H	H	SCH_3	

Example	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1327	n-pentyl / H (chiral) (S)	H (chiral) (R)	 (chiral) (S)	H	H	SCH_3	
1328	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (R)	H	H	SCH_3	
1329	n-pentyl / H (chiral) (S)	H (chiral) (S)	 (chiral) (S)	H	H	SCH_3	
1330	n-pentyl / H (chiral) (R)	H (chiral) (S)	 (chiral) (+/–)	H	H	SCH_3	
1331	n-pentyl / H (chiral) (R)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	
1332	n-pentyl / H (chiral) (+/–)	H (chiral) (+/–)	 (chiral) (+/–)	H	H	SCH_3	

Determination of logP-values was made according to EEC-Directive 79/831. Annex V. A8 by HPLC (gradient method, acetonitrile/0.1% aqueous phosphoric acid).

* BnOCO = benzyloxycarbonyl

** BOC = *tert*-butoxycarbonyl

B. Biological Test Examples

Example 1

Podosphaera test (apple) / protective

Solvent: 24,5 parts by weight of acetone

24,5 parts by weight of dimethylacetamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for protective activity, young plants are sprayed with the preparation of active compound at the stated rate of application. After the spray coating has dried on, the plants are inoculated with an aqueous spore suspension of the causal agent of apple mildew (Podosphaera leucotricha). The plants are then placed in a greenhouse at approximately 23°C and a relative atmospheric humidity of approximately 70%.

The test is evaluated 7 days after the inoculation. 0% means an efficacy which corresponds to that of the control, while an efficacy of 100% means that no disease is observed.

The compound of example 1 showed an efficacy of 100 % at an application rate of 100 g/ha.

Example 2

Venturia test (apples) / protective

Solvent: 24,5 parts by weight of acetone

24,5 parts by weight of dimethylacetamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for protective activity, young plants are sprayed with the preparation of active compound at the stated rate of application. After the spray coating has dried on, the plants are inoculated with an aqueous

conidia suspension of the causal agent of apple scab (Venturia inaequalis) and then remain for 1 day in an incubation cabinet at approximately 20°C and a relative atmospheric humidity of 100 %.

The plants are then placed in a greenhouse at approximately 21°C and a relative atmospheric humidity of approximately 90 %.

The test is evaluated 10 days after the inoculation. 0% means an efficacy which corresponds to that of the control, while an efficacy of 100% means that no disease is observed.

The compound of example 1 showed an efficacy of 100 % at an application rate of 100 g/ha.

Example 3

Botrytis test (beans) / protective

Solvent: 24,5 parts by weight of acetone

24,5 parts by weight of dimethylacetamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for protective activity, young plants are sprayed with the preparation of active compound. After the spray coating has dried on, 2 small pieces of agar covered with growth of Botrytis cinerea are placed on each leaf. The inoculated plants are placed in a darkened chamber at 20°C and a relative atmospheric humidity of 100%.

2 days after the inoculation, the size of the lesions on the leaves is evaluated. 0% means an efficacy which corresponds to that of the control, while an efficacy of 100% means that no disease is observed.

The compound of example 1 showed an efficacy of more than 90 % at an application rate of 500 g/ha.

Example 4

Sphaerotheca-test (cucumber)

Solvent: 49 parts by weight of N,N-dimethylformamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for protective activity, young plants are sprayed with the preparation of active compound at the stated rate of application. One day after treatment, the plants are inoculated with an aqueous spore suspension of the causal agent of sphaerotheca fuliginea. The plants are then placed in a greenhouse at approximately 23°C and a relative atmospheric humidity of approximately 70%.

The test is evaluated 7 days after the inoculation. 0% means an efficacy which corresponds to that of the control, while an efficacy of 100% means that no disease is observed.

The compounds of examples 1, 8 and 10 showed an efficacy of 70 % at an application rate of 500 ppm.

Example 5

In vitro-Test for the calculation of the ED_{50}-value with Phytophthora infestans as test organism.

Wells of 96-hole microtitre plates are filled with 10µl of a solution of the test compound in methanol together with the emulsifier alkylaryl polyglycol ether. Thereafter, the solvent is evaporated in a hood. At the next step, into each well 200µl of liquid potato dextrose medium is given that has been amended with an appropriate concentration of spores or mycelium suspension of Phytophthora infestans.

The resulting concentrations of the test compounds in the microtitre well are 50, 5, 0,5 and 0,05 ppm. The resulting concentration of the emulsifier in all wells is constantly 300 ppm.

With the aid of a photometer the extinction in all wells is measured at the wavelength of 620 nm.

The microtiter plates are then transferred for 3-5 days onto a shaker at 20°C and 85 % relative humidity.

At the end of the incubation time the growth of the test organism is measured again photometrically at the wavelength of 620 nm. The difference between the two extinction values (taken before and after incubation) is proportional to the growth of the test organism.

Based on the Δ extinction data from the different test concentrations and that of the untreated test organism (control) a dose-response curve is calculated. The concentration that is necessary to give 50

% growth inhibition is defined and reported as ED_{50}-value (= Effective Dose that causes 50 % growth inhibition) in ppm (= mg / l).

The compounds of examples 1, 3 and 4 showed an ED_{50} value of less than 0,05.

Example 6

Spodoptera frugiperda - test (sensible strain)

Method: 1 mg compound disolved in 100 µl acetone; diluted with 900 µl aqueous Triton X-100 0,02 % (w/v)

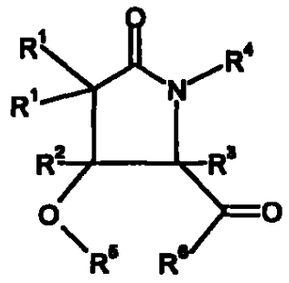
Pieces of cabbage leaves (*Brassica oleracea*) are treated by being dipped into the preparation of the active compound of the desired concentration and are infested with larvae of the fall army worm (*Spodoptera frugiperda*) as long as the leaves are still moist.

After six days the mortality in % is determined. 100 % means that all the caterpillars have been killed; 0 % means that none of the caterpillars have been killed.

In this test e.g. the compound of example 1 showed an efficacy of 100 %.

Claims

1. The use of a compound of the formula (I) or a salt thereof,



(I)

wherein the symbols have the following meanings:

R^1 is the same or different H, halogen, unsubstituted or substituted (C_1-C_{20})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, O-R", $S(O)_nR$", SO_2NR_2", COOR", COSR', CSOR', -O-COR", -O-CSR', -CO-R" or $CONR_2$", or the two substituents R^1 together form a 3 to 8 membered ring which is a carbocyclic ring or contains one or two heteroatom units;

R' is the same or different (C_1-C_{12})-alkyl, (C_2-C_{12})-alkenyl, (C_2-C_{12})-alkynyl, (C_3-C_8)-cycloalkyl, (C_3-C_8)-cycloalkenyl, (C_6-C_{12})-aryl, or heterocyclyl, all of which are unsubstituted or substituted;

R" is the same or different H or R';

n is 0, 1 or 2;

R^2 is H, unsubstituted or substituted (C_1-C_8)-alkyl, unsubstituted or substituted (C_2-C_8)-alkenyl, unsubstituted or substituted (C_2-C_8)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubsituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, or unsubstituted or substituted heterocyclyl;

R^3 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-

C_6)-cycloalkyl, unsubsituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, COOR", CSOR", COSR", -CO-R" or $CONR_2$";

R^4 H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_3-C_{12})-alkenyl, unsubstituted or substituted (C_3-C_{12})-alkynyl, unsubstituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubsituted or substituted (C_3-C_8)-cycloalkenyl, $S(O)_nR'$, COOR', CSOR', COSR', -CO-R', $CONR_2$" or G;

R^5 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubsituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, or unsubstituted or substituted heterocyclyl, SO_2R', COR', COOR', COSR', CSOR', $CONR_2$" or G;

G is $Si[(C_1$-$C_6)$-alkyl$]_x[(CH_2)_t$-phenyl-$(CH_2)_u]_y[(O)_v$-$((C_1$-$C_4)$-alkylene)-$(O$-$(C_1$-$C_4)$-alkylene$)_w$-$H]_z$,

where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2;

R^6 is OR", SR" or NR_2"

or

R^5 and R^6 together form a bond,

for the control of phytopathogenic microorganisms or harmful animals.

2. The use as claimed in claim 1, where the symbols in formula (I) have the following meanings:

R^1 is the same or different H, chloro, bromo, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{10})-alkenyl, unsubstituted or substituted (C_2-C_{10})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, OR", COOR" or -CO-R" or the two substituents R^1 together form a 3 to 6 membered ring which is a carbocyclic ring or contains one or two heteroatom units.

R^2 is H, unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted heterocyclyl.

R^3 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_5-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, COOR", -CO-R" or $CONR_2$".

R^4 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_3-C_{10})-alkenyl, unsubstituted or substituted (C_3-C_{10})-alkynyl, SO_2R', COOR', -COR', $CONR_2$" or G.

R^5 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted phenyl, unsubstituted or substituted heterocyclyl, SO_2R', COR', COOR', COSR', CSOR', $CONR_2$" or G.

G is $Si[(C_1$-$C_6)$-alkyl$]_x[(CH_2)_t$-phenyl-$(CH_3)_u]_y[(O)_v$-$((C_1$-$C_4)$-alkylene$)$-$(O$-$(C_1$-$C_4)$-alkylene$)_w$-$H]_z$,

where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2.

R^6 is OR", SR" or NR_2"

or

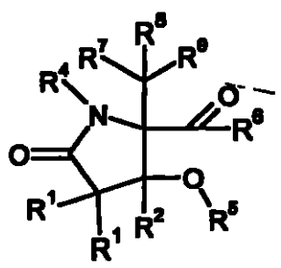
R^5 and R^6 together form a bond.

R' is the same or different (C_1-C_{10})-alkyl, (C_2-C_{10})-alkenyl, (C_2-C_{10})-alkynyl, (C_3-C_8)-cycloalkyl, (C_3-C_8)-cycloalkenyl, phenyl, or heterocyclyl, all of which are unsubstituted or substituted.

R" is the same or different and is H or R'.

n is 0, 1 or 2.

3. The use as claimed in claim 1 or 2 where the compounds of formula (I) are compounds of formula (II),



(II),

where the symbols have the following meanings:

R^1 is the same or different H, chloro, bromo, unsubstituted or substituted (C_1-C_{10})-alkyl, unsubstituted or substituted (C_2-C_8)-alkenyl, unsubstituted or substituted (C_2-C_8)-alkynyl, unsubstituted or substituted phenyl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, COOR", OR" or -CO-R" or the two substituents R^1 together form a 3 to 6 membered carbocyclic ring;

R^2 H, unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted heterocyclyl;

R^4 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_3-C_6)-alkenyl, unsubstituted or substituted (C_3-C_6)-alkynyl, SO_2R', COOR', -COR' or G;

R^5 is H, unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, SO_2R', COOR', -COR', $CONR_2''$, unsubstituted or substituted phenyl, unsubstituted or substituted heterocyclyl, or G;

G is $Si[(C_1\text{-}C_6)\text{-alkyl}]_x[(CH_2)_t\text{-phenyl-}(CH_2)_u]_y[(O)_v\text{-}((C_1\text{-}C_4)\text{-alkylene})\text{-}(O\text{-}(C_1\text{-}C_4)\text{-alkylene})_w\text{-}H]_z$,

where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2;

R^6 is OR", SR" or NR_2'';

or

R^5 and R^6 together form a bond;

R^7 is H, fluoro, chloro, O-R'', SR'', NR''_2, -O-COR', -S-COR', -O-CSR', $-O-SO_2R'$, -O-COOR', -O-CSOR', $-O-CONR_2''$, NO_2, or CN;

R^8 is H, unsubstituted or substituted (C_1-C_4)-alkyl, unsubstituted or substituted (C_2-C_4)-alkenyl, unsubstituted or substituted (C_2-C_4)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted heterocyclyl;

or

R^7 and R^8 are together =O or =S;

R^9 is H, halogen, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, O-R', or SR';

or

R^8 and R^9 together form a 3 to 8 membered ring which is a carbocyclic ring or contains one or two heteroatom units,

R' is the same or different (C_1-C_6)-alkyl, (C_2-C_6)-alkenyl, (C_2-C_6)-alkynyl, (C_3-C_6)-cycloalkyl, phenyl, or heterocyclyl, all of which are unsubstituted or substituted; and

R'' is the same or different H or R'';

G $SiMe_3$, $SiEt_3$, $SiMe_2t$-Bu, $SiMe(t\text{-}Bu)_2$, Si-i-Pr_3, Si-t-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ i-Pr, $SiMe_2$i-Pr, $SiMe_2$i-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2(O\text{-i-Pr})$, $SiPh_2(O\text{-t-Bu})$, Sit-BuPh(OMe), or $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$;

n is 0, 1 or 2.

4. The use as claimed in claim 3, where the symbols in formula II have the following meanings:

R^1 is the same or different H, chloro, bromo, (C_1-C_8)-alkyl, (C_2-C_8)-alkenyl, (C_2-C_8)-alkynyl, phenyl, wherein the last four groups are unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2, and CN, heterocyclyl, unsubstituted or substituted with fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2, or CN, (C_3-C_6)-cycloalkyl, (C_3-C_6)-cycloalkenyl, both unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, trifluoromethyl, methoxy, NO_2, and CN, or the two substituents R^1 together form a 3 to 6 membered carbocyclic ring.

R^2 is H, methyl, ethyl, propyl, isopropyl, allyl, propargyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2, and CN, or heterocyclyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, trifluoromethyl, methoxy, NO_2, and CN.

R^4 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_3-C_6)-alkenyl, unsubstituted or substituted (C_3-C_6)-alkynyl, SO_2R', COOR', -COR', $CONR_2''$ or G.

R^5 is H, (C_1-C_6)-alkyl, (C_2-C_6)-alkenyl, (C_2-C_8)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, SO_2R', COOR', -COR', $CONR_2''$, or G.

R^6 is OR", SR" or NR_2",

or

R^5 and R^6 together form a bond.

R^7 is hydroxyl, mercapto, SCH_3, fluoro, chloro, bromo, methyl, ethyl, methoxy, trifluoromethoxy, ethoxy, -O-SO_2R', -O-COOR', -O-$CONR_2''$, CN, NR" or O-G.

R^8 is H, unsubstituted or substituted (C_1-C_4)-alkyl, unsubstituted or substituted (C_2-C_4)-alkenyl, unsubstituted or substituted (C_2-C_4)-alkynyl, unsubstituted or substituted (C_3-C_6)cycloalkyl, phenyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl,

trifluoromethoxy, methoxy, ethoxy, NO_2 and CN, heterocyclyl, unsubstituted or substituted with one to three substituents from the group fluoro, chloro, methyl, ethyl, isopropyl, tert-butyl, trifluoromethyl, trifluoromethoxy, methoxy, ethoxy, NO_2 and CN;

or

R^7 and R^8 are together =O or =S.

R^9 is H, halogen, unsubstituted or substituted (C_1-C_8)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, propargyl, unsubstituted or substituted (C_6-C_{10})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_6)-cycloalkenyl;

or particularly preferred

R^8 and R^9 together form a 3 to 6 membered ring which is a carbocyclic ring or contains one or two heteroatom units.

G is $SiMe_3$, $SiEt_3$, $SiMe_2t$-Bu, $SiMe(t\text{-}Bu)_2$, Si-i-Pr_3, Si-t-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ i-Pr, $SiMe_2$i-Pr, $SiMe_2$i-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-i-Pr), $SiPh_2$(O-t-Bu), Sit-BuPh(OMe), or $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$.

R' is the same or different (C_1-C_6)-alkyl, (C_2-C_4)-alkenyl, (C_2-C_4)-alkynyl, (C_3-C_6)-cycloalkyl, phenyl, or heterocyclyl, all of which are unsubstituted or substituted.

R'' is the same or different H or R'.

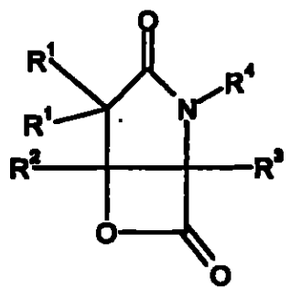
5. The use claimed in one or more of claims 1 to 4, where the compound of formula (I) is used in mixture with one or more further agrochemically active compounds.

6. The use as claimed in one or more of claims 1 to 5, where the compound of formula (II) is applied as a seed dressing.

7. The use as claimed in one or more of claims 1 to 6, where the compound of formula (II) is applied to crops of transgenic plants.

8. A process for controlling phytopathogenic microorganisms and harmful animals, which comprises applying a compound of formula (I) according to claims 1 to the phytopathogenic microorganism or harmful animal or their habitat.

9. A compound of formula (Ia) or a salt thereof,



(Ia)

wherein the symbols have the following meanings:

R^1 is the same or different H, halogen, unsubstituted or substituted (C_1-C_{20})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, substituted or unsubstituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, O-R", S(O)$_n$R", COOR", CSOR', COSR', -O-COR', -O-CSR', -CO-R", $CONR_2$", SO_2NR_2", or the two substituents R^1 together form a 3 to 8 membered ring which is a carbocyclic ring or contains one or two heteroatom units;

n is 0, 1 or 2;

R' is the same or different (C_1-C_{12})-alkyl, (C_2-C_{12})-alkenyl, (C_2-C_{12})-alkynyl, (C_3-C_8)-cycloalkyl, (C_3-C_8)-cycloalkenyl, (C_6-C_{12})-aryl, or heterocyclyl, all of which are unsubstituted or substituted;

R" is the same or different H or R';

R^2 is unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, or unsubstituted or substituted heterocyclyl;

R^3 is H, unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-

C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, or unsubstituted or substituted heterocyclyl, COOR", CSOR', COSR', -CO-R' or $CONR_2$";

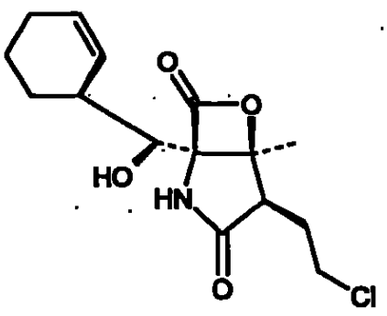
and

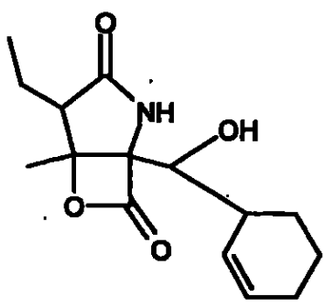
R^4 is H, unsubstituted or substituted (C_1-C_{20})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, $S(O)_nR'$, COOR', CSOR', COSR', -CO-R', $CONR_2$" or G; and

G is $Si[(C_1$-$C_8)$-alkyl$]_x[(CH_2)_t$-phenyl-$(CH_3)_u]_y[(O)_v$-$((C_1$-$C_4)$-alkylene$)$-$(O$-$(C_1$-$C_4)$-alkylene$)_w$-$H]_z$,

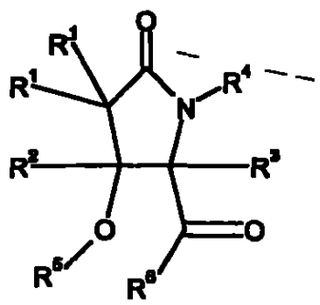
where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2;

with the proviso, that the following compounds are excluded:





10. A compound of formula (Ib) or a salt thereof,



(Ib)

wherein the symbols have the following meanings

R^1 is the same or different H, halogen, unsubstituted or substituted (C_1-C_{20})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, substituted or unsubstituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, O-R", $S(O)_nR$", COOR", CSOR', COSR', -O-COR', -O-CSR', -CO-R" or $CONR_2$", or the two substituents R^1 together form a 3 to 8 membered ring which is a carbocyclic ring or contains one or two heteroatom units;

n is 0, 1 or 2;

R' is the same or different (C_1-C_{12})-alkyl, (C_2-C_{12})-alkenyl, (C_2-C_{12})-alkynyl, (C_3-C_8)-cycloalkyl, (C_3-C_8)-cycloalkenyl, (C_6-C_{12})-aryl, or heterocyclyl, all of which are unsubstituted or substituted;

R" is the same or different H or R';

R^2 is unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_6)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, or unsubstituted or substituted heterocyclyl;

R^3 is H, unsubstituted or substituted (C_1-C_6)-alkyl, unsubstituted or substituted (C_2-C_6)-alkenyl, unsubstituted or substituted (C_2-C_6)-alkynyl, unsubstituted or substituted (C_3-C_6)-cycloalkyl, unsubstituted or substituted (C_3-C_6)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, or unsubstituted or substituted heterocyclyl, CSOR', COSR', -CO-R" or $CONR_2$";

R^4 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, $S(O)_nR'$, COOR', CSOR', -CO-R', CON'R_2" or G;

R^5 is H, unsubstituted or substituted (C_1-C_{12})-alkyl, unsubstituted or substituted (C_2-C_{12})-alkenyl, unsubstituted or substituted (C_2-C_{12})-alkynyl, unsubstituted or substituted (C_3-C_8)-cycloalkyl, unsubstituted or substituted (C_3-C_8)-cycloalkenyl, unsubstituted or substituted (C_6-C_{12})-aryl, unsubstituted or substituted heterocyclyl, SO_2R', COR', COOR', COSR', CSOR', $CONR_2$" or G.

G is $Si[(C_1\text{-}C_6)\text{-alkyl}]_x[(CH_2)_t\text{-phenyl-}(CH_3)_u]_y[(O)_v\text{-}((C_1\text{-}C_4)\text{-alkylene})\text{-}(O\text{-}(C_1\text{-}C_4)\text{-alkylene})_w\text{-}H]_z$,

where x, y, z are 0, 1, 2 or 3 and x + y + z = 3, t, u are 0 or 1, v, w are 0 or 1 and v + w is 1 or 2;

R^6 is OR", SR" or NR_2";

excluding compounds where

R^1=H, R^2=CH_3, R^3=H, R^4=H, C_6H_5, CH_2-C_6H_5, C_2H_5, R^5=H and R^6=NH_2, NHC_6H_5, $NHCH_2C_6H_5$.

Derivados de 2-pirrolidona sustituida como fungicidas e insecticidas

La invención se refiere a heterocicios sustituidos, a procedimientos para su preparación y a su uso para controlar hongos fitopatógenos e insectos dañinos.

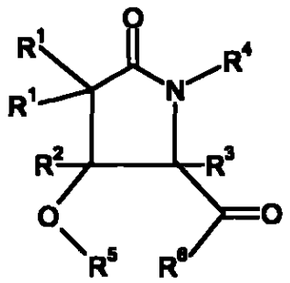
Se conocen ciertos compuestos con anillos de Lactama de 5 ó 6 miembros por su actividad fungicida, por ejemplo Procimidona, Cicloheximida y Capsimicina (véase "The Pesticide Manual", 13ª ed., C.D.S. Tomlin (Ed.), British Crop Protection Council, Farnham 2003.

Sin embargo, como los pesticidas modernos deben satisfacer una gran diversidad de demandas, por ejemplo con respecto al nivel, duración y espectro de acción, espectro de uso, toxicidad, combinación con otras sustancias activas, combinación con auxiliares de formulación o síntesis, y como es posible la aparición de resistencias, nunca puede considerarse concluido el desarrollo de estas sustancias, y existe constantemente una gran demanda de nuevos compuestos que sean ventajosos sobre los compuestos conocidos, al menos en lo que se refiere a algunos aspectos.

Sorprendentemente, se ha descubierto que ciertos heterocicios sustituidos son particularmente activos como fungicidas e insecticidas.

Tales compuestos se han descrito parcialmente en Yakugaku Zasshi, Pharmaceutical Society of Japan 92 (1972) 1507 y en el documento WO-A 04/071382 como inhibidores de proteasoma. No se describe una utilidad contra pestes de plantas y patógenos de plantas.

Por consiguiente, en un aspecto de la invención se proporciona el uso de un compuesto de fórmula (I) o una sal del mismo,



(I)

donde los símbolos tienen los siguientes significados:

R^1 es en cada caso igual o diferente H, halógeno, alquilo (C_1-C_{20}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, O-R", $S(O)_nR$", SO_2NR_2", COOR", COSR', CSOR', -O-COR", -O-CSR', -CO-R" o $CONR_2$", o los dos sustituyentes R^1 juntos forman un anillo de 3 a 8 miembros que es un anillo carbocíclico o contiene una o dos unidades *heteroátomo*;

R' es en cada caso igual o diferente alquilo (C_1-C_{12}), alquenilo (C_2-C_{12}), alquinilo (C_2-C_{12}), cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), arilo (C_6-C_{12}), o heterociclilo, estando todos ellos sin sustituir o sustituidos;

R" es en cada caso igual o diferente H o R';

n es 0, 1 ó 2;

R^2 es H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

R^3 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, COOR", CSOR", COSR", -CO-R" o $CONR_2$";

R^4 H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_{12}) sin sustituir o sustituido, alquinilo (C_3-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, $S(O)_nR'$, COOR', CSOR', COSR', -CO-R', $CONR_2$" o G;

R^5 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido, SO_2R', COR', COOR', COSR', CSOR', $CONR_2$" o G;

G es $Si[alquil\ (C_1\text{-}C_8)]_x[(CH_2)_t\text{-}fenil\text{-}(CH_3)_u]_y[(O)_v\text{-}(alquileno\ (C_1\text{-}C_4))\text{-}(O\text{-}alquileno\ (C_1\text{-}C_4))_w\text{-}H]_z$,

donde x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2;

R^6 es OR", SR" o NR_2"

o

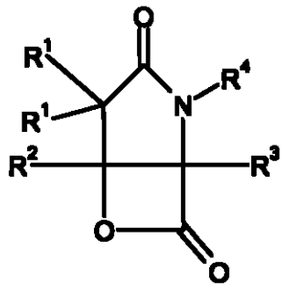
R^5 y R^6 juntos forman un enlace,

para el control de microorganismos fitopatógenos o animales dañinos.

En un aspecto adicional de la invención se proporciona un procedimiento para

controlar microorganismos fitopatógenos y animales dañinos, que comprende aplicar un compuesto de fórmula (I) como se ha descrito anteriormente al microorganismo fitopatógeno o animal dañino o su hábitat.

En otro aspecto adicional de la invención se proporciona un compuesto de fórmula (Ia) o una sal del mismo,



(Ia)

donde los símbolos tienen los siguientes significados:

R^1 es en cada caso igual o diferente H, halógeno, alquilo (C_1-C_{20}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sustituido o sin sustituir, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, O-R", $S(O)_nR$", COOR", CSOR', COSR', -O-COR', -O-CSR', -CO-R", $CONR_2$", SO_2NR_2", o los dos sustituyentes R^1 juntos forman un anillo de 3 a 8 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo;

n es 0, 1 ó 2;

R' es en cada caso igual o diferente alquilo (C_1-C_{12}), alquenilo (C_2-C_{12}), alquinilo (C_2-C_{12}), cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), arilo (C_6-C_{12}), o heterociclilo, estando todos ellos sin sustituir o sustituidos;

R" es en cada caso igual o diferente H o R';

R^2 es alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

R^3 es H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido, COOR", CSOR', COSR', -CO-R' o $CONR_2$";

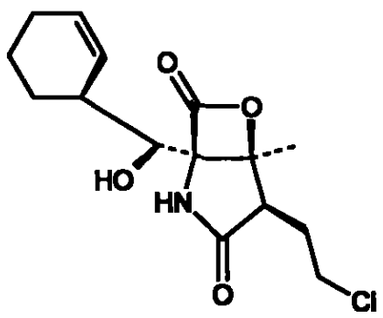
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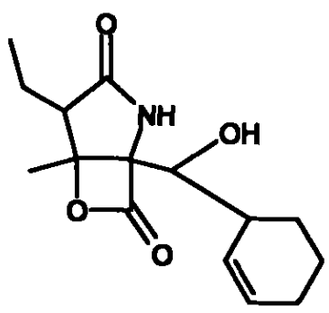
R^4 es H, alquilo (C_1-C_{20}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, $S(O)_nR'$, COOR', CSOR', COSR', -CO-R', $CONR_2$" o G; y

G es $Si[alquil\ (C_1\text{-}C_8)]_x[(CH_2)_t\text{-fenil-}(CH_3)_u]_y[(O)_v\text{-(alquileno }(C_1\text{-}C_4))\text{-(O-alquileno }(C_1\text{-}C_4))_w\text{-H}]_z$,

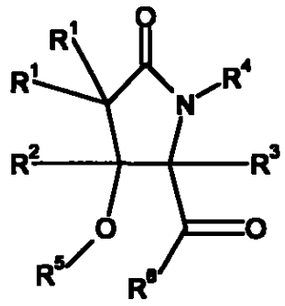
donde x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2;

con la condición de que se excluyan los siguientes compuestos:





En otro aspecto adicional de la invención se proporciona un compuesto de fórmula (Ib) o una sal del mismo,



(Ib)

donde los símbolos tienen los siguientes significados:

R^1 es en cada caso igual o diferente H, halógeno, alquilo (C_1-C_{20}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sustituido o sin sustituir, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, O-R", $S(O)_nR$", COOR", CSOR', COSR', -O-COR', -O-CSR', -CO-R" o $CONR_2$", o los dos sustituyentes R^1 juntos forman un anillo de 3 a 8 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo;

n es 0, 1 ó 2;

R' es en cada caso igual o diferente alquilo (C_1-C_{12}), alquenilo (C_2-C_{12}), alquinilo (C_2-C_{12}), cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), arilo (C_6-C_{12}), o heterociclilo, estando todos ellos sin sustituir o sustituidos;

R'' es en cada caso igual o diferente H o R';

R^2 es alquilo (C_1-C_5) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

R^3 es H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido, CSOR', COSR', -CO-R'' o $CONR_2''$;

R^4 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, $S(O)_nR'$, COOR', CSOR', -CO-R', $CON'R_2''$ o G;

R^5 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, SO_2R', COR', COOR', COSR', CSOR', $CONR_2''$ o G;

G es Si[alquil (C_1-C_8)]$_x$[$(CH_2)_t$-fenil-$(CH_3)_u$]$_y$[$(O)_v$-(alquileno (C_1-C_4))-(O-alquileno (C_1-C_4))$_w$-H]$_z$,

donde x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2;

R^6 es OR", SR" o NR_2";

excluyendo los compuestos en los que

R^1=H, R^2=CH_3, R^3=H, R^4=H, C_6H_5, CH_2-C_6H_5, C_2H_5, R^5=H y R^6=NH_2, NHC_6H_5, $NHCH_2C_6H_5$.

Dependiendo inter alia de la naturaleza de los sustituyentes, los compuestos de fórmula (I) pueden estar presentes como isómeros ópticos o mezclas de isómeros de composición variable que, si es apropiado, pueden separarse de manera convencional. La presente invención proporciona los isómeros puros y las mezclas de isómeros, su preparación y uso así como composiciones que los comprenden. Sin embargo, a continuación en este documento sólo se indican por simplicidad compuestos de fórmula (I) aunque esto se refiere a los compuestos puros y, si es apropiado, también a mezclas que tienen proporciones variables de compuestos isoméricos.

Las sales para los fines de la invención son preferiblemente sales agroquímicamente aceptables de los compuestos de acuerdo con la invención.

Las sales agroquímicamente aceptables de los compuestos (I) incluyen sales de adición de ácidos de ácidos minerales, ácidos carboxílicos y ácidos sulfónicos, por ejemplo, sales de ácido clorhídrico, ácido bromhídrico, ácido sulfúrico, ácido fosfórico, ácido metanosulfónico, ácido etanosulfónico, ácido toluenosulfónico, ácido bencenosulfónico, ácido naftalenodisulfónico, ácido acético, ácido propiónico, ácido láctico, ácido tartárico, ácido málico, ácido cítrico, ácido

fumárico, ácido maleico y ácido benzoico.

Las sales agroquímicamente aceptables de los compuestos (I) también incluyen sales de bases convencionales, tales como por ejemplo y preferiblemente sales de metales alcalinos (por ejemplo sales de sodio y potasio, sales de metales alcalinotérreos (por ejemplo sales de calcio y magnesio) y sales de amonio obtenidas a partir de amoniaco o aminas orgánicas que tienen de 1 a 16 átomos de carbono, tales como ilustrativa y preferiblemente etilamina, dietilamina, trietilamina, etildiisopropilamina, monoetanolamina, dietanolamina, trietanolamina, diciclohexilamina, dimetilaminoetanol, procaína, dibencilamina, *N*-metilmorfolina, dihidroabietilamina, arginina, lisina, etilendiamina y metilpiperidina.

En la presente memoria descriptiva, incluyendo las reivindicaciones que acompañan, los sustituyentes mencionados anteriormente tienen los siguientes significados:

Halógeno significa flúor, cloro, bromo o yodo. El término "halo" antes del nombre de un radical significa que este radical está parcial o completamente halogenado, es decir, está sustituido con F, Cl, Br o I, en cualquier combinación, preferiblemente con F o Cl.

Los grupos alquilo y porciones de los mismos (a menos que se defina otra cosa) pueden ser de cadena lineal o ramificada.

La expresión "alquilo (C_1-C_6)" pretende indicar un radical de hidrocarburo no ramificado o ramificado que tiene 1, 2, 3, 4, 5 ó 6 átomos de carbono, tal como, por ejemplo, un radical metilo, etilo, propilo, isopropilo, 1-butilo, 2-butilo, 2-metilpropilo o *terc*-butilo.

Los radicales alquilo y también en grupos compuestos, a menos que se defina otra cosa, preferiblemente tienen de 1 a 4 átomos de carbono.

Haloalquilo (C_1-C_6) significa "alquilo (C_1-C_6)" donde uno o más átomos de hidrógeno se reemplazan por el mismo número de átomos de halógeno iguales o diferentes, tales como monohaloalquilo, perhaloalquilo, CF_3, CHF_2, CH_2F, $CHFCH_3$, CH_2CF_3, CF_2CF_3, CF_2CHF_2, $CHClCH_2F$, CCl_3, $CHCl_2$ o CH_2CH_2Cl.

La expresión "haloalquileno(C_1-C_6)" pretende indicar un grupo alquileno mencionado en la expresión "alquileno (C_1-C_6)", donde uno o más átomos de hidrógeno se reemplazan por el mismo número de átomos de halógeno iguales o diferentes.

"Alcoxi (C_1-C_6)" significa un grupo alcoxi cuya cadena de carbonos tiene el significado dado en la expresión "alquilo (C_1-C_6)". "Haloalcoxi" es, por ejemplo, OCF_3, $OCHF_2$, OCH_2F, OCF_2CF_3, OCH_2CF_3 u OCH_2CH_2Cl.

"Alquenilo (C_2-C_6)" significa una cadena de carbonos no cíclica, sin ramificar o ramificada que tiene un número de átomos de carbono que se corresponde con este intervalo establecido y que contiene al menos un doble enlace que puede situarse en cualquier posición del radical insaturado respectivo. Por consiguiente, "alquenilo (C_2-C_6) " se refiere, por ejemplo, al grupo vinilo, alilo, 2-metil-2-propenilo, 2-butenilo, pentenilo, 2-metilpentenilo o hexenilo.

"Alquinilo (C_2-C_6)" significa una cadena de carbonos no cíclica, sin ramificar o ramificada, que tiene un número de átomos de carbono que se corresponde con este intervalo establecido y que contiene un triple enlace que puede situarse en cualquier posición del radical insaturado respectivo. Por consiguiente, "alquinilo (C_2-C_6)" se refiere, por ejemplo, al grupo propargilo, 1-metil-2-propinilo, 2-butinilo o 3-butinilo.

Preferiblemente, los grupos cicloalquilo tienen de tres a siete átomos de carbono en el anillo y están opcionalmente sustituidos con halógeno,

haloalquilo (C_1-C_4) o alquilo (C_1-C_4).

El grupo "G" Si[alquil (C_1-C_8)]$_x$[$(CH_2)_t$-fenil-$(CH_3)_u$]$_y$[$(O)_v$-(alquileno (C_1-C_4))-(O-alquileno (C_1-C_4))$_w$-H]$_z$, donde x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2; se refiere, por ejemplo, al grupo $SiMe_3$, $SiEt_3$, $SiMe_2$*t*-Bu, SiMe(*t*-Bu)$_2$, Si-*i*-Pr$_3$, Si-*t*-BuPh$_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2$-$CH(CH_3)_2)$, $SiEt_2$ *i*-Pr, $SiMe_2$*i*-Pr, $SiMe_2$*i*-Bu, $SiBz_3$, $Si(CH_2$-C_6H_4-$CH_3)_3$, $SiPh_2$(O-*i*-Pr), $SiPh_2$(O-*t*-Bu), SitBuPh(OMe), o $SiMe_2$(O-C_2H_4-OMe).

Preferiblemente, "heterociclilo" significa un sistema de anillos saturados, insaturados o aromáticos, de 3 a 10 miembros, que comprende uno o más heteroátomos, preferiblemente del grupo constituido por N, O y $S(O)_m$ (m = 0, 1, 2), donde al menos un átomo de carbono está presente en el anillo.

El "heterociclilo" más preferido se refiere a un radical tiofeno, furano, pirrol, tiazol, oxazol, imidazol, isotiazol, isoxazol, pirazol, 1,3,4-oxadiazol, 1,3,4-tiadiazol, 1,3,4-triazol, 1,2,4-oxadiazol, 1,2,4-tiadiazol, 1,2,4-triazol, 1,2,3-triazol, 1,2,3,4-tetrazol, benzo[b]tiofeno, benzo[b]furano, indol, benz[c]tiofeno, 1,3-benzodioxol, 1,3-benzodioxano, benzo[c]furano, isoindol, benzoxazol, benzotiazol, bencimidazol, benzisoxazol, benzoisotiazol, benzopirazol, benzotiadiazol, benzotriazol, dibenzofurano, dibenzotiofeno, carbazol, piridina, pirazina, pirimidina, piridazina, 1,3,5-triazina, 1,2,4-triazina, 1,2,4,5-tetrazina, quinolina, isoquinolina, quinoxalina, quinazolina, cinnolina, 1,8-naftiridina, 1,5-naftiridina, 1,6-naftiridina, 1,7-naftiridina, ftalazina, piridopirimidina, purina, pteridina, 4*H*-quinolizina, morfolina, piperidina, piperazina, pirrolina, pirrolidina, oxazolina, tetrahidrofurano, tetrahidropirano, isoxazolidina, oxazolidina, tiazolina, tiazolidina, oxirano u oxetano.

El "heterociclilo" particularmente preferido significa pirrolilo, imidazolilo,

pirazolilo, 1,3,4-triazolilo, 1,2,4-oxadiazolilo, oxazolilo, tetrazolilo, piridilo, pirazinilo, pirimidinilo, 1,3,5-triazinilo, morfolinilo, piperidinilo, tiofenilo o tiazolilo.

"Sustituido", si no se define otra cosa en su contexto respectivo, significa, por ejemplo, sustituido con uno o más, preferiblemente de uno a tres y en el caso de halógeno hasta el número máximo, de sustituyentes del grupo constituido por halógeno, R''', OR''', $S(O)_nR'''$, SO_2NR_2''', NR_2''', COOR''', NHCOR''', NHCOOR''', G, CN, NO_2, cicloalquilo (C_3-C_8), sin sustituir o sustituido con halógeno y/o alquilo (C_1-C_4), arilo (C_6-C_{12}) y/o heterociclilo, los dos últimos sin sustituir o sustituidos con uno o más sustituyentes del grupo constituido por halógeno, alquilo (C_1-C_4), haloalquilo (C_1-C_4), alcoxi (C_1-C_4), haloalcoxi (C_1-C_4), NO_2, y CN,

donde

n es 0, 1 ó 2;

R''' es H, alquilo (C_1-C_4), haloalquilo (C_1-C_4), alcoxi (C_1-C_4), haloalcoxi (C_1-C_4), alquenilo (C_2-C_4), haloalquenilo (C_2-C_4), alquinilo (C_2-C_4), haloalquinilo (C_2-C_4), cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), heterociclilo y arilo (C_6-C_{10}), estando los dos sin sustituir o sustituidos con uno a cinco sustituyentes del grupo constituido por halógeno, alquilo (C_1-C_4), haloalquilo (C_1-C_4), alcoxi (C_1-C_4), haloalcoxi (C_1-C_4), NO_2, y CN; y

G tiene el significado dado anteriormente.

Preferiblemente, "sustituido" significa sustituido con uno o más, preferiblemente de uno a tres y en el caso de halógeno hasta el número máximo, de sustituyentes del grupo F, Cl, Br, I, R''', OR''', $S(O)_nR'''$, SO_2NR_2''', NR_2''', COOR''', NHCOR''', NHCOOR''', G, CN, NO_2,

donde

R''' es H, alquilo (C_1-C_4), haloalquilo (C_1-C_4), alcoxi (C_1-C_4), haloalcoxi (C_1-C_4), alquenilo (C_2-C_4), haloalquenilo (C_2-C_4), alquinilo (C_2-C_4), haloalquinilo (C_2-C_4), cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), heterociclilo y arilo (C_6-C_{10}), de los cuales los últimos cuatro grupos están sin sustituir o sustituidos con uno a cinco sustituyentes del grupo constituido por halógeno, alquilo (C_1-C_4), haloalquilo (C_1-C_4), alcoxi (C_1-C_4), haloalcoxi (C_1-C_4), NO_2, y CN;

G es $Si[alquil\ (C_1\text{-}C_8)]_x[(CH_2)_t\text{-}fenil\text{-}(CH_3)_u]_y[(O)_v\text{-}(alquileno\ (C_1\text{-}C_4))\text{-}(O\text{-}alquileno\ (C_1\text{-}C_4))_w\text{-}H]_z$,

donde x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2;

n es 0, 1 ó 2.

Más preferiblemente, "sustituido" significa sustituido con uno o más, preferiblemente uno a tres y en el caso de halógeno hasta el número máximo, de sustituyentes del grupo F, Cl, Br, R''', OR''', $S(O)_nR'''$, SO_2NR_2''', NR_2''', COOR''', NHCOR''', NHCOOR'''; G, CN y NO_2,

donde

R''' es H, alquilo (C_1-C_4), haloalquilo (C_1-C_4), alcoxi (C_1-C_4), haloalcoxi (C_1-C_4), haloalquenilo (C_2-C_4), alquinilo (C_2-C_4), haloalquinilo (C_2-C_4), cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), heterociclilo y arilo (C_6-C_{10}), de los cuales los últimos cuatro grupos están sin sustituir o sustituidos con uno a cuatro sustituyentes del grupo constituido por fluoro, cloro, bromo, alquilo (C_1-C_4), haloalquilo (C_1-C_4), alcoxi (C_1-C_4), haloalcoxi (C_1-C_4), NO_2, y CN;

$SiMe_3$, $SiEt_3$, $SiMe_2$*t*-Bu, $SiMe(t\text{-Bu})_2$, Si-*i*-Pr_3, Si-*t*-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ *i*-Pr, $SiMe_2$*i*-Pr, $SiMe_2$*i*-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-*i*-Pr), $SiPh_2$(O-*t*-Bu), Si*t*-BuPh(OMe), o $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$;

n es 0, 1 ó 2.

Particular y preferiblemente, "sustituido" significa sustituido con uno a tres y en el caso de halógeno hasta el número máximo de sustituyentes del grupo fluoro, cloro, R'''', OR'''', NR_2'''', G, NO_2 y CN,

donde

R'''' es H, alquilo (C_1-C_4), haloalquilo (C_1-C_4), alcoxi (C_1-C_4), haloalcoxi (C_1-C_4), haloalquenilo (C_2-C_4), alquenilo (C_2-C_4), haloalquenilo (C_2-C_4), alquinilo (C_2-C_4), haloalquinilo (C_2-C_4), cicloalquilo (C_3-C_6), heterociclilo y fenilo, estando los dos sin sustituir o sustituidos con uno a tres sustituyentes del grupo constituido por fluoro, cloro, alquilo (C_1-C_4), trifluorometilo, difluorometilo, alcoxi (C_1-C_4), haloalcoxi (C_1-C_4), NO_2, y CN; y

G es $SiMe_3$, $SiEt_3$, $SiMe_2$*t*-Bu, $SiMe(t\text{-Bu})_2$, Si-*i*-Pr_3, Si-*t*-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ *i*-Pr, $SiMe_2$*i*-Pr, $SiMe_2$*i*-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-*i*-Pr), $SiPh_2$(O-*t*-Bu), Si*t*-BuPh(OMe), o $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$;

Preferiblemente, los símbolos de la fórmula (I) tienen los siguientes significados:

R^1 es preferiblemente en cada caso igual o diferente H, cloro, bromo, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{10}) sin sustituir o sustituido, alquinilo (C_2-C_{10}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin

sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, OR", COOR" o -CO-R" o los dos sustituyentes R^1 juntos forman un anillo de 3 a 8 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo.

R^2 es preferiblemente H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido.

R^3 es preferiblemente H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, COOR", -CO-R" o $CONR_2$".

R^4 es preferiblemente H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_{10}) sin sustituir o sustituido, alquinilo (C_3-C_{10}) sin sustituir o sustituido, SO_2R', COOR', -COR', $CONR_2$" o G.

R^5 es preferiblemente H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, SO_2R', COR', COOR', COSR', CSOR', $CONR_2$" o G.

G es preferiblemente $Si[alquil\ (C_1\text{-}C_6)]_x[(CH_2)_t\text{-fenil-}(CH_3)_u]_y[(O)_v\text{-(alquileno }(C_1\text{-}C_4))\text{-(O-alquileno }(C_1\text{-}C_4))_w\text{-}H]_z$,

donde x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2.

R^6 es preferiblemente OR", SR" o NR_2"

o

Preferiblemente, R^5 y R^6 juntos forman un enlace.

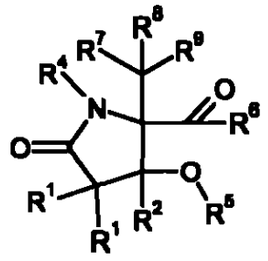
R' es preferiblemente en cada caso igual o diferente alquilo (C_1-C_{10}), alquenilo (C_2-C_{10}), alquinilo (C_2-C_{10}), cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), fenilo, o heterociclilo, estando todos ellos sin sustituir o sustituidos.

R" es preferiblemente en cada caso igual o diferente y es H o R'.

n es preferiblemente 0, 1 ó 2.

Se prefieren compuestos de fórmula (I) en la que todos los símbolos tienen los significados preferidos y "sustituido" tiene los significados preferidos.

Los compuestos más preferidos de fórmula (I) son compuestos de fórmula (II),



(II),

donde los símbolos tienen los siguientes significados:

R^1 es en cada caso igual o diferente H, cloro, bromo, alquilo (C_1-C_{10}) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, COOR", OR" o -CO-R" o los dos sustituyentes R^1 juntos forman un anillo carbocíclico de 3 a 8 miembros;

R^2 H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_4) sin sustituir o

sustituido, alquinilo (C_2-C_4) sin sustituir o sustituido, cicloalquilo (C_3-C_6) sin sustituir o sustituido, fenilo sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

R^4 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_6) sin sustituir o sustituido, alquinilo (C_3-C_6) sin sustituir o sustituido, SO_2R', COOR', -COR' o G;

R^5 es H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_6) sin sustituir o sustituido, alquinilo (C_2-C_6) sin sustituir o sustituido, cicloalquilo (C_3-C_6) sin sustituir o sustituido, SO_2R', COOR', -COR', $CONR_2''$, fenilo sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, o G;

G es $Si[alquil\ (C_1\text{-}C_6)]_x[(CH_2)_t\text{-fenil-}(CH_3)_u]_y[(O)_v\text{-(alquileno }(C_1\text{-}C_4))\text{-(O-alquileno }(C_1\text{-}C_4))_w\text{-}H]_z$,

donde x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2;

R^6 es OR", SR" o NR_2'';

o

R^5 y R^6 juntos forman un enlace;

R^7 es H, fluoro, cloro, O-R", SR", NR''_2, -O-COR', -S-COR', -O-CSR', -O-SO_2R', -O-COOR', -O-CSOR', -O-$CONR_2''$, NO_2, o CN;

R^8 es H, alquilo (C_1-C_4) sin sustituir o sustituido, alquenilo (C_2-C_4) sin sustituir o sustituido, alquinilo (C_2-C_4) sin sustituir o sustituido, cicloalquilo (C_3-C_6) sin sustituir o sustituido, fenilo sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

o

R^7 y R^8 juntos son =O o =S;

R^9 es H, halógeno, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{10}) sin sustituir o sustituido, alquinilo (C_2-C_{10}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, O-R', o SR';

o

R^8 y R^9 juntos forman un anillo de 3 a 8 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo,

R' es en cada caso igual o diferente alquilo (C_1-C_8), alquenilo (C_2-C_8), alquinilo (C_2-C_8), cicloalquilo (C_3-C_8), fenilo, o heterociclilo, estando todos ellos sin sustituir o sustituidos; y

R" es en cada caso igual o diferente H o R";

G $SiMe_3$, $SiEt_3$, $SiMe_2t$-Bu, $SiMe(t\text{-Bu})_2$, Si-*i*-Pr_3, Si-*t*-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ *i*-Pr, $SiMe_2$*i*-Pr, $SiMe_2$*i*-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-*i*-Pr), $SiPh_2$(O-*t*-Bu), Si*t*-BuPh(OMe), o $SiMe_2$(O-C_2H_4-OMe);

n es 0, 1 ó 2.

Se prefieren compuestos de fórmula (II) en la que "sustituido" tiene los significados preferidos. Se prefieren más compuestos de fórmula (II) en la que "sustituido" tiene los significados más preferidos.

Se prefieren particularmente compuestos de fórmula (II) en la que los símbolos tienen los siguientes significados:

R^1 es particular y preferiblemente en cada caso igual o diferente H, cloro, bromo, alquilo (C_1-C_8), alquenilo (C_2-C_8), alquinilo (C_2-C_8), fenilo, donde

los últimos cuatro grupos están sin sustituir o sustituidos con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2, y CN, heterociclilo, sin sustituir o sustituido con fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2, o CN, cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), los dos sin sustituir o sustituidos con uno a tres sustituyentes del grupo fluoro, cloro, metilo, trifluorometilo, metoxi, NO_2, y CN, o los dos sustituyentes R^1 juntos forman un anillo carbocíclico de 3 a 6 miembros.

R^2 es particular y preferiblemente H, metilo, etilo, propilo, isopropilo, alilo, propargilo, ciclopropilo, ciclobutilo, ciclopentilo, ciclohexilo, fenilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2, y CN, o heterociclilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, trifluorometilo, metoxi, NO_2, y CN.

R^4 es particular y preferiblemente H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_8) sin sustituir o sustituido, alquinilo (C_3-C_8) sin sustituir o sustituido, SO_2R', COOR', -COR', $CONR_2''$ o G.

R^5 es particular y preferiblemente H, alquilo (C_1-C_8), alquenilo (C_2-C_8), alquinilo (C_2-C_8), cicloalquilo (C_3-C_8) sin sustituir o sustituido, SO_2R', COOR', -COR', $CONR_2''$, o G.

R^6 es particular y preferiblemente OR", SR" o NR_2",

o particular y preferiblemente

R^5 y R^6 juntos forman un enlace.

R^7 es particular y preferiblemente hidroxilo, mercapto, SCH_3, fluoro, cloro, bromo, metilo, etilo, metoxi, trifluorometoxi, etoxi, -O-SO_2R', -O-COOR', -O-$CONR_2$", CN, NR" u O-G.

R^8 es particular y preferiblemente H, alquilo (C_1-C_4) sin sustituir o sustituido, alquenilo (C_2-C_4) sin sustituir o sustituido, alquinilo (C_2-C_4) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2 y CN, heterociclilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2 y CN;

o particular y preferiblemente

R^7 y R^8 juntos son =O o =S.

R^9 es particular y preferiblemente H, halógeno, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, propargilo, arilo (C_6-C_{10}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido;

o particular y preferiblemente

R^8 y R^9 juntos forman un anillo de 3 a 6 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo.

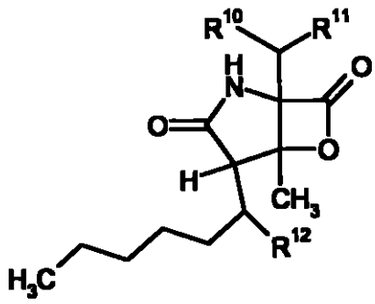
G es particular y preferiblemente $SiMe_3$, $SiEt_3$, $SiMe_2$*t*-Bu, $SiMe$(*t*-Bu)$_2$, Si-*i*-Pr_3, Si-*t*-BuPh_2, $SiMePh_2$, $SiPh_3$, $SiMe_2$($C(CH_3)_2$-$CH(CH_3)_2$), $SiEt_2$ *i*-Pr, $SiMe_2$*i*-Pr, $SiMe_2$*i*-Bu, $SiBz_3$, $Si(CH_2$-C_6H_4-$CH_3)_3$, $SiPh_2$(O-*i*-Pr), $SiPh_2$(O-*t*-Bu), Si*t*-BuPh(OMe), o $SiMe_2$(O-C_2H_4-OMe).

R' es particular y preferiblemente en cada caso igual o diferente alquilo (C_1-C_8), alquenilo (C_2-C_4), alquinilo (C_2-C_4), cicloalquilo (C_3-C_8), fenilo, o heterociclilo, estando todos ellos sin sustituir o sustituidos.

R" es particular y preferiblemente en cada caso igual o diferente H o R'.

Se prefieren particularmente compuestos de fórmula (II) en la que todos los símbolos y el término "sustituido" tienen los significados particularmente preferidos.

Adicionalmente, se prefieren particularmente compuestos de fórmula (III),



(III),

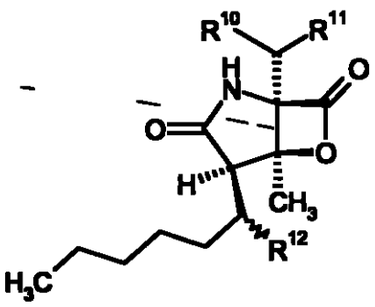
donde

R^{10} representa hidrógeno o hidroxi,

R^{11} representa ciclohexilo o ciclohex-2-enilo,

R^{12} representa hidrógeno o hidroxi,

Adicionalmente, se prefieren particularmente compuestos de acuerdo con la fórmula (IIIa)



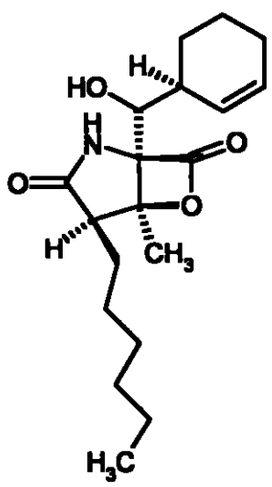
(IIIa),

donde

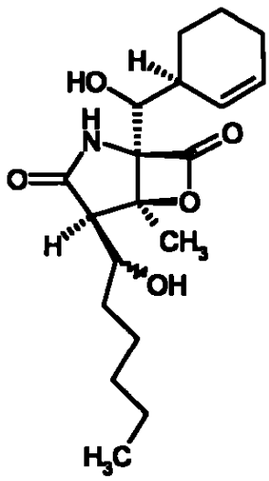
R^{10}, R^{11} y R^{12} tienen los significados descritos anteriormente.

Adicionalmente, se prefieren particularmente los siguientes compuestos de acuerdo con la fórmula (I),

(1*R*,4*R*,5*S*)-1-[(*S*)-(1*S*)-2-ciclohexen-1-il(hidroxi)metil]-4-hexil-5-metil-6-oxa-2-azabiciclo[3.2.0]heptano-3,7-diona

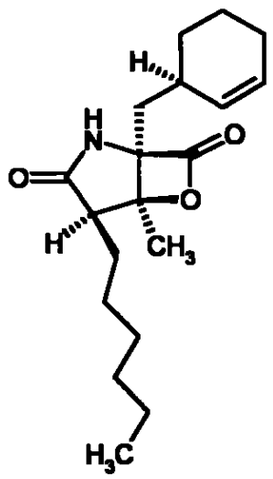


(1*R*,4*R*,5*S*)-1-[(*S*)-(1*S*)-2-ciclohexen-1-il(hidroxi)metil]-4-[1-hidroxi-hexil]-5-metil-6-oxa-2-azabiciclo[3.2.0]heptano-3,7-diona

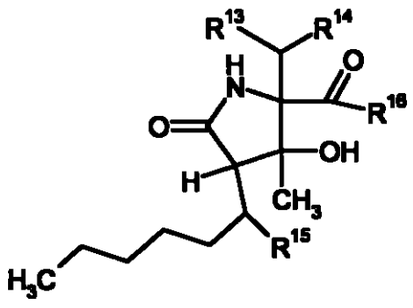


y

(1*R*,4*R*,5*S*)-1-[(1*R*)-2-ciclohexen-1-ilmetil]-4-hexil-5-metil-6-oxa-2-aza-biciclo[3.2.0]heptano-3,7-diona



En otra realización particularmente preferida, la presente invención se refiere a compuestos de acuerdo con la fórmula



(IIIb),

donde

R^{13} representa hidrógeno o hidroxi,

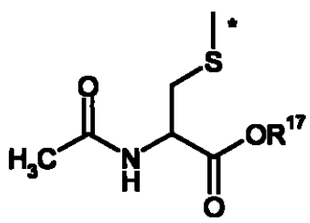
R^{14} representa ciclohexilo o ciclohex-2-enilo,

donde el ciclohexilo puede estar sustituido con 0 a 2 grupos hidroxi,

R^{15} representa hidrógeno o hidroxi,

y

R^{16} representa hidroxi o un sustituyente de la fórmula



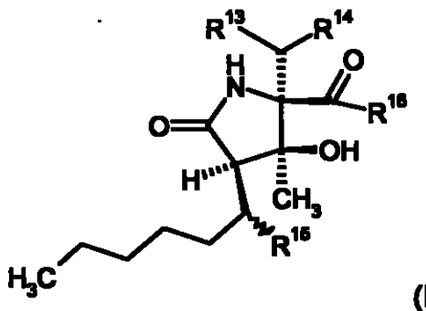
donde

R^{17} representa hidrógeno o metilo,

y

* representa la posición de conexión con la molécula.

Adicionalmente, se prefiere particularmente compuestos de acuerdo con la fórmula



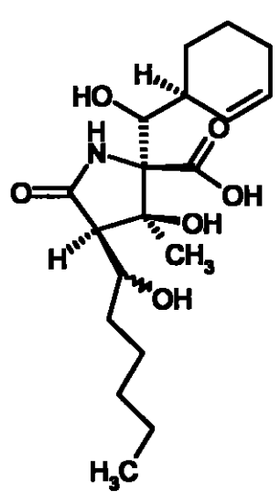
(IIIb),

donde

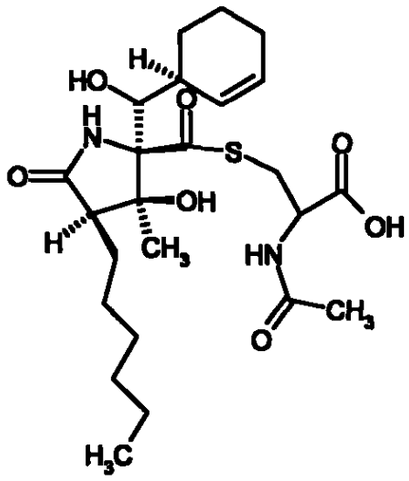
R^{13}, R^{14}, R^{15} y R^{16} tienen los significados descritos anteriormente.

Adicionalmente, se prefieren compuestos de acuerdo con la fórmula (III), tales como

(3*S*,4*R*)-2-[(*S*)-(1*S*)-2-ciclohexen-1-il(hidroxi)metil]-3-hidroxi-4-[1-hidroxi-hexil]-3-metil-5-oxo-D-prolina

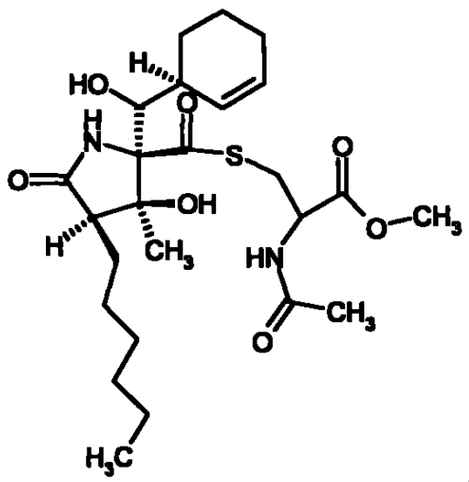


N-acetil-*S*-{[(2*R*,3*S*,4*R*)-2-[(*S*)-(1*S*)-2-ciclohexen-1-il(hidroxi)metil]-4-hexil-3-hidroxi-3-metil-5-oxo-2-pirrolidinil]carbonil}cisteína



y

N-acetil-S-({(2*R*,3*S*,4*R*)-2-[(*S*)-(1*S*)-2-ciclohexen-1-il(hidroxi)metil]-4-hexil-3-hidroxi-3-metil-5-oxo-2-pirrolidinil}carbonil)cisteinato de metilo



En los compuestos de fórmula (Ia), los símbolos e índices preferiblemente tienen los siguientes significados:

R^1 es preferiblemente en cada caso igual o diferente H, cloro, bromo, alquilo

(C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{10}) sin sustituir o sustituido, alquinilo (C_2-C_{10}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, OR", COOR" o -CO-R" o los dos sustituyentes R^1 juntos forman un anillo de 3 a 6 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo.

R^2 es preferiblemente alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_6) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido.

R^3 es preferiblemente H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_6) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, COOR", -CO-R" o $CONR_2$".

R^4 es preferiblemente H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_{10}) sin sustituir o sustituido, alquinilo (C_3-C_{10}) sin sustituir o sustituido, SO_2R', COOR', -COR', $CONR_2$" o G.

G es $Si[alquil\ (C_1-C_8)]_x[(CH_2)_t\text{-fenil-}(CH_3)_u]_y[(O)_v\text{-(alquileno }(C_1-C_4))\text{-(O-alquileno }(C_1-C_4))_w\text{-H}]_z$,

donde x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2.

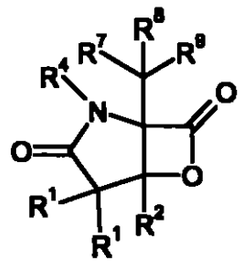
R' es preferiblemente en cada caso igual o diferente alquilo (C_1-C_{10}),

alquenilo (C_2-C_{10}), alquinilo (C_2-C_{10}), cicloalquilo (C_3-C_8), fenilo, o heterociclilo, estando todos ellos sin sustituir o sustituidos.

R" es preferiblemente en cada caso igual o diferente y es H o R'.

Se prefieren compuestos de fórmula (Ia) en la que todos los símbolos tienen los significados preferidos y "sustituido" tiene los significados preferidos.

Los compuestos más preferidos de fórmula (Ia) son compuestos de fórmula (IIa),



(IIa),

donde los símbolos tienen los siguientes significados:

R^1 es en cada caso igual o diferente H, cloro, bromo, alquilo (C_1-C_{10}) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, COOR", OR" o -CO-R" o los dos sustituyentes R^1 juntos forman un anillo carbocíclico de 3 a 6 miembros;

R^2 alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_4) sin sustituir o sustituido, alquinilo (C_2-C_4) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

R^4 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_6) sin

sustituir o sustituido, alquinilo (C_3-C_8) sin sustituir o sustituido, SO_2R', COOR', -COR', o $CONR_2''$, o G;

G es Si[alquil (C_1-C_8)]$_x$[$(CH_2)_t$-fenil-$(CH_3)_u$]$_y$[$(O)_v$-(alquileno (C_1-C_4))-(O-alquileno (C_1-C_4))$_w$-H]$_z$,

donde x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2;

R^7 es H, fluoro, cloro, O-R'', SR'', NR''_2, -O-COR', -S-COR', -O-CSR', -O-SO_2R', -O-COOR', -O-CSOR', -O-$CONR_2''$, NO_2, o CN;

R^8 es H, alquilo (C_1-C_4) sin sustituir o sustituido, alquenilo (C_2-C_4) sin sustituir o sustituido, alquinilo (C_2-C_4) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

o

R^7 y R^8 juntos son =O o =S;

R^9 es H, halógeno, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{10}) sin sustituir o sustituido, alquinilo (C_2-C_{10}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, O-R', o SR';

o

R^8 y R^9 juntos forman un anillo de 3 a 8 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo,

R' es en cada caso igual o diferente alquilo (C_1-C_8), alquenilo (C_2-C_8), alquinilo (C_2-C_8), cicloalquilo (C_3-C_8), fenilo, o heterociclilo, estando todos ellos sin sustituir o sustituidos; y

R" es en cada caso igual o diferente H o R"; y

G es $SiMe_3$, $SiEt_3$, $SiMe_2$*t*-Bu, $SiMe(t\text{-}Bu)_2$, Si-*i*-Pr_3, Si-*t*-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ *i*-Pr, $SiMe_2$*i*-Pr, $SiMe_2$*i*-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-*i*-Pr), $SiPh_2$(O-*t*-Bu), Si*t*-BuPh(OMe), o $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$.

Se prefieren compuestos de fórmula (IIa) en la que "sustituido" tiene los significados preferidos. Se prefieren más compuestos de fórmula (IIa) en la que "sustituido" tiene los significados más preferidos.

Se prefieren particularmente compuestos de fórmula (II) en la que los símbolos tienen los siguientes significados:

R^1 es particular y preferiblemente en cada caso igual o diferente H, cloro, bromo, alquilo (C_1-C_8), alquenilo (C_2-C_8), alquinilo (C_2-C_8), fenilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2, y CN, heterociclilo, sin sustituir o sustituido con fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2, o CN, cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), los dos sin sustituir o sustituidos con uno a tres sustituyentes del grupo fluoro, cloro, metilo, trifluorometilo, metoxi, NO_2, y CN, o los dos sustituyentes R^1 juntos forman un anillo carbocíclico de 3 a 6 miembros.

R^2 es particular y preferiblemente metilo, etilo, propilo, isopropilo, alilo, propargilo, ciclopropilo, ciclobutilo, ciclopentilo, ciclohexilo, fenilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2, y CN, o heterociclilo, sin sustituir o sustituido con uno a tres

sustituyentes del grupo fluoro, cloro, metilo, etilo, trifluorometilo, metoxi, NO_2, y CN.

R^4 es particular y preferiblemente H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_{10}) sin sustituir o sustituido, alquinilo (C_3-C_8) sin sustituir o sustituido, SO_2R', COOR', -COR', $CONR_2''$ o G.

R^7 es particular y preferiblemente hidroxilo, mercapto, SCH_3, fluoro, cloro, bromo, metilo, etilo, metoxi, trifluorometoxi, etoxi, -O-SO_2R', -O-COOR', -O-$CONR_2''$, CN, NR_2'' u O-G.

R^8 es particular y preferiblemente H, alquilo (C_1-C_4) sin sustituir o sustituido, alquenilo (C_2-C_4) sin sustituir o sustituido, alquinilo (C_2-C_4) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, fenilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2 y CN, heterociclilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2 y CN;

o particular y preferiblemente

R^7 y R^8 juntos son =O o =S.

R^9 es particular y preferiblemente H, halógeno, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, propargilo, arilo (C_6-C_{10}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido;

o particular y preferiblemente

R^8 y R^9 juntos forman un anillo de 3 a 6 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo.

G es particular y preferiblemente $SiMe_3$, $SiEt_3$, $SiMe_2t$-Bu, $SiMe(t\text{-Bu})_2$, Si-*i*-Pr_3, Si-*t*-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ *i*-Pr, $SiMe_2$*i*-Pr, $SiMe_2$*i*-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-*i*-Pr), $SiPh_2$(O-*t*-Bu), Si*t*-BuPh(OMe), o $SiMe_2$(O-C_2H_4-OMe).

R' es particular y preferiblemente en cada caso igual o diferente alquilo (C_1-C_6), alquenilo (C_2-C_4), alquinilo (C_2-C_4), cicloalquilo (C_3-C_6), fenilo, o heterociclilo, estando todos ellos sin sustituir o sustituidos.

R" es particular y preferiblemente en cada caso igual o diferente H o R'

Se prefieren particularmente compuestos de fórmula (IIa) en la que todos los símbolos y el término "sustituido" tienen los significados particularmente preferidos.

En la fórmula (Ib) los símbolos e índices tienen preferiblemente los siguientes significados:

R^1 es preferiblemente en cada caso igual o diferente H, cloro, bromo, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{10}) sin sustituir o sustituido, alquinilo (C_2-C_{10}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_6) sin sustituir o sustituido, cicloalquenilo (C_3-C_6) sin sustituir o sustituido, OR", COOR" o -CO-R" o los dos sustituyentes R^1 juntos forman un anillo de 3 a 6 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo.

R^2 es preferiblemente H, alquilo (C_1-C_5) sin sustituir o sustituido, alquenilo (C_2-C_6) sin sustituir o sustituido, alquinilo (C_2-C_6) sin sustituir o sustituido,

cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido.

R^3 es preferiblemente H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, -CO-R" o $CONR_2$".

R^4 es preferiblemente H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_{10}) sin sustituir o sustituido, alquinilo (C_3-C_{10}) sin sustituir o sustituido, SO_2R', COOR', -COR', $CONR_2$" o G.

R^5 es preferiblemente H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, SO_2R', COR', COOR', COSR', CSOR', $CONR_2$" o G.

G es $Si[alquil\ (C_1\text{-}C_8)]_x[(CH_2)_t\text{-}fenil\text{-}(CH_3)_u]_y[(O)_v\text{-}(alquileno\ (C_1\text{-}C_4))\text{-}(O\text{-}alquileno\ (C_1\text{-}C_4))_w\text{-}H]_z$,

donde x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2.

R^6 es preferiblemente OR", SR" o NR_2".

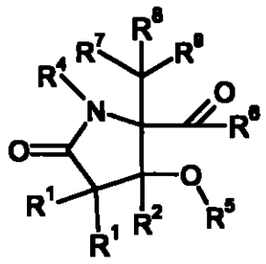
R' es preferiblemente en cada caso igual o diferente alquilo (C_1-C_{10}), alquenilo (C_2-C_{10}), alquinilo (C_2-C_{10}), cicloalquilo (C_3-C_8), fenilo, o heterociclilo, estando todos ellos sin sustituir o sustituidos.

R" es preferiblemente en cada caso igual o diferente y es H o R'.

Se prefieren compuestos de fórmula (Ib) en la que todos los símbolos tienen los

significados preferidos y "sustituido" tiene los significados preferidos.

Los compuestos más preferidos de fórmula (Ib) son compuestos de fórmula (IIb),



(IIb),

donde los símbolos tienen los siguientes significados:

R^1 es en cada caso igual o diferente H, cloro, bromo, alquilo (C_1-C_{10}) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, COOR', OR" o -CO-R' o los dos sustituyentes R^1 juntos forman un anillo carbocíclico de 3 a 6 miembros;

R^2 H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_4) sin sustituir o sustituido, alquinilo (C_2-C_4) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

R^4 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_8) sin sustituir o sustituido, alquinilo (C_3-C_8) sin sustituir o sustituido, SO_2R', COOR', -COR', $CONR_2"$, o G;

R^5 es H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, SO_2R', COOR', -COR',

$CONR_2''$, fenilo sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, o G;

G es $Si[alquil\ (C_1-C_8)]_x[(CH_2)_t-fenil-(CH_3)_u]_y[(O)_v-(alquileno\ (C_1-C_4))-(O-alquileno\ (C_1-C_4))_w-H]_z$,

donde x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2;

R^6 es OR'', SR'' o NR_2'';

R^7 es H, fluoro, cloro, O-R'', SR'', -O-COR', -S-COR', -O-CSR', $-O-SO_2R'$, NR_2'', -O-COOR', -O-CSOR', $-O-CONR_2''$, NO_2 o CN;

R^8 es H, alquilo (C_1-C_4) sin sustituir o sustituido, alquenilo (C_2-C_4) sin sustituir o sustituido, alquinilo (C_2-C_4) sin sustituir o sustituido, cicloalquilo (C_3-C_6) sin sustituir o sustituido, fenilo sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

o

R^7 y R^8 juntos son =O o =S;

R^9 es H, halógeno, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{10}) sin sustituir o sustituido, alquinilo (C_2-C_{10}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, O-R', o SR',

con la condición de que si R^7 y R^8 juntos son =O, R^9 no sea OR';

o

R^8 y R^9 juntos forman un anillo de 3 a 8 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo,

R' es en cada caso igual o diferente alquilo (C_1-C_8), alquenilo (C_2-C_8),

alquinilo (C_2-C_8), cicloalquilo (C_3-C_8), fenilo, o heterociclilo, estando todos ellos sin sustituir o sustituidos; y

R" es en cada caso igual o diferente H o R";

G es $SiMe_3$, $SiEt_3$, $SiMe_2$*t*-Bu, $SiMe(t\text{-Bu})_2$, Si-*i*-Pr_3, Si-*t*-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ *i*-Pr, $SiMe_2$*i*-Pr, $SiMe_2$*i*-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-*i*-Pr), $SiPh_2$(O-*t*-Bu), Si*t*-BuPh(OMe), o $SiMe_2$(O-C_2H_4-OMe);

n es 0, 1 ó 2.

Se prefieren compuestos de fórmula (IIb) en la que "sustituido" tiene los significados preferidos. Se prefieren más compuestos de fórmula (IIb) en la que "sustituido" tiene los significados más preferidos.

Se prefieren particularmente compuestos de fórmula (IIb) en la que los símbolos tienen los siguientes significados:

R^1 es particular y preferiblemente en cada caso igual o diferente H, cloro, bromo, alquilo (C_1-C_8), alquenilo (C_2-C_8), alquinilo (C_2-C_8), fenilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2, y CN, heterociclilo, sin sustituir o sustituido con fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2, o CN, cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), los dos sin sustituir o sustituidos con uno a tres sustituyentes del grupo fluoro, cloro, metilo, trifluorometilo, metoxi, NO_2, y CN, o los dos sustituyentes R^1 juntos forman un anillo carbocíclico de 3 a 6 miembros.

R^2 es particular y preferiblemente H, metilo, etilo, propilo, isopropilo, alilo, propargilo, ciclopropilo, ciclobutilo, ciclopentilo, ciclohexilo, fenilo, sin

sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2, y CN, o heterociclilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, trifluorometilo, metoxi, NO_2, y CN.

R^4 es particular y preferiblemente H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_8) sin sustituir o sustituido, alquinilo (C_3-C_8) sin sustituir o sustituido, SO_2R', COOR', -COR", $CONR_2$" o G.

R^5 es particular y preferiblemente H, alquilo (C_1-C_6), alquenilo (C_2-C_6), alquinilo (C_2-C_6), cicloalquilo (C_3-C_8) sin sustituir o sustituido, SO_2R', COOR', -COR", $CONR_2$", o G.

R^6 es particular y preferiblemente OR", SR" o NR_2",

R^7 es particular y preferiblemente hidroxilo, mercapto, SCH_3, fluoro, cloro, bromo, metilo, etilo, metoxi, trifluorometoxi, etoxi, -O-SO_2R', -O-COOR', -O-$CONR_2$", CN, NR_2" u O-G.

R^8 es particular y preferiblemente H, alquilo (C_1-C_4) sin sustituir o sustituido, alquenilo (C_2-C_4) sin sustituir o sustituido, alquinilo (C_2-C_4) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, fenilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2 y CN, heterociclilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2 y CN;

o particular y preferiblemente

R^7 y R^8 juntos son =O o =S.

R^9 es particular y preferiblemente H, halógeno, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_6) sin sustituir o sustituido, propargilo, arilo (C_6-C_{10}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_6) sin sustituir o sustituido, cicloalquenilo (C_3-C_6) sin sustituir o sustituido;

o particular y preferiblemente

R^8 y R^9 juntos forman un anillo de 3 a 6 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo.

G es particular y preferiblemente $SiMe_3$, $SiEt_3$, $SiMe_2$*t*-Bu, $SiMe(t\text{-Bu})_2$, Si-*i*-Pr_3, Si-*t*-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ *i*-Pr, $SiMe_2$*i*-Pr, $SiMe_2$*i*-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-*i*-Pr), $SiPh_2$(O-*t*-Bu), Si*t*-BuPh(OMe), o $SiMe_2$(O-C_2H_4-OMe);

R' es particular y preferiblemente en cada caso igual o diferente alquilo (C_1-C_8), alquenilo (C_2-C_4), alquinilo (C_2-C_4), cicloalquilo (C_3-C_8), fenilo, o heterociclilo, estando todos ellos sin sustituir o sustituidos.

R" es particular y preferiblemente en cada caso igual o diferente H o R'

Se prefieren particularmente compuestos de fórmula (IIb) en la que todos los símbolos y el término "sustituido" tienen los significados particularmente preferidos.

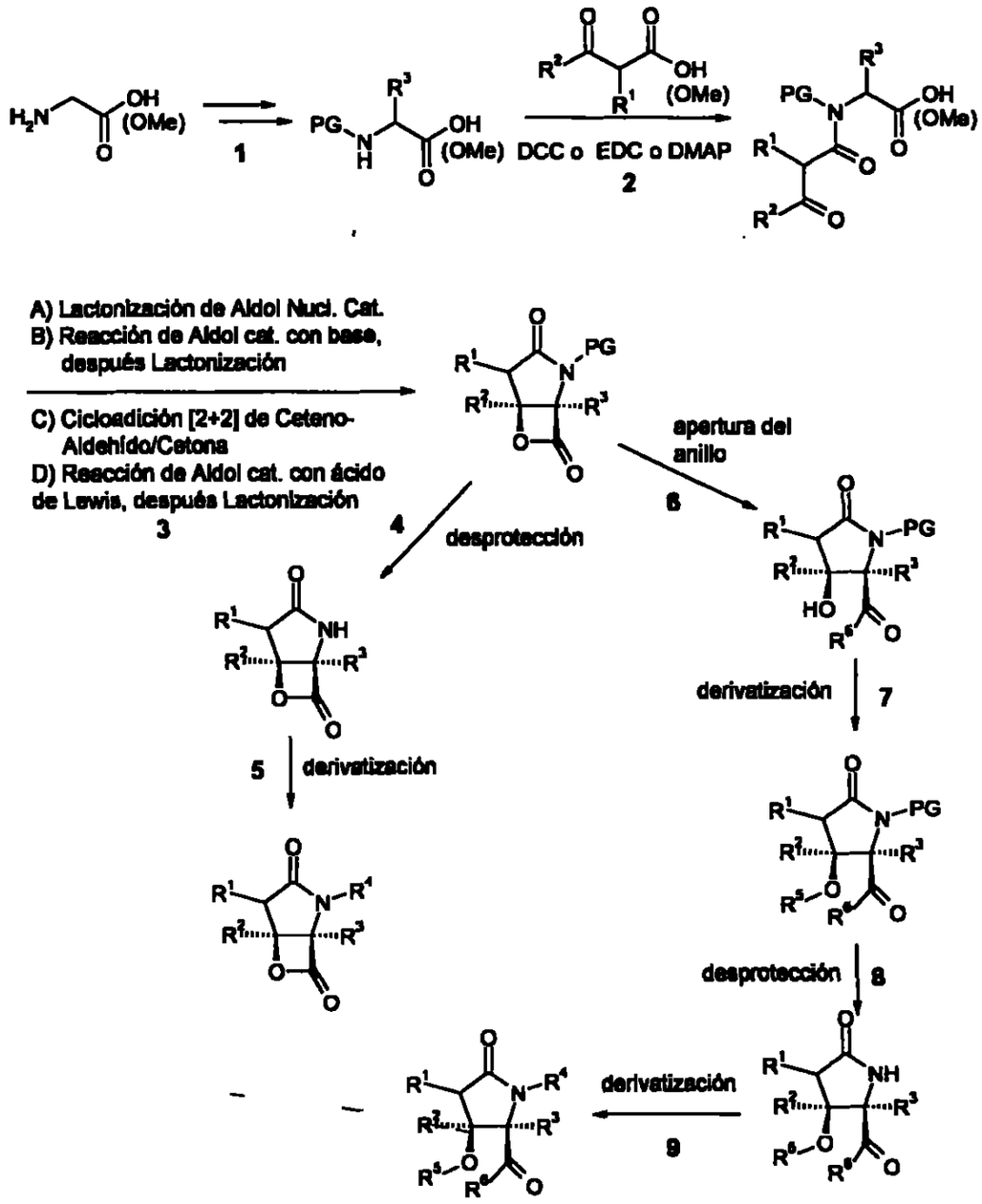
Los compuestos de acuerdo con la invención se preparan mediante procedimientos que se conocen per se de la bibliografía, como se describe en trabajos convencionales sobre síntesis orgánica, por ejemplo Houben.-Weyl, Methoden der Organischen Chemie [Methods in Organic Chemistry], Georg-Thieme-Verlag, Stuttgart.

La preparación se realiza en condiciones de reacción que se conocen y son adecuadas para las reacciones mencionadas anteriormente. También pueden usarse otras variaciones que se conocen per se, pero no se ilustran en este documento con más detalle.

Si se desea, los materiales de partida también pueden formarse in situ, de tal forma que no se aíslan de la mezcla de reacción sino que se hacen reaccionar inmediatamente adicionalmente para dar los compuestos de fórmula (I).

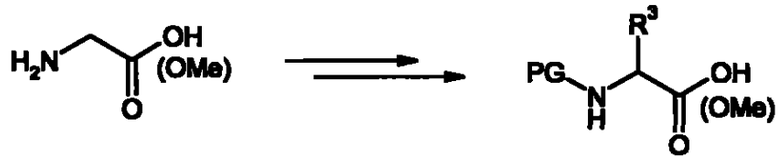
En particular, los compuestos de fórmula (I) pueden prepararse de acuerdo con los siguientes procedimientos A a D:

Procedimiento A



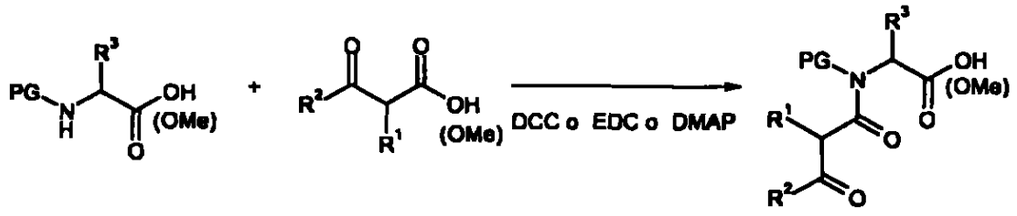
1

Siguiendo procedimientos bien establecidos conocidos en la bibliografía, se convierte glicina o su éster metílico en un aminoácido derivado después de proteger la amina libre (por ejemplo D. Enders, Helv. Chim Acta 85 (2002) 3657-3677). R^3 se introduce de esta manera.



2

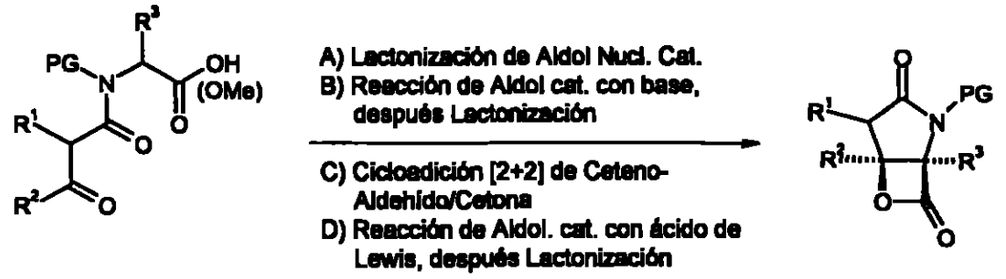
Los aminoácidos protegidos se acilan con beta-ceto ácidos sustituidos o sus ésteres que tienen R^1 y R^2. La acilación se realiza usando diciclohexilcarbodiimida (DCC), 1-Etil-3-(3-Dimetilaminopropil)carbodiimida (EDC) o 4-dimetilaminopiridina (DMAP).



3

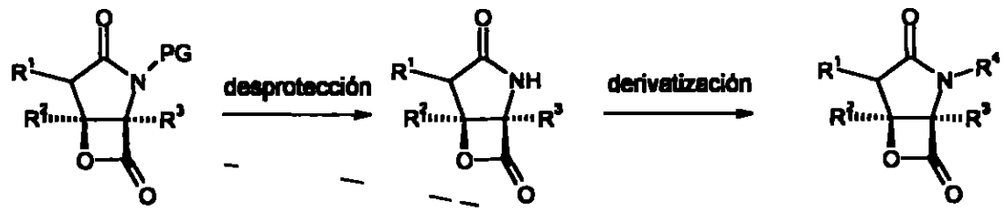
La etapa clave de la ruta es la lactonización. Se realiza como una lactonización de aldol nucleófila catalizada (procedimiento A) descrita por Romo y col. (G.S, Cortez, R.L. Tennyson, D. Romo *J. Am. Chem. Soc.* **2001**, *123*, 7945) o como una reacción de aldol convencional catalizada con una base (procedimiento B) con una posterior lactonización (E. J. Corey et. al., *Angew. Chem.* **1998**, *110*, 1784). Además, la lactona puede obtenerse usando una [2+2]-cicloadición de ceteno aldehído (procedimiento C, C. Zhu, X. Shen, S.G. Nelson *J. Am. Chem.*

Soc. **2004**, *126*, 5352). La reacción de aldol catalizada con ácido de Lewis con una posterior lactonización es un procedimiento posible adicional (procedimiento D). Se han informado acerca de metodologías para la reacción de aldol catalítica con cetonas para reacciones no estereocontroladas (por ejemplo Kobayashi, S. y col. *Chem. Lett.* **1988**, 1491; Chen, J.y col. *J. Org. Chem.* **1988**, *63*, 9739) y para reacciones de aldol enantioselectivas (Denmark, S. E.; Fan, Y. *J. Am. Chem. Soc.* **2002**, *124*, 4233; Oisaki, K.y col. *J. Am. Chem. Soc.* **2003**, *125*, 5644).



4 + 5

Los compuestos de fórmula (Ia) se sintetizan siguiendo procedimientos bibliográficos conocidos. El nitrógeno se desprotege y se derivatiza con R^4 si es necesario.



6

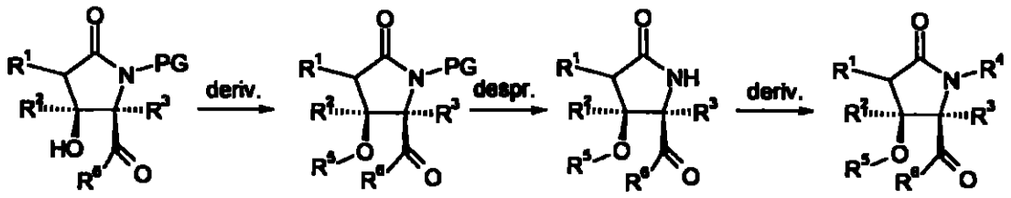
Los compuestos de fórmula (I) se sintetizan siguiendo procedimientos

bibliográficos conocidos. En la primera etapa, el anillo de lactona se escinde de acuerdo con procedimientos conocidos en la bibliografía. R^6 se introduce en la molécula.



7 + 8 + 9

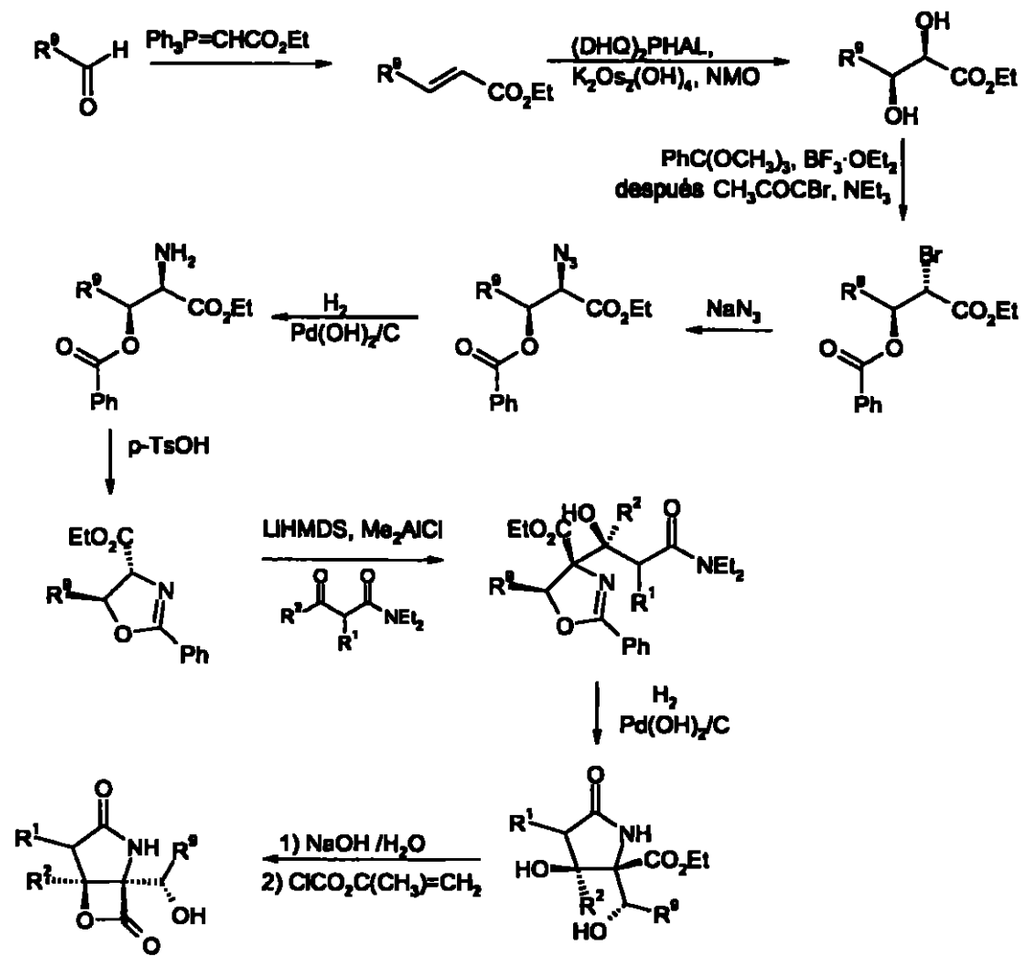
Después de la derivatización del OH libre para introducir R^5, el nitrógeno se desprotege y se derivatiza con R^4 si es necesario.



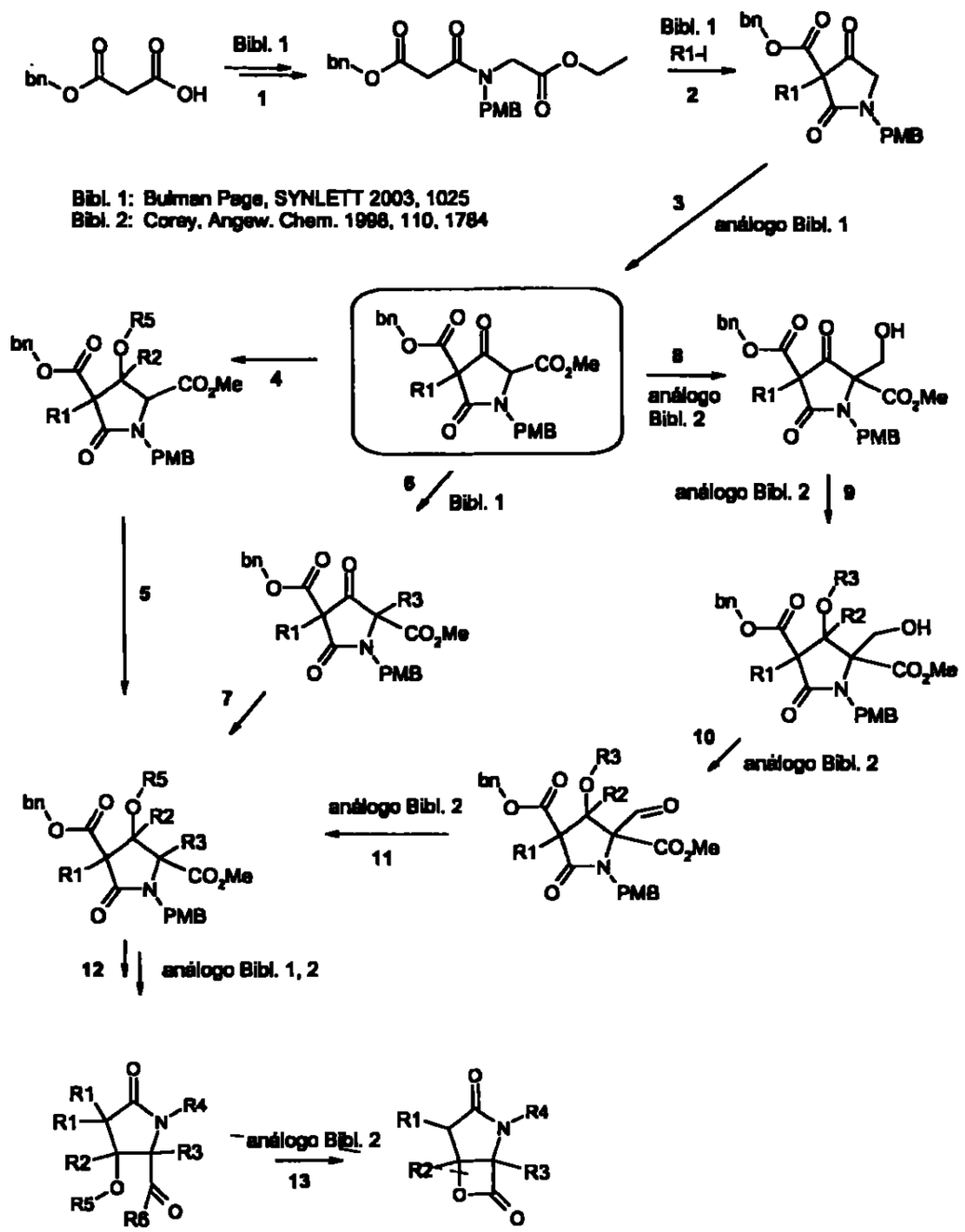
Procedimiento B

Los compuestos de fórmula (II) se sintetizan siguiendo un procedimiento bibliográfico (F. Souci, L. Grenier, M.L. Behnke, A.T. Destree, T.A. McCormack, J. Adams, L. Plamondon, *J. Am. Chem. Soc.* **1999**, *121*, 9967) mediante una síntesis de múltiples etapas como se muestra en el siguiente esquema.

Esta ruta puede realizarse para introducir todos los centros estereogénicos con la configuración requerida.



Procedimiento C

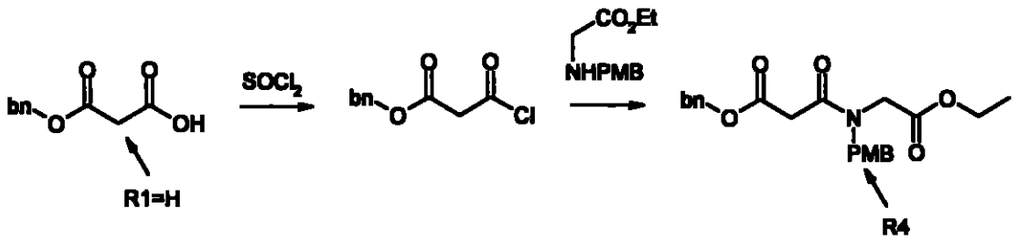

Bibl. 1
1
Bibl. 1
R1-I
2
3
analogo Bibl. 1
Bibl. 1: Bulman Page, SYNLETT 2003, 1025
Bibl. 2: Corey, Angew. Chem. 1998, 110, 1784
4
5
6
Bibl. 1
7
8
analogo Bibl. 2
9
analogo Bibl. 2
10
analogo Bibl. 2
11
analogo Bibl. 2
12
analogo Bibl. 1, 2
analogo Bibl. 2
13

1

Siguiendo el procedimiento bibliográfico [1], se convierte malonato de monobencilo en el cloruro de ácido y posteriormente se trata con éster etílico de *N*-(*p*-metoxibencil)glicina.

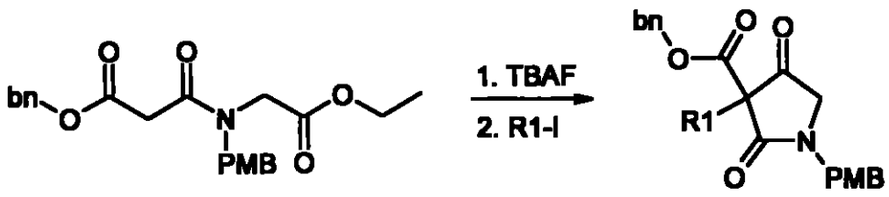
R^1 = H, R^4 = pmb

Variaciones posibles (no publicadas): R^1 = Arilo, Alquilo; R^4 = Arilo, Alquilo



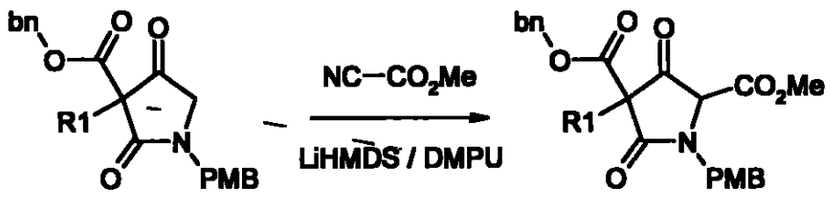
2

La ciclación se induce con fluoruro de tetrabutilamonio y las alquilaciones (introducción de R^1) se realizan usando yoduros de alquilo, bencilo o alilo [1].



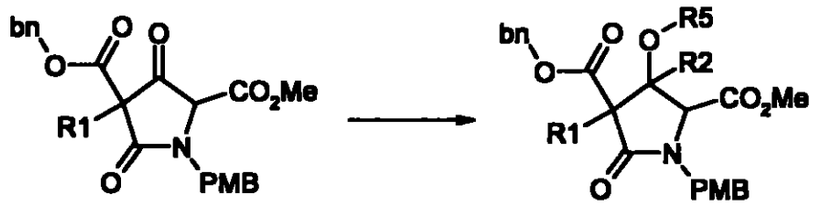
3

Se emplean LHMDS (Hexametildisilazida de litio) y DMPU en THF para la desprotonación, y cianoformiato de metilo para la carboxilación [1].



4

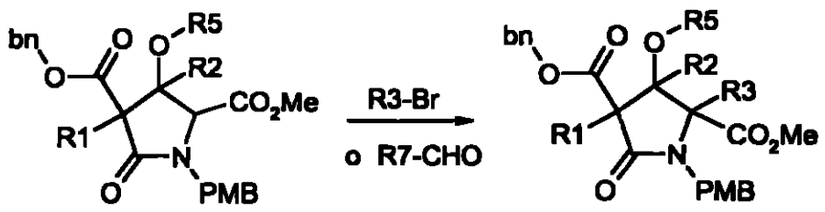
La reducción de la cetona puede realizarse de manera análoga a [2] usando $NaBH(OAc)_3$ ($R^5 = R^2 = H$). La introducción de sustituyentes R_2 (por ejemplo alquilo, alilo, arilo) puede realizarse mediante la adición de un reactivo organometálico adecuado (por ejemplo Grignard).



5

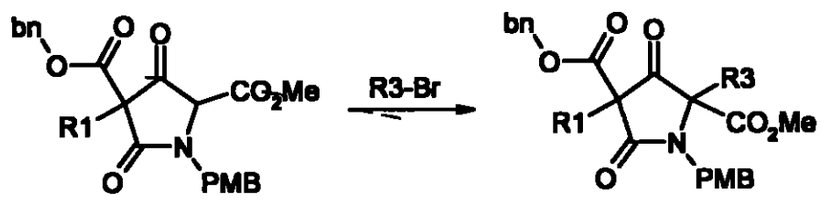
Después de la O-protección (R^5 = sililo, bencilo) pueden añadirse alquilos y aldehídos.

(R^3 = alquilo, alilo, bencilo o R^7 = alquilo, alilo, bencilo, arilo, R^8 = OH)



6

De acuerdo con [1], los bromuros de alilo reaccionan fácilmente.

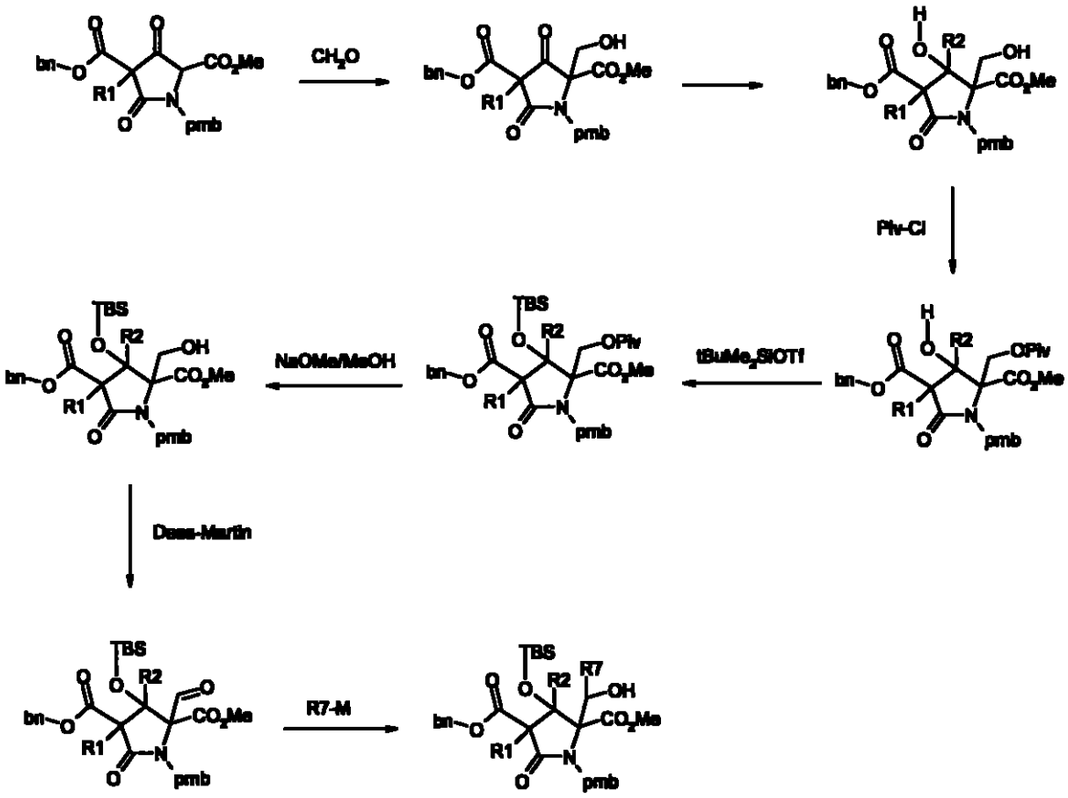


7

véase 4

8-11

de manera análoga a [2]: adición de formaldehído (8), reducción de la cetona (véase (4)), protección del grupo hidroxilo primario en forma de éster de pivaloílo, protección del grupo hidroxilo secundario en forma de éter de TBS, desprotección del éster de pivaloílo (9), Oxidación de Dess-Martin (10), adición de reactivos de Grignard [2] u organometálicos de Zinc [3] (11)



12

Las transformaciones posibles son

-descarboxilación (R1 no más CO_2Bn): La hidrogenólisis catalizada con Pd da la desbencilación e induce la descarboxilación [1]

- N-desprotección (R4 = H) utilizando nitrato de Cer(amonio) (CAN) si R4 es PMB [2]

- transesterificación (R6 = O-alquilo, O-alilo, O-bencilo)

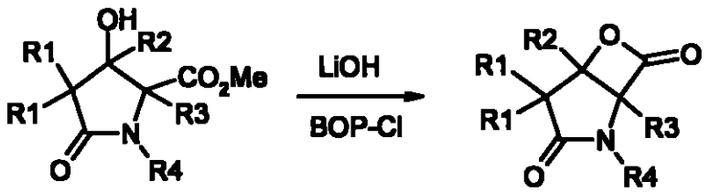
- saponificación (R6 = OH)

- formación de tioéster (R6 = S-alquilo)

- formación de amida (R6 = NH-alquilo/Arilo, N-alquil-arilo, N-dialquilo)

13

La lactonización usando BOP-Cl se describe en [2].



Bibliografía:

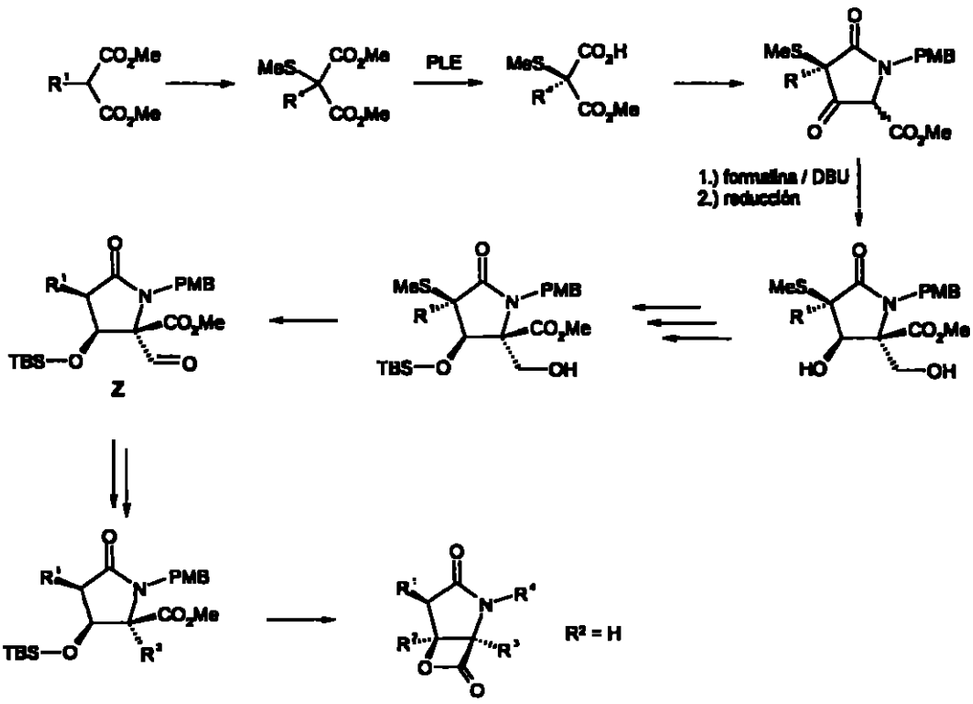
[1] P.C. Bulman Page et. al., *SYNLETT* **2003**, 1025.

[2] E. J. Corey et. al., *Angew. Chem.* **1998**, *110*, 1784.

[3] L. R. Reddy, P. Saravanan, E. J. Corey, *J. Am. Chem. Soc.*, ASAP

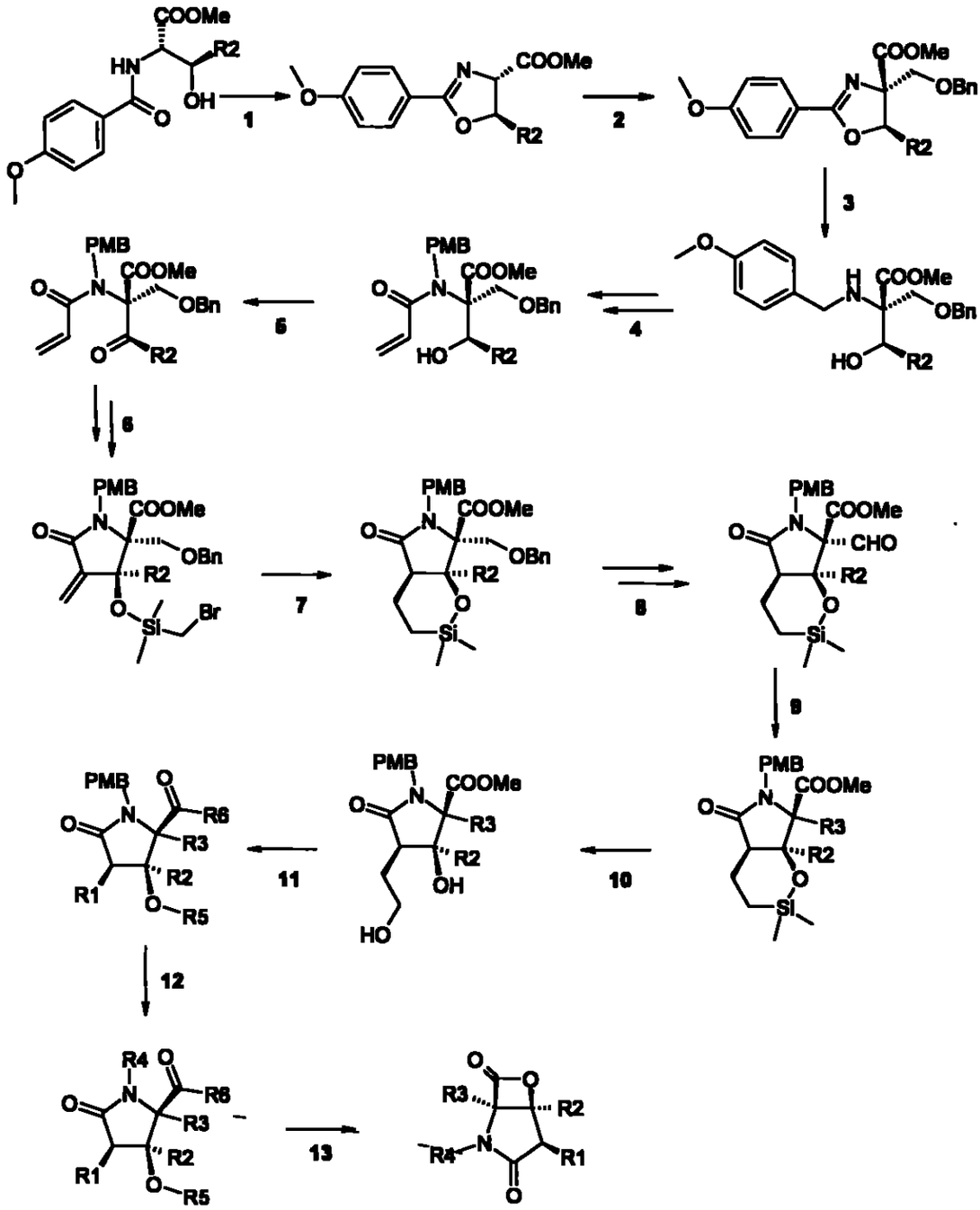
Procedimiento D

Los compuestos de fórmula (I) con R^2 = H pueden sintetizarse siguiendo un procedimiento bibliográfico (E.J. Corey, W. Li, T. Nagamitsu, *Angew. Chem. IE* **1998**, *37*, 1676-1679,) partiendo de malonato sustituido enantioméricamente puro mediante una síntesis de etapa múltiple como se muestra en el esquema de proceso. Esta ruta sintética es muy flexible para R^1 y puede realizarse con estereocontrol completo. El intermedio clave Z permite gran variación de R^3.


PLE
1.) formalina / DBU
2.) reducción
PMB
TBS
OH
Z
R² = H

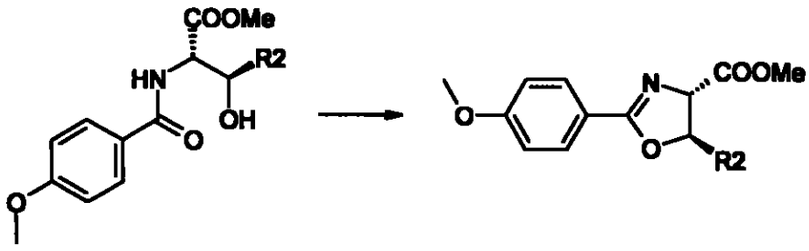
Procedimiento E

Este procedimiento se basa en un procedimiento descrito en la bibliografía (Corey y col., J. Am. Chem. Soc. 2004, 126, 6230-6231)


COOMe
R2
HN
OH
O
1
N
COOMe
O
R2
2
OBn
3
PMB
4
5
6
Br
Si
7
8
CHO
9
10
11
R6
R3
R1
R5
12
R4
13

1

Siguiendo el procedimiento bibliográfico, un derivado de éster metílico de serina se N-aciló con cloruro de 4-metoxibenzoílo para formar la amida que se cicla para dar una oxazolina por calentamiento con ácido *p*-toluenosulfónico.



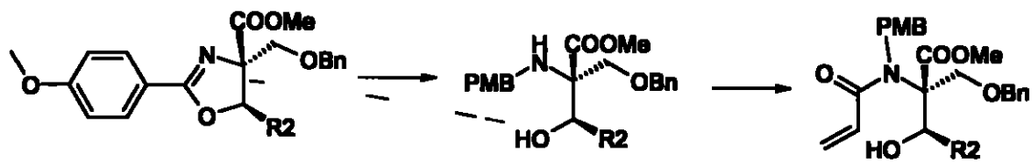
2

La desprotonación de la oxazolina con diisopropilamiduro de litio y alquilación del enolato resultante con clorometil bencil éter produce el isómero deseado.



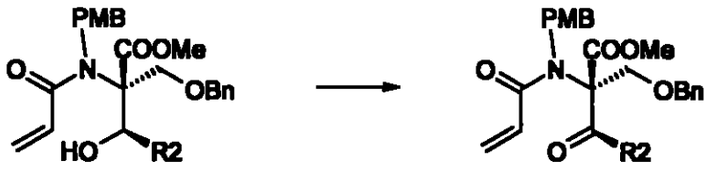
3-4

La reducción con cianoborohidruro sódico produce una PMB-amina (PMB = 4-metoxibencilo) que puede transformarse en el derivado de N-acrilil-N-PMB por reacción con Me3SiCl y Et3N para formar el trimetil silil éter, seguido de acilación con cloruro de acrililo y tratamiento ácido.



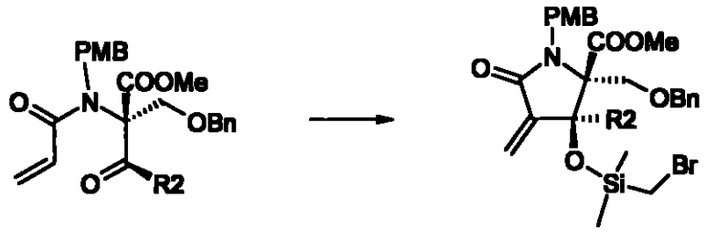
5

La oxidación con peryodinano de Dess-Martin produce el éster de ceto amida.



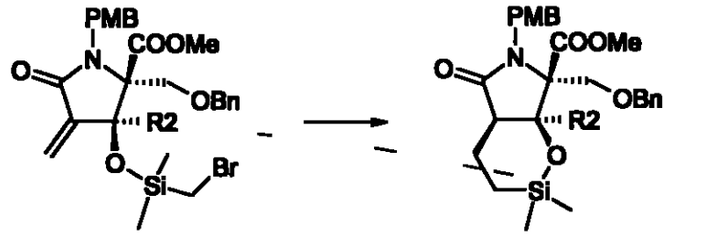
6

El éster de ceto amida puede ciclarse para dar la γ-lactama por medio de una reacción interna de Baylis-Hillman-aldol usando quinuclidina como base catalítica. El producto de ciclación puede sililarse con cloruro de bromometildimetilsililo y separarse por cromatografía en columna.



7

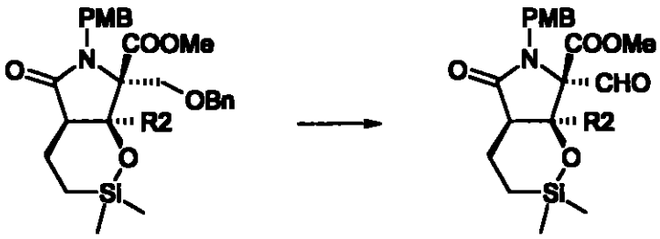
El núcleo de γ-lactama puede transformarse limpiamente por ciclación de la cadena de radicales mediada por hidruro de tri-*n*-butilestaño en la γ-lactama biciclica *cis*-condensada.



8

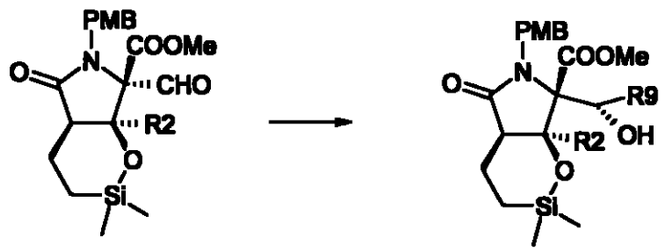
La escisión del éter bencílico con hidrógeno sobre paladio/carbono y la

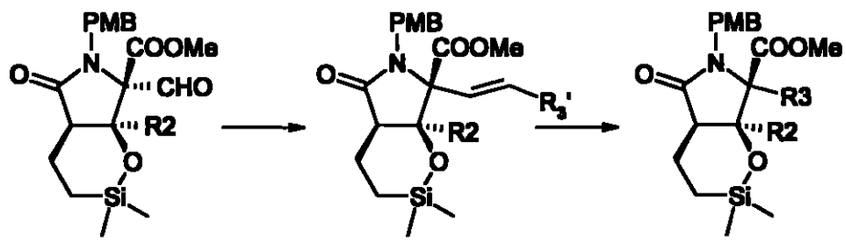
oxidación con peryodinano de Dess-Martin proporcionan un aldehído.



9

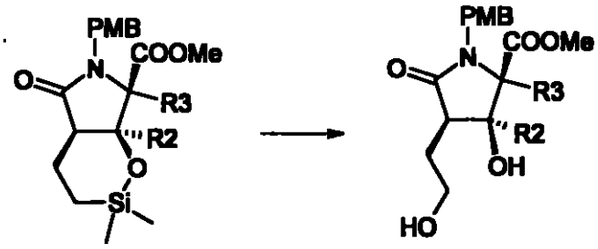
La conversión de este aldehído en sustituyentes R3 es posible mediante la adición de un reactivo organometálico adecuado, por ejemplo Grignard, o realizando una reacción de Wittig seguido de una hidratación del alqueno creado.





10

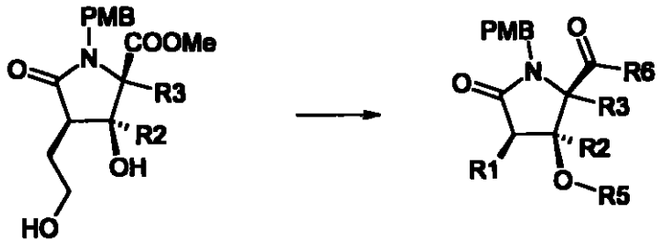
La oxidación de Tamao-Fleming del biciclo produce el éster de diol protegido con PMB correspondiente.



11

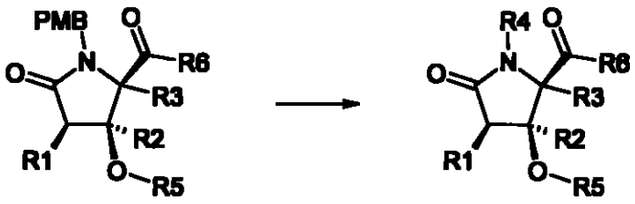
Las posibles transformaciones de este éster de diol son

- **oxidación del grupo hidroxi primario para dar el aldehído seguido de reacción de Wittig y reducción del alqueno creado para variar el sustituyente R1**
- **derivatización (por ejemplo alquilación, acilación etc.) del grupo hidroxi secundario (por ejemplo R5 = alquilo, alilo, bencilo, acilo, etc.)**
- **transesterificación (por ejemplo R6 = O-alquilo, O-alilo, O-bencilo)**
- **saponificación (por ejemplo R6 = OH)**
- **formación de tioéster (por ejemplo R6 = S-alquilo)**
- **formación de amida (por ejemplo R6 = NH-alquilo/arilo, N-alquil-arilo, N-dialquilo)**



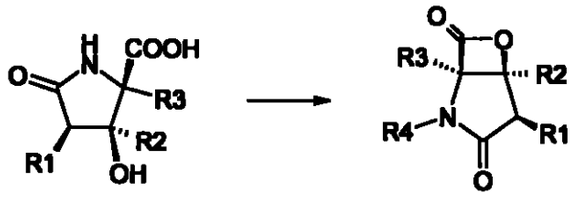
12

Después de la escisión oxidativa inducida por Ce(IV) del grupo PMB, la amida puede N-alquilarse (R4 = alquilo, bencilo, etc.) usando procedimientos convencionales si es necesario.

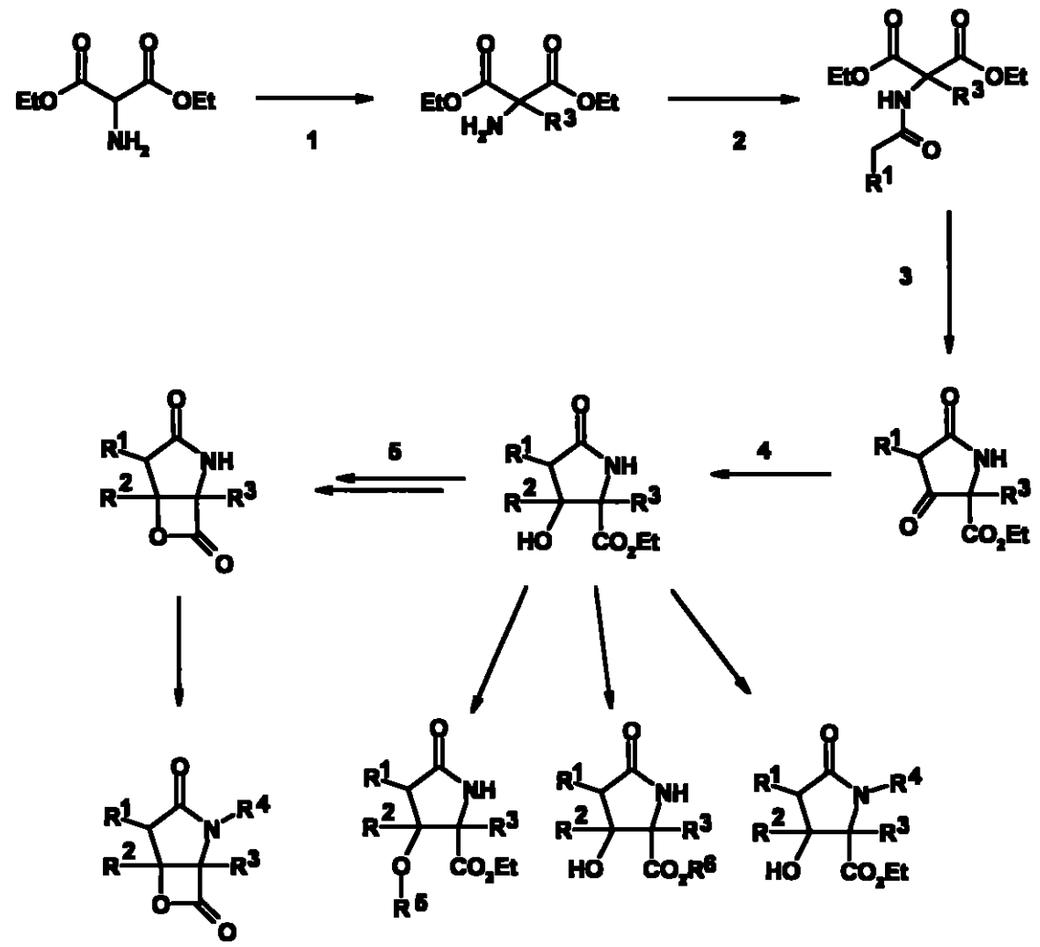


13

La lactonización del β-hidroxi ácido (R4 = R5 = R6 = H) para dar compuestos de fórmula (Ia) se realiza usando cloruro bis-(2-oxo-3-oxazolidinil)fosfínico (BOPCl). Si es necesario, la amida puede N-alquilarse (R4 = alquilo, alilo, bencilo, etc.) también en esta etapa.

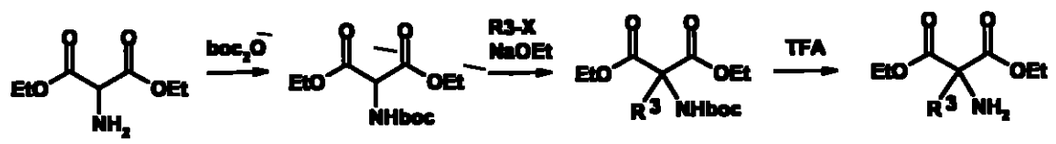


Procedimiento F



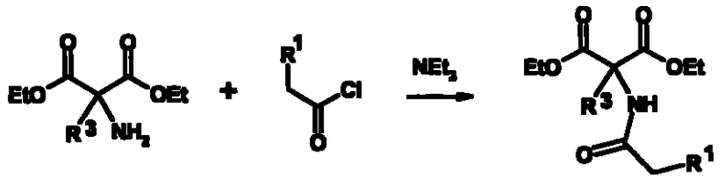
1

En una secuencia de protección – alquilación – desprotección se obtienen dietilaminomalonatos sustituidos. Posibles variaciones: R3 = alquilo, alilo, bencilo, alquilo sust.



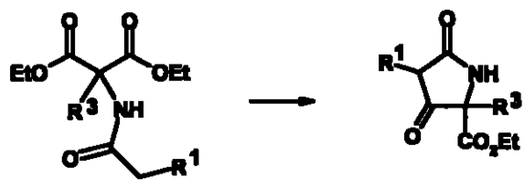
2

La N-acilación se realiza en condiciones moderadas. Posibles variaciones: R1 = sin limitaciones



3

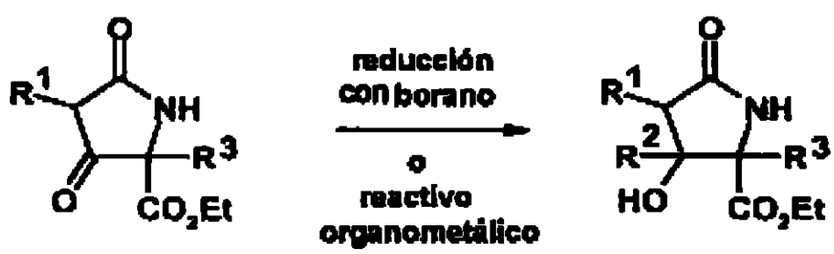
La ciclación inducida por una base da ácidos tetrámicos.



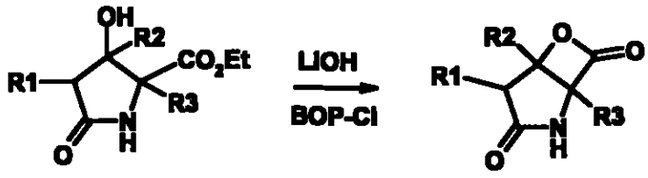
4

La siguiente etapa se realiza por reducción o adición de un reactivo organometálico adecuado (por ejemplo Grignard).

Posibles variaciones: R2= H, alquilo, bencilo, arilo



Se emplea BOP-Cl para la lactonización.



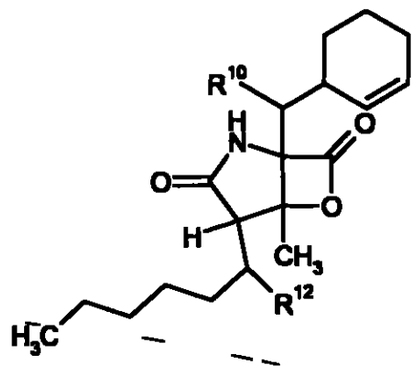
Las posibles transformaciones son:

- introducción de R4 = alquilo, bencilo, acilo, sulfonilo
- introducción de R5 = alquilo, bencilo, acilo, sulfonilo
- transesterificación (R6 = O-alquilo, O-alilo, O-bencilo)
- saponificación (R6 = OH)
- formación de tioéster (R6 = S-alquilo)

o combinaciones de los mismos

Además, los compuestos de fórmula (II) pueden prepararse mediante

[A] un procedimiento para sintetizar los compuestos de fórmula general



(IIIc),

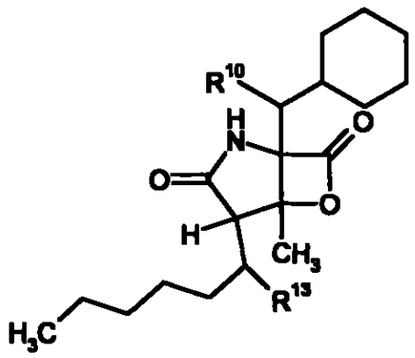
donde

R^{10} y R^{12} tienen los significados descritos anteriormente,

caracterizado porque los compuestos se preparan por fermentación y aislamiento de un Actinomiceto del género *Streptomyces*,

o

[B] un procedimiento para sintetizar los compuestos de fórmula general



(IIId),

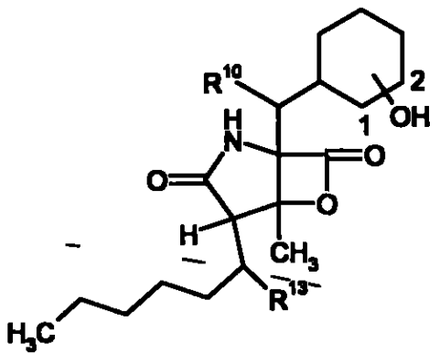
donde

R^{10} y R^{13} tienen los significados descritos anteriormente,

caracterizado porque los compuestos se preparan por hidrogenación del doble enlace en compuestos de fórmula (IIIc),

o

[C] un procedimiento para sintetizar los compuestos de fórmula general



(IIIe),

donde

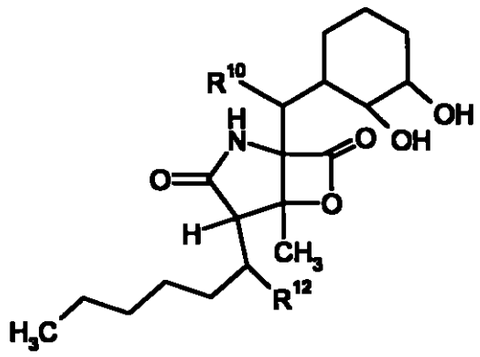
R^{10} y R^{13} tienen los significados descritos anteriormente, y

el grupo hidroxi se une en el átomo de carbono 1 ó 2,

caracterizado porque los compuestos se preparan por hidratación del doble enlace en compuestos de fórmula (IIIc),

o

[D] un procedimiento para sintetizar los compuestos de fórmula general



(IIIf),

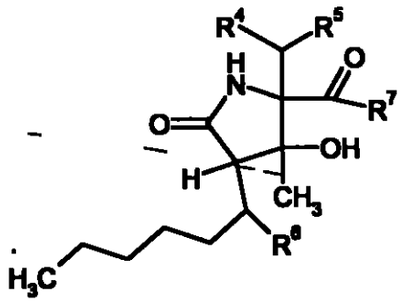
donde

R^{10} y R^{12} tienen los significados descritos anteriormente,

caracterizado porque los compuestos se preparan por oxidación del doble enlace en compuestos de fórmula (IIIc),

o

[E] un procedimiento para sintetizar los compuestos de fórmula general



(IIIb),

donde

R^{13}, R^{14}, R^{15} y R^{16} tienen los significados descritos anteriormente,

caracterizado porque los compuestos se preparan por fermentación y aislamiento de un Actinomiceto del género *Streptomyces*.

Los Procedimientos [A] y [E] pueden realizarse como se describe en la sección experimental.

La hidrogenación del procedimiento [B] puede realizarse en presencia de un catalizador tal como paladio/carbono e hidrógeno en un disolvente adecuado en un intervalo de temperaturas de 0°C a +100°C, a presión normal o a una presión elevada hasta 3 bar (300 kPa).

Los disolventes adecuados son éteres tales como éter dietílico, metil-*t*-butil éter, dioxano o tetrahidrofurano, alcoholes tales como metanol, etanol, *n*-propanol, *iso*-propanol, *n*-butanol o *t*-butanol, prefiriéndose metanol, etanol, *iso*-propanol o tetrahidrofurano.

La hidratación del procedimiento [C] puede realizarse por hidroboración con tratamiento oxidativo usando por ejemplo diborano (B_2H_6) en tetrahidrofurano seguido de peróxido de hidrógeno. Como alternativa, puede generarse un epóxido y abrirse mediante procedimientos de reducción. Todos los procedimientos pueden realizarse en un disolvente adecuado en un intervalo de temperaturas de -78°C a +25°C, a presión normal o a una presión elevada hasta 3 bar (300 kPa).

Los disolventes adecuados son tetrahidrofurano, éter dietílico, *terc*-butil-metil éter, y disolventes relacionados.

La oxidación del procedimiento [D] puede realizarse mediante procedimientos de dihidroxilación quiral o aquiral usando permanganato potásico ($KMnO_4$) o

tetróxido de osmio (OsO_4). En el caso de tetróxido de osmio, pueden ser suficientes cantidades catalíticas, cuando se usan *N*-óxidos de *terc*-amina, por ejemplo *N*-óxido de *N*-Metil-morfolina u otros oxidantes tales como ferricianuro potásico (K_3FeCN_6). Todos los procedimientos pueden realizarse en un disolvente adecuado en un intervalo de temperaturas de 0°C a +100°C, a presión normal o a una presión elevada hasta 3 bar (300 kPa).

Los disolventes adecuados son alcoholes tales como etanol o *t*-butanol, con cantidades apropiadas añadidas de agua.

Los compuestos de acuerdo con la presente invención muestran una fuerte actividad microbicida. De esta manera, pueden usarse para combatir microorganismos indeseados, tales como hongos fitopatógenos y bacterias, en agricultura y horticultura. Los compuestos son adecuados para el control directo de microorganismos indeseados así como para generar resistencia en plantas frente al ataque producido por patógenos indeseados de las plantas.

Las sustancias que inducen resistencia en el presente contexto pretenden indicar aquellas sustancias que son capaces de estimular el sistema de defensa de las plantas para que las plantas tratadas, cuando se inoculan posteriormente con microorganismos indeseados, muestren una resistencia sustancial a estos microorganismos.

Microorganismos indeseables en el presente caso debe entenderse como hongos y bacterias fitopatogénicos. Las sustancias de acuerdo con la invención pueden por tanto emplearse para generar resistencia en plantas contra el ataque de organismos dañinos mencionados en un cierto periodo de tiempo después del tratamiento. El periodo de tiempo en el que la resistencia se provoca en general se extiende de 1 a 10 días, preferiblemente 1 a 7 días,

después del tratamiento de las plantas con los compuestos activos.

Generalmente, los compuestos de acuerdo con la invención pueden usarse como fungicidas para combatir hongos fitopatogénicos, tales como Plasmodiophoromycetes, Oomycetes, Chytridiomycetes, Zygomycetes, Ascomycetes, Basidiomycetes y Deuteromycetes, y también pueden usarse como bactericidas para combatir bacterias, tales como Pseudomonadaceae, Rhizobiaceae, Enterobacteriaceae, Corynebacteriaceae, Streptomycetaceae, Proteobacteriae y grupos Gram-positivos.

Algunos patógenos que causan enfermedades fúngicas que tienen los nombres genéricos enumerados anteriormente se mencionan como ejemplos, pero no a modo de limitación:

Especies de Erwinia, tales como, por ejemplo, Erwinia amylovora;

Especies de Pythium , tales como, por ejemplo, Pythium ultimum;

Especies de Phytophthora , tales como, por ejemplo, Phytophthora infestans;

Especies de Pseudoperonospora , tales como, por ejemplo, Pseudoperonospora humuli o

Pseudoperonospora cubensis;

Especies de Plasmopara , tales como, por ejemplo, Plasmopara viticola;

Especies de Bremia , tales como, por ejemplo, Bremia Lactucae;

Especies de Peronospora , tales como, por ejemplo, Peronospora pisi o P. brassicae;

Especies de Erysiphe , tales como, por ejemplo, Erysiphe graminis;

Especies de Sphaerotheca , tales como, por ejemplo, Sphaerotheca fuliginea;

Especies de Podosphaera , tales como, por ejemplo, Podosphaera leucotricha;

Especies de Venturia , tales como, por ejemplo, Venturi inaequalis;

Especies de Pyrenophora , tales como, por ejemplo, Pyrenophora teres o P. graminea

(forma de conidios: Drechslera, syn: Helminthosporium);

Especies de Cochliobolus , tales como, por ejemplo, Cochliobolus sativus

(forma de conidios: Drechslera,syn: Helminthosporium);

Especies de Uromyces , tales como, por ejemplo, Uromyces appendiculatus;

Especies de Puccinia , tales como, por ejemplo, Puccinia recondita;

Especies de Sclerotinia , tales como, por ejemplo, Sclerotinia sclerotiorum;

Especies de Tilletia , tales como, por ejemplo, Tilletia caries;

Especies de Ustilago , tales como, por ejemplo, Ustilago nuda o Ustilago avenae;

Especies de Pellicularia , tales como, por ejemplo, Pellicularia sasakii;

Especies de Pyricularia , tales como, por ejemplo, Pyricularia oryzae;

Especies de Fusarium , tales como, por ejemplo, Fusarium culmorum;

Especies de Botrytis , tales como, por ejemplo, Botrytis cinerea;

Especies de Septoria , tales como, por ejemplo, Leptosphaeria nodorum;

Especies de Cercospora , tales como, por ejemplo, Cercospora canescens;

Especies de Alternaria , tales como, por ejemplo, Alternaria brassicae;

Especies de Pseudocercosporella , tales como, por ejemplo, Pseudocercosporella herpotrichoides; y

Especies de Phakopsora, tales como, por ejemplo Phakopsora pachyrhizi y Phakopsora meibomiae.

Los compuestos de acuerdo con la presente invención son particularmente adecuados para causar resistencia contra infección de plantas por patógenos vegetales, tales como Pyricularia oryzae, Phythophthora infestans etc.

La buena tolerancia, por las plantas, de los compuestos activos, a las concentraciones necesarias para combatir enfermedades vegetales, permite el tratamiento de las partes por encima del suelo de las plantas, del tronco de propagación vegetativa y las semillas, y de la tierra.

Los compuestos de acuerdo con la presente invención tienen una baja toxicidad contra animales de sangre caliente y por lo tanto puede usarse de forma segura.

Los compuestos activos se pueden convertir en las formulaciones habituales, tales como soluciones, emulsiones, polvos humedecibles, suspensiones, polvos, espumas, pastas, gránulos, comprimidos, aerosoles, materiales naturales y sintéticos impregnados con compuesto activo, cápsulas muy finas en sustancias poliméricas, composiciones de revestimiento para su uso en semillas, y formulaciones usadas con un equipo ardiente, tales como cartuchos de fumigación, bidones de fumigación y bobinas de fumigación, así como formulaciones de bruma fría y bruma caliente de ULV.

Estas formulaciones pueden producirse de una forma conocida, por ejemplo mezclando los compuestos activos con medios diluyentes, es decir, diluyentes o vehículos líquidos o gaseosos licuados o sólidos, opcionalmente con el uso de agentes tensioactivos, es decir agentes emulsionantes y/o agentes de dispersión y/o agentes formadores de espuma. En el caso del uso de agua como medio diluyente, también pueden usarse disolventes orgánicos, por ejemplo, como disolventes auxiliares.

Como disolventes líquidos, hay diluyentes o vehículos que son adecuados en los principales hidrocarburos aromáticos tales como xileno, tolueno o alquil naftalenos, hidrocarburos aromáticos clorados o alifáticos clorados, tales como

clorobencenos, cloroetilenos o cloruro de metileno, hidrocarburos alifáticos, tales como ciclohexano o parafinas, por ejemplo fracciones de aceite mineral, alcoholes, tales como butanol o glicol así como sus éteres y ésteres, cetonas, tales como acetona, metil etil cetona, metil-isobutil cetona o ciclohexanona, o disolventes fuertemente polares, tales como dimetilformamida y dimetil-sulfóxido, así como agua.

Por diluyentes o vehículos gaseosos licuados se entienden líquidos que serían gaseosos a temperatura normal y a presión normal, por ejemplo impulsores de aerosoles, tales como hidrocarburos halogenados así como butano, propano, nitrógeno y dióxido de carbono.

Como vehículos sólido se pueden usar minerales naturales del suelo, tales como kaolinas, arcillas, talco, tiza, cuarzo, atapulgita, montmorillonita o tierra de diatomeas, y minerales sintéticos de la tierra, tales como ácido silícico altamente dispersado, alúmina y silicatos. Como vehículos sólido para gránulos pueden usarse rocas trituradas y fraccionadas naturales tales como calcita, mármol, piedra pómez, sepiolita y dolomita, así como gránulos sintéticos de harinas inorgánicas y orgánicas, y gránulos de material orgánico tal como serrín, cáscara de coco, mazorcas de maíz y tallos de tabaco.

Como agentes emulsionantes y/o formadores de espuma pueden usarse emulsionantes no iónicos y aniónicos, tales como ésteres de ácido graso de polioxietileno, éteres de alcohol graso de polioxietileno, por ejemplo éteres de alquilarilpoliglicol, alquil sulfonatos, alquil sulfatos, aril sulfonatos así como productos de hidrólisis de albúmina.

Los agentes de dispersión incluyen, por ejemplo, aguas de desecho de sulfito de lignina y metilcelulosa.

Pueden usarse adhesivos tales como carboximetilcelulosa y polímeros naturales y sintéticos en forma de polvos, gránulos o redes, tales como goma arábiga, poli(alcohol vinílico) y poli(acetato de vinilo), en la formulación.

Es posible usar colorantes tales como pigmentos inorgánicos, por ejemplo óxido de hierro, óxido de titanio y Azul De Prusia, y colorante orgánicos, tales como colorantes de alizarina, colorantes azo o colorantes de ftalocianina metálica, y nutrientes traza, tales como sales de hierro, manganeso, boro, cobre, cobalto, molibdeno y cinc.

Las formulaciones en general contienen del 0,1 al 95 por ciento en peso de compuesto activo, preferiblemente del 0,5 al 90 por ciento en peso.

Los compuestos activos de acuerdo con la invención pueden presentarse en las formulaciones o en las diversas formas de uso como una mezcla con otros compuesto activos conocidos, tales como fungicidas, bactericidas, insecticidas, acaricidas, nematicidas, herbicidas, repelentes de aves, factores de crecimiento, nutrientes vegetales y agentes para mejorar la estructura de la tierra.

En muchos casos, se consiguen efectos sinérgicos, es decir la actividad de la mezcla excede la actividad de los componentes individuales.

Los ejemplos de co-componentes en mezclas son los siguientes compuestos:

Fungicidas:

1. Inhibición de la síntesis de ácido nucleico

1.1 benalaxil, benalaxil-M, bupirimato, quiralaxil, clozilacon, dimetirimol, etirimol, furalaxil, himexazol, metalaxil-M, ofurace, oxadixil, ácido oxolínico

2. Inhibición de la mitosis y división celular:

2.1 benomil, carbendazim, dietofencarb, fuberidazol, pencicuron, metil tiofanato

de tiabendazol, zoxamida

3. Inhibición de la respiración

3.1 CI: diflumetorim

3.2 CII: boscalid, carboxin, fenfuram, flutolanil, furametpir, mepronil, oxicarboxina, pentiopirad, tifluzamida

3.3 CIII: azoxistrobin, ciazofamid, dimoxistrobin, enestrobin, famoxadona, fenamidona, fluoxastrobin, kresoxim-metilo, metominostrobin, orisastrobin, piraclostrobin, picoxistrobin, trifloxistrobin,

3.4 Desacopladores: dinocap, fluazinam

3.5 Inhibición de la producción de ATP: acetato de fentin, cloruro de fentin, hidróxido de fentin, siltiofam

4. Inhibición de la biosíntesis de AA y proteínas

4.1 andoprim, blasticidin-S, ciprodinil, kasugamicina, clorhidrato de kasugamicin hidrato, mepanipirim, pirimetanil,

5. Inhibición de la transducción de señales

5.1 fenpiclonil, fludioxonil, quinoxifeno

6. Inhibición de la síntesis de lípidos y membranas

6.1 clozolinato, iprodiona, procimidona, vinclozolin

6.2 pirazofos, edifenfos, iprobenfos (IBP), isoprotiolano

6.3 tolclofos-metilo, bifenilo

6.4 yodocarb, propamocarb, clorhidrato de propamocarb

7. Inhibición de la biosíntesis de ergosterol

7.1 fenhexamid,

7.2 azaconzol, bitertanol, bromuconzol, ciproconazol, diclobutrazol, difenoconazol, diniconazol, diniconazol-M, epoxiconazol, etaconazol,

fenbuconazol, fluquinconazol, flusilazol, flutriafol, furconazol, furconazol-cis, hexaconazol, imibenconazol, ipconazol, metconazol, miclobutanilo, paclobutrazol, penconazol, propiconazol, protioconazol, simeconazol, tebuconazol, tetraconazol, triadimefon, triadimenol, triticonazol, uniconazol, voriconazol, imazalil, sulfato de imazalil, oxpoconazol, fenarimol, flurprimidol, nuarimol, pirifenox, triforina, pefurazoato, procloraz, triflumizol, viniconazol,

7.3 aldimorf, dodemorf, acetato de dodemorf, fenpropimorf, tridemorf, fenpropidin, spiroxamina

7.4 naftifina, piributicarb, terbinafina,

8. Inhibición de la síntesis de la pared celular

8.1 bentiavalicarb, bialafos, dimetomorf, flumorf, iprovalicarb, polioxinas, polioxorim, validamicina A

9. Inhibición de la biosíntesis de melanina

9.1 carpropamid, diclocimet, fenoxanil, ftalida, piroquilon, triciclazol,

10. Inductor de la defensa de huésped

10.1 acibenzolar-S-metilo, probenzol, tiadinil

11. Multisitio

11.1 captafol, captan, clorotalonil, preparaciones de cobre tales como: hidróxido de cobre, naftenato de cobre, oxicloruro de cobre, sulfato de cobre, óxido de cobre, mezcla de oxina-cobre y Bordeaux, diclofluanid, ditianon, dodina, base libre de dodina, ferbam, fluorofolpet, folpet, guazatina, acetato de guazatina, iminoctadina, albesilato de iminoctadina, triacetato de iminoctadina, mancobre, mancozeb, maneb, metiram, metiram cinc, propineb, azufre y preparaciones de azufre que incluyen polisulfito cálcilo, tiram, tolilfluanid, zineb, ziram,

12. Desconocido

12.1 amibromdol, bentiazol, betoxazin, capsimicina, carvona, quinometionat, cloropicrin, cufraneb, ciflufenamid, cimoxanil, dazomet, debacarb, diclomezina, diclorofeno, dicloran, difenzoquat, metilsulfato de difenzoquat, difenilamina, etaboxam, ferimzona, flumetover, flusulfamida, fosetil-aluminio, fosetil-calcio, fosetil-sodio, fluopicolida, fluoroimida, hexaclorobenceno, sulfato de 8-hidroxiquinolina, irumamicina, metasulfocarb, metrafenona, isotiocianata de metilo, mildiomicina, natamicina, dimetilditiocarbamato de metilo, nitrotalisopropilo, octilinona, oxamocarb, oxifentilna, pentaclorofenol y sales, 2-fenilfenol y sales, ácido fosforoso y sus sales, piperalina, propanosina–sodio, proquinazid, pirrolnitrina, quintozeno, tecloftalam, tecnazeno, triazoxida, triclamida, zarilamid y 2,3,5,6-tetracloro-4-(metilsulfonil)-piridina, *N*-(4-cloro-2-nitrofenil)-*N*-etil-4-metil-bencenosulfonamida, 2-amino-4-metil-*N*-fenil-5-tiazolcarboxamida, 2-cloro-*N*-(2,3-dihidro-1,1,3-trimetil-1*H*-inden-4-il)-3-piridincarboxamida, 3-[5-(4-clorofenil)-2,3-dimetilisoxazolidin-3-il]piridina, cis-1-(4-clorofenil)-2-(1*H*-1,2,4-triazol-1-il)-cicloheptanol, 1-(2,3-dihidro-2,2-dimetil-1*H*-inden-1-il)-1*H*-imidazol-5-carboxilato de metilo, 3,4,5-tricloro-2,6-piridinadicarbonitrilo, 2-[[[ciclopropil[(4-metoxifenil)imino]metil]tio]metil]-.alfa.-(metoxi-metileno)-bencenoacetato de metilo, 4-cloro-alfa-propiniloxi-*N*-[2-[3-metoxi-4-(2-propiniloxi)fenil]etil]-bencenoacetamida, (2S)-*N*-[2-[4-[[3-(4-clorofenil)-2-propinil]oxi]-3-metoxifenil]etil]-3-metil-2-[(metilsulfonil)amino]-butanamida, 5-cloro-7-(4-metilpiperidin-1-il)-6-(2,4,6-trifluorofenil)[1,2,4]triazolo[1,5-a]pirimidina, 5-cloro-6-(2,4,6-trifluorofenil)-*N*-[(1*R*)-1,2,2-trimetilpropil][1,2,4]triazolo[1,5-a]pirimidin-7-amina, 5-cloro-*N*-[(1*R*)-1,2-dimetilpropil]-6-(2,4,6-trifluorofenil)[1,2,4]triazolo[1,5-a]pirimidin-7-amina, *N*-[1-(5-bromo-3-cloropiridin-2-il)etil]-2,4-dicloronicotinamida, *N*-(5-bromo-3-

cloropiridin-2-il)metil-2,4-dicloronicotinamida, 2-butoxi-6-yodo-3-propil-benzopiranon-4-ona, *N*-{(*Z*)-[(ciclopropilmetoxi)imino][6-(difluorometoxi)-2,3-difluorofenil]metil}-2-fenil-acetamida, *N*-(3-etil-3,5,5-trimetil-ciclohexil)-3-formilamino-2-hidroxi-benzamida, 2-[[[1-[3(1fluoro-2-feniletil)oxi]fenil]etilideno]amino]oxi]metil]-alfa-(metoxiimino)-*N*-metil-alfaE-bencenoacetamida, *N*-{2-[3-cloro-5-(trifluorometil)piridin-2-il]etil}-2-(trifluorometil)benzamida, *N*-(3',4'-dicloro-5-fluorobifenil-2-il)-3-(difluorometil)-1-metil-1*H*-pirazol-4-carboxamida, ácido 1-[(4-metoxifenoxi)metil]-2,2-dimetilpropil-1H-imidazol-1-carboxílico, ácido O-[1-[(4-metoxifenoxi)metil]-2,2-dimetilpropil]-1*H*-imidazol-1-carbotioic, 2-(2-{[6-(3-cloro-2-metilfenoxi)-5-fluoropirimidin-4-il]oxi}fenil)-2-(metoxiimino)-*N*-metilacetamida

Bactericidas:

bronopol, diclorofeno, nitrapirin, dimetilditiocarbamato de níquel, kasugamicina, octilinona, ácido furancarboxílico, oxitetraciclina, probenzol, estreptomicina, tecloftalam, sulfato de cobre y otras preparaciones de cobre.

Insecticidas / acaricidas / nematicidas:

1. Inhibidores de acetilcolinesterasa (AChE)

1.1 carbamatos (por ejemplo alanicarb, aldicarb, aldoxicarb, alixicarb, aminocarb, azametifos, bendiocarb, benfuracarb, bufencarb, butacarb, butocarboxim, butoxicarboxim, carbarilo, carbofurano, carbosulfan, cloetocarb, coumafos, cianofenfos, cianofos, dimetilan, etiofencarb, fenobucarb, fenotiocarb, formetanato, furatiocarb, isoprocarb, metam-sodio, metiocarb, metomilo, metolcarb, oxamilo, pirimicarb, promecarb, propoxur, tiodicarb, tiofanox, triazamato, trimetacarb, XMC, xililcarb)

1.2 organofosfatos (por ejemplo acefato, azametifos, azinfos (-metilo, -etilo),

bromofos-etilo, bromfenvinfos (-metilo), butatiofos, cadusafos, carbofenotion, cloroetoxifos, clorofenvinfos, cloromefos, cloropirifos (-metil/-etilo), coumafos, cianofenfos, cianofos, clorofenvinfos, demeton-s-metilo, demeton-s-metilsulfona, dialifos, diazinon, diclofention, diclorovos/DDVP, dicrotofos, dimetoato, dimetilvinfos, dioxabenzofos, disulfoton, EPN, etion, etoprofos, etrimfos, famfur, fenamifos, fenitrotion, fensulfotion, fention, flupirazofos, fonofos, formotion, fosmetilan, fostiazato, heptenofos, yodofenfos, iprobenfos, isazofos, isofenfos, *o*-salicilato de isopropilo, isoxation, malation, mecarbam, metacrifos, metamidofos, metidation, mevinfos, monocrotofos, naled, ometoato, oxidemeton-metilo, paration (-metil/-etilo), fentoato, forato, fosalona, fosmet, fosfamidon, fosfocarb, foxim, pirimifos (-metil/-etilo), profenofos, propafos, propetamfos, protiofos, protoato, piraclofos, piridafention, piridation, quinalfos, sebufos, sulfotep, sulprofos, tebupirimfos, temefos, terbufos, tetraclorovinfos, tiometon, triazofos, triclorfon, vamidotion)

2. *Moduladores/bloqueantes de los canales de sodio de canales de sodio dependientes de voltaje*

2.1 piretroides (por ejemplo acrinatrina, aletrina (d-*cis-trans*, d-*trans*), beta-cflutrina, bifentrina, bioaletrina, isómero *S*-ciclopentilo de bioaletrin, bioetanometrina, biopermetrina, bioresmetrina, clovaportrina, *cis*-cipermetrina, *cis*-resmetrina, *cis*-permetrina, clocitrina, cicloprotrina, ciflutrina, cihalotrina, cipermetrina (alfa-, beta-, theta-, zeta-), cifenotrina, DDT, deltametrina, empentrina (isómero 1*R*), esfenvalerato, etofenprox, fenflutrina, fenpropatrina, fenpiritrina, fenvalerato, flubrocitrinato, flucitrinato, flufenprox, flumetrina, fluvalinato, fubfenprox, gamma-cihalotrina, imiprotrina, kadetrina, lambda-cihalotrina, metoflutrina, permetrina (*cis*-, *trans*-), fenotrina (isómero 1*R*-*trans*),

praletrina, proflutrina, protrifenbute, piresmetrina, resmetrina, RU 15525, silafluofeno, tau-fluvalinato, teflutrina, teraletrina, tetrametrina (isómero 1*R*), tralometrina, transflutrina, ZXI 8901, piretrinas (piretrum))

2.2 oxadiazinas (por ejemplo indoxacarb)

3. Agonistas/antagonistas del receptor de acetilcolina

3.1 cloronicotinilos/neonicotinoides (por ejemplo acetamiprid, clotianidin, dinotefurano, imidacloprid, nitenpiram, nitiazina, tiacloprid, tiametoxam)

3.2 nicotina, bensultap, cartap

4.Moduladores del receptor de acetilcolina

4.1 espinosinas (por ejemplo espinosad)

5. Antagonistas de los canales de cloruro controlados por GABA

5.1 compuestos organoclorados de ciclodieno (por ejemplo camfecloro, clorodano, endosulfano, gamma-HCH, HCH, heptacloro, lindano, metoxicloro

5.2 fiproles (por ejemplo acetoprol, etiprol, fipronilo, vaniliprol)

6. Activadores de canales de cloruro

6.1 mectinas (por ejemplo abamectina, avermectina, emamectina, benzoato de emamectina, ivermectina, milbemectina, milbemicina)

7. Miméticos de hormonas juveniles

(por ejemplo diofenolan, epofenonano, fenoxicarb, hidropreno, kinopreno, metopreno, piriproxifeno, tripreno)

8. Agonistas/alteradores de Ecdyson

8.1 diacilhidrazinas (por ejemplo cromafenozida, halofenozida, metoxifenozida, tebufenozida)

9. Inhibidores de la biosíntesis de quitina

9.1 benzoilureas (por ejemplo bistrifluron, clofluazuron, diflubenzuron,

fluazuron, flucicloxuron, flufenoxuron, hexaflumuron, lufenuron, novaluron, noviflumuron, penfluron, teflubenzuron, triflumuron)

9.2 buprofezin

9.3 ciromazina

10. Inhibidores de la fosforilación oxidativa, alteradores de ATP

10.1 diafenthiuron

10.2 organotinas (por ejemplo azociclotina, cihexatina, óxido de fenbutatina)

11. Desacopladores de la fosforilación oxidativa que funcionan alterado el gradiente de protones H

11.1 pirroles (por ejemplo clorofenapir)

11.2 dinitrofenoles (por ejemplo binapacril, dinobuton, dinocap, DNOC)

12. Inhibidores del transporte de electrones al sitio-I

12.1 METI (por ejemplo fenazaquin, fenpiroximato, pirimidifen, piridaben, tebufenpirad, tolfenpirad)

12.2 hidrametilnona

12.3 dicofol

13. Inhibidores del transporte de electrones al sitio-II

13.1 rotenona

14. Inhibidores del transporte de electrones al sitio-III

14.1 acequinocil, fluacripirim

15. Alteradores microbianos de la membrana del intestino de insectos

Cepas de Bacillus thuringiensis

16. Inhibidores de la síntesis de grasas

16.1 ácidos tetrónicos (por ejemplo espirodiclofeno, espiromesifeno)

16.2 ácidos tetrámicos [por ejemplo carbonato de 3-(2,5-dimetilfenil)-8-metoxi-

2-oxo-1-azaespiro[4,5]dec-3-en-4-iletilo (alias: éster 3-(2,5-dimetilfenil)-8-metoxi-2-oxo-1-azaespiro[4,5]dec-3-en-4-iletílico del ácido carbónico, Nº Reg. CAS: 382608-10-8) y éster *cis*-3-(2,5-dimetilfenil)-8-metoxi-2-oxo-1-azaespiro[4,5]dec-3-en-4-iletílico del ácido carbónico (Nº Reg. CAS: 203313-25-1)]

17. Carboxamidas

(por ejemplo flonicamid)

18. Agonistas octopaminérgicos

(por ejemplo amitraz)

19. Inhibidores de ATPasa estimulada por magnesio

(por ejemplo propargita)

20. Ftalamidas

(por ejemplo N^2-[1,1-dimetil-2-(metilsulfonil)etil]-3-yodo-N^1-[2-metil-4-[1,2,2,2-tetrafluoro-1-(trifluorometil)etil]fenil]-1,2-bencenodicarboxamida (Nº Reg. CAS: 272451-65-7), flubendiamida)

21. Análogos de nereistoxina

(por ejemplo hidrogenooxalato de tiociclam, tiosultap-sodio)

22. Agentes biológicos, hormonas o feromonas

(por ejemplo azadiractin, Bacillus spec., Beauveria spec., Codlemone, Metarrhizium spec., Paecilomyces spec., Thuringiensin, Verticillium spec.)

23. Compuestos activos con mecanismos desconocidos o no específicos de acción

23.1 fumigantes (por ejemplo fosfuro de aluminio, bromuro de metilo, fluoruro de sulfurilo)

23.2 agentes antialimentarios selectivos (por ejemplo criolita, flonicamid,

pimetrozina)

23.3 inhibidores del crecimiento de ácaros (por ejemplo clofentezina, etoxazol, hexitiazox)

23.4 amidoflumet, benclotiaz, benzoximato, bifenazato, bromopropilato, buprofezin, quinometionat, clorodimeform, clorobencilato, cloropicrin, clotiazoben, ciclopreno, ciflumetofeno, diciclanil, fenoxacrim, fentrifanil, flubencimina, flufenerim, flutenzin, gossyplure, hidrametilnona, japonilure, metoxadiazona, petróleo, butóxido de piperonilo, oleato potásico, pirafluprol, piridalilo, piriprol, sulfluramid, tetradifon, tetrasul, triarateno, verbutin,

además el compuesto propilcarbamato de 3-metilfenilo (Tsumacida Z), el compuesto 3-(5-cloro-3-piridinil)-8-(2,2,2-trifluoroetil)-8-azabiciclo[3,2,1]octano-3-carbonitrilo (Nº Reg. CAS 185982-80-3) y el correspondiente 3-endo-isómero (Nº Reg. CAS 185984-60-5) (cf. documentos WO 96/37494, WO 98/25923), y preparaciones que comprenden extractos vegetales, nematodos, hongos o virus insecticidamente activos.

También es posible una mezcla con otros compuestos activos conocidos, tales como herbicidas, o con fertilizantes y reguladores del crecimiento, sanadores y/o semioquímicos.

Los compuestos activos pueden usarse como tales o en forma de sus formulaciones o las formas de uso preparadas a partir de los mismos por dilución adicional, tales como soluciones listas para su uso, emulsiones, suspensiones, polvõs, comprimidos, pastas, microcápsulas y gránulos. Se usan en el modo habitual, por ejemplo por regado, inmersión, pulverización, atomización, neblina, vaporización, inyección, formación de una suspensión, cepillado, espolvoreado, dispersión, abono seco, abono húmero, abono

mojado, abono en pasta o incrustado.

En el tratamiento de partes de las plantas, la concentración de los compuestos activos en las formas de uso puede variarse dentro de un intervalo sustancial. Están, en general, del 1 a 0,0001% en peso, preferiblemente del 0,5 al 0,001%.

Para el tratamiento de semillas, generalmente se emplean cantidades del compuesto activo de 0,1 a 10 g, especialmente 1 a 5 g, por 1 kilogramo de semilla.

Para el tratamiento de la tierra, generalmente se emplean concentraciones de compuesto activo, en el punto de acción, del 0,00001 al 0,1% en peso, especialmente del 0,0001 al 0,02%.

Como ya se ha mencionado anteriormente, todas las plantas y partes de las plantas pueden tratarse de acuerdo con la invención. En una realización preferida se tratan especies vegetales y variedades vegetales de origen natural o las obtenidas por procedimientos de reproducción biológica convencionales, tales como reproducción cruzada o fusión de protoplastos así como partes de dichas plantas. En una realización preferida adicional se tratan plantas transgénicas y variedades de plantas que se han obtenido por procedimientos de modificación genética, posiblemente junto con procedimientos convencionales (organismos modificados genéticamente) y partes de dichas plantas. La expresión "partes" o "partes de plantas" o "partes vegetales" se ha explicado anteriormente.

De acuerdo con la invención muy preferiblemente se tratan plantas de las variedades vegetales disponibles en el mercado o usadas en cualquier momento particular. Las variedades vegetales se entiende que son plantas con propiedades específicas ("rasgos") que se han obtenido tanto por reproducción

convencional, por mutagénesis común por técnicas de ADN recombinante. Pueden ser variedades, biotipos o genotipos.

Dependiendo de las especies o variedades de plantas, su localización y condiciones de crecimiento (los tipos de tierra, clima, periodo de vegetación y alimento respectivo), pueden suceder efectos superaditivos ("sinérgicos") como resultado del tratamiento de acuerdo con la invención. Son posibles efectos tales como por ejemplo tasas de aplicación reducidas y/o ampliación de los espectros de actividad y/o actividad aumentada de los compuestos y composiciones que se pueden usar de acuerdo con la invención, crecimiento vegetal mejorado, tolerancia aumentada a temperaturas altas o bajas, tolerancia aumentada a condiciones de sequedad o contenido de agua o de sal en el suelo, capacidad de floración aumentada, recolección facilitada, aceleración de la madurez, rendimiento del cultivo aumentado, mayor calidad y/o valor nutricional aumentado de los cultivos recolectados y calidad en almacenamiento y/o procesabilidad de los cultivos recolectados aumentadas, que son mayores que los realmente esperados.

Las plantas transgénicas o variedades vegetales preferidas (obtenidas por ingeniería genética) a tratar de acuerdo con la invención incluyen todas las plantas que como resultado de la modificación genética respectiva han recibido material genético que les proporciona propiedades valiosas particularmente ventajosas ("rasgos"). Los ejemplos de dichas propiedades son crecimiento vegetal mejorado, tolerancia aumentada a temperaturas altas o bajas, tolerancia aumentada a condiciones de sequedad o contenidos de agua o sales en el suelo, capacidad de floración aumentada, recolección facilitada, aceleración de la madurez, rendimientos de los cultivos aumentados, mayor

calidad y/o valor nutricional aumentado de los cultivos recolectados y calidad en almacenamiento y/o procesabilidad de los cultivos recolectados aumentadas. Ejemplos adicionales y particularmente notables de dichas propiedades son resistencia aumentada de las plantas a plagas animales y microbianas, tales como a insectos, ácaros, hongos fitopatogénicos, bacterias y/o virus así como tolerancia aumentada por las plantas a ciertos compuestos activos herbicidas. Ejemplos que pueden mencionarse de plantas transgénicas son las plantas de cultivo importantes tales como cereales (trigo y arroz), maíz, soja, patatas, algodón, colza y plantas frutales (que producen manzanas, peras, cítricos y uvas), siendo particularmente notables las plantas de cultivo maíz, soja, patatas, algodón y colza. Las propiedades particularmente significativas ("rasgos") son resistencia aumentada de las plantas a insectos debido a las toxinas que se forman en las plantas, y en particular las que se producen en las plantas (a partir de ahora mencionadas como "plantas Bt") por el material genético obtenido de Bacillus Thuringiensis (por ejemplo por los genes CryIA(a), CryIA(b), CryIA(c), CryIIA, CryIIIB2, Cry9c Cry2Ab, Cry3Bb y CryIF y combinaciones de los mismos). Las propiedades particularmente significativas ("rasgos") son la resistencia aumentada de las plantas a hongos, bacterias y virus debido a la resistencia adquirida sistémicamente (SAR), sistemina, fitoalexinas, suscitadores y genes de resistencia y las correspondientes proteínas y toxinas expresadas. Las propiedades particularmente significativas ("rasgos") son también tolerancia aumentada por las plantas a ciertos compuestos activos herbicidas, tales como por ejemplo imidazolinonas, sulfonilureas, glifosato o fosfinotricina (por ejemplo el gen "PAT"). Los genes correspondientes que transmiten las propiedades necesarias

("rasgos") también pueden existir en las plantas transgénicas en combinación entre sí. Ejemplos que pueden mencionarse de "plantas Bt" son variedades del maíz, algodón, soja y patatas que se venden con los nombres comerciales YIELD GARD® (por ejemplo maíz, algodón, soja), KnockOut® (por ejemplo maíz), StarLink® (por ejemplo maíz), Bollgard® (algodón), Nucotn® (algodón) y NewLeaf® (patatas). Ejemplos que pueden mencionarse de plantas tolerantes a herbicidas son variedades de maíz, algodón y soja que se venden con los nombres comerciales Roundup Ready® (tolerancia a glifosato, por ejemplo maíz, algodón, soja), Liberty Link® (tolerancia a fosfinotricina, por ejemplo colza), IMI® (tolerancia a imidazolinonas) y STS® (tolerancia a sulfonilureas, por ejemplo maíz). Plantas resistentes a herbicidas (cultivadas para tolerancia a herbicidas de manera convencional) que pueden mencionarse son también variedades (por ejemplo maíz) vendidas con el nombre Clearfield®. Las exposiciones anteriores por supuesto también se aplican a cualquier variedad vegetal que pueda desarrollarse en el futuro o lanzarse en el mercado en el futuro y que tengan las propiedades genéticas ("rasgos") descritos anteriormente o desarrollados en el futuro.

De acuerdo con la invención las plantas mencionadas anteriormente pueden tratarse de forma particularmente ventajosa con los compuestos de fórmula general I o las mezclas de compuesto activo de acuerdo con la invención. Los intervalos preferidos mencionados anteriormente para los compuestos activos o mezclas también se aplican al tratamiento de estas plantas. Es particularmente ventajoso el tratamiento de plantas con los compuestos o mezclas enumerados específicamente en el presente texto.

Los compuestos activos son adicionalmente adecuados para controlar plagas

animales. Animales dañinos como se usa en este documento significa artrópodos y helmintos dañinos, en particular insectos, arácnidos y nematodos, que se encuentran en la agricultura, en silvicultura, en la protección de productos y de materiales almacenados, y en el sector de la higiene, y tienen una buena tolerancia vegetal y toxicidad favorable para animales de sangre caliente. Pueden emplearse preferiblemente como agentes de protección de plantas. Son activos contra especies normalmente sensibles y resistentes y contra todas o algunas fases de desarrollo. Las plagas mencionadas anteriormente incluyen:

Del orden de Isopoda, por ejemplo, Oniscus asellus, Armadillidium vulgare y Porcellio scaber.

Del orden de Diplopoda, por ejemplo, Blaniulus guttulatus.

Del orden de Chilopoda, por ejemplo, Geophilus carpophagus y Scutigera spp.

Del orden de Symphyla, por ejemplo, Scutigerella immaculata.

Del orden de Thysanura, por ejemplo, Lepisma saccharina.

Del orden de Collembola, por ejemplo, Onychiurus armatus.

Del orden de Orthoptera, por ejemplo, Acheta domesticus, Gryllotalpa spp., Locusta migratoria migratorioides, Melanoplus spp. y Schistocerca gregaria.

Del orden de Blattaria, por ejemplo, Blatta orientalis, Periplaneta americana, Leucophaea maderae, Blattella germanica.

Del orden de Dermaptera, por ejemplo, Forficula auricularia.

Del orden de Isoptera, por ejemplo, Reticulitermes spp.

Del orden de Phthiraptera, por ejemplo, Pediculus humanus corporis, Haematopinus spp., Linognathus spp., Trichodectes spp. y Damalinia spp.

Del orden de Thysanoptera, por ejemplo, Hercinothrips femoralis, Thrips tabaci, Thrips palmi y Frankliniella accidentalis.

Del orden de Heteroptera, por ejemplo, Eurygaster spp., Dysdercus intermedius, Piesma quadrata, Cimex lectularius, Rhodnius prolixus y Triatoma spp.

Del orden de Homoptera, por ejemplo, Aleurodes brassicae, Bemisia tabaci, Trialeurodes vaporariorum, Aphis gossypii, Brevicoryne brassicae, Cryptomyzus ribis, Aphis fabae, Aphis pomi, Eriosoma lanigerum, Hyalopterus arundinis, Phylloxera vastatrix, Pemphigus spp., Macrosiphum avenae, Myzus spp., Phorodon humuli, Rhopalosiphum padi, Empoasca spp., Euscelis bilobatus, Nephotettix cincticeps, Lecanium corni, Saissetia oleae Laodelphax striatellus, Nilaparvata lugens, Aonidiella aurantii, Aspidiotus hederae, Pseudococcus spp. y Psylla spp.

Del orden de Lepidoptera, por ejemplo, Pectinophora gossypiella, Bupalus piniarius, Cheimatobia brumata, Lithocolletis blancardella, Hyponomeuta padella, Plutella xylostella, Malacosoma neustria, Euproctis chrysorrhoea, Lymantria spp., Bucculatrix thurberiella, Phyllocnistis citrella, Agrotis spp., Euxoa spp., Feltia spp., Earias insulana, Heliothis spp., Mamestra brassicae, Panolis flammea, Spodoptera spp., Trichoplusia ni, Carpocapsa pomonella, Pieris spp., Chilo spp., Pirausta nubilalis, Ephestia kuehniella, Galleria mellonella, Tineola bisselliella, Tinea pellionella, Hofmannophila pseudospretella, Cacoecia podana, Capua reticulana, Choristoneura fumiferana, Clysia ambiguella, Homona magnanima, Tortrix viridana, Cnaphalocerus spp., Oulema oryzae.

Del orden de Coleoptera, por ejemplo, Anobium punctatum, Rhizopertha dominica, Bruchidius obtectus, Acanthoscelides obtectus, Hylotrupes bajulus, Agelastica alni, Leptinotarsa decemlineata, Phaedon cochleariae, Diabrotica spp., Psylliodes chrysocephala, Epilachna varivestis, Atomaria spp., Oryzaephilus surinamensis, Anthonomus spp., Sitophilus spp., Otiorrhynchus sulcatus,

Cosmopolites sordidus, Ceuthorrhynchus assimilis, Hypera postica, Dermestes spp., Trogoderma spp., Anthrenus spp., Attagenus spp., Lyctus spp., Meligethes aeneus, Ptinus spp., Niptus hololeucus, Gibbium psylloides, Tribolium spp., Tenebrio molitor, Agriotes spp., Conoderus spp., Melolontha melolontha, Amphimallon solstitialis, Costelytra zealandica y Lissorhoptrus oryzophilus.

Del orden de Hymenoptera, por ejemplo, Diprion spp., Hoplocampa spp. Lasius spp., Monomorium pharaonis y Vespa spp.

Del orden de Diptera, por ejemplo, Aedes spp., Anopheles spp., Culex spp., Drosophila melanogaster, Musca spp., Fannia spp., Calliphora erythrocephala, Lucilia spp., Chrysomyia spp., Cuterebra spp., Gastrophilus spp., Hyppobosca spp., Stomoxis spp., Oestrus spp., Hypoderma spp., Tabanus spp., Tannia spp., Bibio hortulanus, Oscinella frit, Phorbia spp., Pegomyia hyoscyami, Ceratitis capitata, Dacus oleae, Tipula paludosa, Hylemyia spp. y Liriomyza spp.

Del orden de Siphonaptera, por ejemplo, Xenopsylla cheopis y Ceratophyllus spp.

De la clase de Arachnida, por ejemplo, Scorpio maurus, Latrodectus mactans, Acarus siro, Argas spp., Ornithodoros spp., Dermanyssus gallinae, Eriophyes ribis, Phyllocoptruta oleivora, Boophilus spp., Rhipicephalus spp., Amblyomma spp., Hyalomma spp., Ixodes spp., Psoroptes spp., Chorioptes spp., Sarcoptes spp., Tarsonemus spp., Bryobia praetiosa, Panonychus spp., Tetranychus spp., Hemitarsonemus spp., Brevipalpus spp.

Los nematodos fitoparasitarios incluyen, por ejemplo, Pratylenchus spp., Radopholus similis, Ditylenchus dipsaci, Tylenchulus semipenetrans, Heterodera spp., Globodera spp., Meloidogyne spp., Aphelenchoides spp., Longidorus spp., Xiphinema spp., Trichodorus spp., Bursaphelenchus spp.

Si es apropiado, los compuestos de acuerdo con la invención pueden, a ciertas

concentraciones o tasas de aplicación, usarse también como herbicidas o microbicidas, por ejemplo con fungicidas, antimicóticos y bactericidas. Si es apropiado, también pueden emplearse como intermedios o precursores para la síntesis de otros compuestos activos.

Todas las plantas y partes de plantas pueden tratarse de acuerdo con la invención. Plantas debe entenderse como que significa en el presente contexto todas las plantas y poblaciones vegetales tales como plantas silvestres o de cultivo deseadas y no deseadas (incluyendo plantas de cultivo de origen natural). Las plantas de cultivo pueden ser plantas que pueden obtenerse por reproducción vegetal convencional y procedimientos de optimización o procedimientos de biotecnología y recombinantes o por combinaciones de estos procedimientos, incluyendo las plantas transgénicas e incluyendo las variedades vegetales cultivadas que se pueden proteger o que no se pueden proteger por los derechos de los criadores de plantas. Partes de la planta tiene que entenderse como que significa todas las partes y órganos de las plantas por encima y por debajo del suelo, tales como brote, hoja, flor y raíz, siendo ejemplos que pueden mencionarse las hojas, acículas, tallos, troncos, flores, frutescencias, frutos, semillas, raíces, tubérculos y rizomas. Las partes de la planta también incluyen material recolectado, y material de propagación vegetativo y generativo, por ejemplo cortes, tubérculos, rizomas, bulbos y semillas.

El tratamiento de acuerdo con la invención de las plantas y partes de plantas con los compuestos activos se realiza directamente o dejando que los compuestos actúen sobre los alrededores, entorno o espacio de almacenamiento mediante procedimientos de tratamiento habituales, por

ejemplo por inmersión, pulverización, evaporación, empañamiento, dispersión, con pintura y, en el caso de material de propagación, en particular en el caso de semillas, también aplicando uno o más revestimientos.

Los compuestos activos pueden convertirse en las formulaciones habituales, tales como soluciones, emulsiones, polvos humedecibles, suspensiones, polvos, polvos finos, pastas, polvos solubles, gránulos, concentrados de suspensión-emulsión, materiales naturales y sintéticos impregnados con compuesto activo y microencapsulaciones en sustancias poliméricas.

Estas formulaciones se producen de un modo conocido, por ejemplo mezclando los compuestos activos con medios diluyentes, es decir disolventes líquidos, y/o vehículos sólidos, opcionalmente con el uso de tensioactivos, es decir emulsionantes y/o dispersantes, y/o formadores de espuma.

Si el medio diluyente usado es agua, es posible emplear por ejemplo disolventes orgánicos como disolventes auxiliares. Esencialmente, los disolventes líquidos adecuados son: compuestos aromáticos tales como xileno, tolueno o alquilnaftalenos, compuestos aromáticos clorados o hidrocarburos alifáticos clorados tales como clorobencenos, cloroetilenos o cloruro de metileno, hidrocarburos alifáticos tales como ciclohexano o parafinas, por ejemplo fracciones de petróleo, aceites minerales y vegetales, alcoholes tales como butanol o glicol y también sus éteres y ésteres, cetonas tales como acetona, metil etil cetona, metil isobutil cetona o ciclohexanona, disolventes fuertemente polares tales como dimetilformamida y dimetilsulfóxido, y también agua.

Como vehículos sólidos son adecuados:

por ejemplo sales de amonio y minerales naturales del suelo tales como kaolinas, arcillas, talco, tiza, cuarzo, atapulgita, montmorillonita o tierra de diatomeas, y

minerales sintéticos del suelo, tales como sílice altamente dispersa, alúmina y silicatos; como vehículos sólidos para gránulos son adecuados: por ejemplo rocas naturales trituradas y fraccionadas tales como calcita, mármol, piedra pómez, sepiolita y dolomita, y también gránulos sintéticos de harinas inorgánicas y orgánicas, y gránulos de material orgánico tal como serrín, cáscaras de coco, mazorcas de maíz y tallos de tabaco; como emulsionantes y/o formadores de espuma son adecuados: por ejemplo emulsionantes no iónicos y aniónicos, tales como ésteres de ácido graso de polioxietileno, éteres de alcohol graso de polioxietileno, por ejemplo éteres de alquilarilo poliglicol, alquilsulfonatos, alquil sulfatos, arilsulfonatos y también hidrolizados de proteínas; como dispersantes son adecuados: por ejemplo aguas de desecho de sulfito de lignina y metilcelulosa.

Pueden usarse pegamentos tales como carboximetilcelulosa y polímeros naturales y sintéticos en forma de polvos, gránulos o redes, tales como goma arábiga, poli(alcohol vinílico) y poli(acetato de vinilo), así como fosfolípidos naturales tales como cefalinas y lecitinas, y fosfolípidos sintéticos, en las formulaciones. Otros aditivos posibles son aceites minerales y vegetales.

Es posible usar colorantes tales como pigmentos inorgánicos, por ejemplo óxido de hierro, óxido de titanio y Azul de Prusia, y colorantes orgánicos, tales como colorantes de alizarina, colorantes azo y colorantes de ftalocianina metálica, y nutrientes traza, tales como sales de hierro, manganeso, boro, cobre, cobalto, molibdeno y cinc.

Las formulaciones generalmente comprenden entre el 0,1 y el 95% en peso de compuesto activo, preferiblemente entre el 0,5 y el 90%.

Los compuestos activos de acuerdo con la invención pueden emplearse como

tales o en sus formulaciones como una mezcla con fungicidas, bactericidas, acaricidas, nematicidas o insecticidas conocidos para aumentar el espectro de actividad o evitar el desarrollo de resistencia. En muchos casos se consiguen efectos sinérgicos, es decir la eficacia de la mezcla es mayor de la eficacia de los componentes individuales.

Ejemplos favorables de co-componentes en mezclas son los compuestos enumerados anteriormente como posibles compañeros de mezcla en caso de un uso fungicida de los compuestos de fórmula (I).

También es posible mezclar otros compuestos activos conocidos, tales como herbicidas, fertilizantes y reguladores del crecimiento.

Cuando se usan como insecticidas, los compuestos activos de acuerdo con la invención pueden presentarse adicionalmente es sus formulaciones disponibles en el mercado y en las formas de uso, preparadas a partir de estas formulaciones, como una mezcla con agentes sinérgicos. Los agentes sinérgicos son compuestos que aumentan la acción de los compuestos activos, sin ser necesario que el agente sinérgico añadido sea activo por sí mismo.

El contenido de compuesto activo de las formas de uso preparadas a partir de las formulaciones disponibles en el mercado puede variar en amplios límites. La concentración de compuesto activo de las formas de uso puede ser del 0,0000001 al 95% en peso de compuesto activo, preferiblemente entre el 0,0001 y el 1% en peso.

Los compuestos se emplean de un modo habitual apropiado para las formas de uso.

Cuando se usa contra plagas sanitarias y plagas de productos almacenados, el compuesto activo se distingue por una excelente acción residual en la madera

y la arcilla así como por una buena estabilidad a sustancias alcalinas sobre sustratos abonados con cal.

Como ya se ha mencionado anteriormente, es posible tratar todas las plantas y sus partes de acuerdo con la invención. En una realización preferida, se tratan especies vegetales silvestres y variedades vegetales de cultivo, o las obtenidas por reproducción biológica convencional, tal como cruces o fusión de protoplastos, y partes de los mismos. En una realización preferida adicional, se tratan plantas transgénicas y variedades vegetales de cultivo obtenidas por ingeniería genética, si fuera apropiado en combinación con procedimientos convencionales (Organismos Modificados Genéticamente), y partes de los mismos. La expresión "partes" o "partes de plantas" o "partes vegetales" se ha explicado anteriormente.

De forma particularmente preferible, se tratan plantas de las variedades vegetales de cultivo que están en cada caso disponibles en el mercado o en uso de acuerdo con la invención. Variedades vegetales de cultivo se entiende como que significa plantas con nuevas propiedades ("rasgos") que se hacer crecer por cultivo convencional, por mutagénesis o por técnicas de ADN recombinantes. Estos pueden ser variedades de cultivo, biotipos o genotipos.

Dependiendo de las especies vegetales o variedades vegetales de cultivo, su localización y condiciones de crecimiento (tierras, clima, periodo de vegetación, dieta), el tratamiento de acuerdo con la invención también puede producir efectos superaditivos ("sinérgicos"). Por tanto, por ejemplo, son posibles tasas de aplicación reducidas y/o amplitudes del espectro de actividad y/o un aumento en la actividad de las sustancias y composiciones a usar de acuerdo con la invención, mejor crecimiento vegetal, tolerancia aumentada a

temperaturas altas o bajas, tolerancia aumentada a sequía o al contenido de agua o sales en la tierra, rendimiento de floración aumentado, recolección más fácil, maduración acelerada, rendimientos de recolección superiores, mejor calidad y/o un valor nutricional mayor de los productos recolectados, mejor estabilidad en almacenamiento y/o procesabilidad de los productos recolectados que exceden los efectos que realmente se esperarían.

Las plantas transgénicas o variedades vegetales de cultivo (es decir las obtenidas por ingeniería genética) a tratar preferiblemente de acuerdo con la invención incluyen todas las plantas que, en la modificación genética, recibieron material genético que otorgó propiedades útiles particularmente ventajosas ("rasgos") a estas plantas. Ejemplos de dichas propiedades son mejor crecimiento vegetal, tolerancia aumentada a temperaturas altas o bajas, tolerancia aumentada a sequía o al contenido de agua o sales en la tierra, rendimiento de floración aumentado, recolección más fácil, maduración acelerada, rendimientos de recolección superiores, mejor calidad y/o un valor nutricional mayor de los productos recolectados, mejor estabilidad en almacenamiento y/o procesabilidad de los productos recolectados. Ejemplos adicionales y particularmente enfatizados de dichas propiedades son una mejor defensa de las plantas contra plagas animales y microbianas, tales como contra insectos, ácaros, hongos fitopatogénicos, bacterias y/o virus, y también tolerancia aumentada de las plantas a ciertos compuestos herbicidamente activos. Ejemplos de plantas transgénicas que pueden mencionarse son las plantas de cultivo importantes, tales como cereales (trigo, arroz), maíz, soja, patatas, algodón, colza y también plantas frutales (con los frutos manzanas, peras, cítricos y uvas), y se da énfasis particular al maíz, soja, patatas, algodón

y colza. Los rasgos que se enfatizan son en particular defensa aumentada de las plantas contra insectos por toxinas formadas en las plantas, en particular las formadas en las plantas por el material genético de Bacillus thuringiensis (por ejemplo por los genes CrylA(a), CrylA(b), CrylA(c), CrylIA, CrylIIA, CrylIIB2, Cry9c, Cry2Ab, Cry3Bb y CrylF y también combinaciones de los mismos) (a partir de ahora mencionadas como "plantas Bt"). Los rasgos que también se enfatizan particularmente son la resistencia aumentada de las plantas a hongos, bacterias y virus por resistencia adquirida sistémica (SAR), sistemina, fitoalexinas, suscitadores y genes de resistencia y las proteínas y toxinas correspondientemente expresadas. Los rasgos se enfatizan además particularmente son la tolerancia aumentada de las plantas a ciertos compuestos herbicidamente activos, por ejemplo imidazolinonas, sulfonilureas, glifosato o fosfinotricina (por ejemplo el gen "PAT"). Los genes que otorgan los rasgos deseados en cuestión también pueden presentarse en combinación con otro en las plantas transgénicas. Ejemplos de "plantas Bt" que pueden mencionarse son variedades de maíz, variedades de algodón, variedades de soja y variedades de patata que se venden con los nombres comerciales YIELD GARD® (por ejemplo maíz, algodón, soja), KnockOut® (por ejemplo maíz), StarLink® (por ejemplo maíz), Bollgard® (algodón), Nucotn® (algodón) y NewLeaf® (patata). Ejemplos de plantas tolerantes a herbicidas que pueden mencionarse son variedades de maíz, variedades de algodón y variedades de soja que se venden con los nombres comerciales Roundup Ready® (tolerancia a glifosato, por ejemplo maíz, algodón, soja), Liberty Link® (tolerancia a fosfinotricina, por ejemplo colza), IMI® (tolerancia a imidazolinonas) y STS® (tolerancia a sulfonilureas, por ejemplo maíz). Plantas resistentes a herbicidas

(plantas reproducidas de manera convencional para tolerancia a herbicidas) que pueden mencionarse incluyen las variedades vendidas con el nombre Clearfield® (por ejemplo maíz). Por supuesto, estas exposiciones también se aplican a variedades vegetales de cultivo que tienen estos rasgos genéticos o rasgos genéticos aún por desarrollar, variedades de cultivo que se desarrollarán y/o comercializarán en el futuro.

Las plantas enumeradas pueden tratarse de acuerdo con la invención de una manera ventajosa con el compuestos de fórmula I o las mezclas del compuesto activo de acuerdo con la invención. Los intervalos preferidos indicados anteriormente para los compuestos activos o mezclas también se aplican al tratamiento de estas plantas. Se da énfasis particular al tratamiento de plantas con los compuestos o mezclas mencionados específicamente en el presente texto.

Los compuestos activos de acuerdo con la invención funcionan no sólo sobre plagas vegetales, sanitarias y de productos almacenados, sino también en el sector de la medicina veterinaria contra parásitos animales (ectoparásitos), tales como garrapatas duras, garrapatas blandas, ácaros de la sarna, ácaros de la hoja, moscas (picadoras y chupadoras), larvas de moscas parasitarias, piojos, piojos del pelo, piojos de las plumas y pulgas. Estos parásitos incluyen:

Del orden de Anoplurida, por ejemplo, Haematopinus spp., Linognathus spp., Pediculus spp., Phtirus spp. y Solenopotes spp.

Del orden de Mallophagida y los subórdenes Amblycerina y Ischnocerina, por ejemplo, Trimenopon spp., Menopon spp., Trinoton spp., Bovicola spp., Werneckiella spp., Lepikentron spp., Damalina spp., Trichodectes spp. y Felicola spp.

Del orden de Diptera y los subórdenes Nematocerina y Brachycerina, por ejemplo, Aedes spp., Anopheles spp., Culex spp., Simulium spp., Eusimulium spp., Phlebotomus spp., Lutzomyia spp., Culicoides spp., Chrysops spp., Hybomitra spp., Atylotus spp., Tabanus spp., Haematopota spp., Philipomyia spp., Braula spp., Musca spp., Hydrotaea spp., Stomoxis spp., Haematobia spp., Morellia spp., Fannia spp., Glossina spp., Calliphora spp., Lucilia spp., Chrysomyia spp., Wohlfahrtia spp., Sarcophaga spp., Oestrus spp., Hypoderma spp., Gasterophilus spp., Hippobosca spp., Lipoptena spp. y Melophagus spp.

Del orden de Siphonapterida, por ejemplo Pulex spp., Ctenocephalides spp., Xenopsylla spp. y Ceratophyllus spp.

Del orden de Heteropterida, por ejemplo, Cimex spp., Triatoma spp., Rhodnius spp. y Panstrongylus spp.

Del orden de Blattarida, por ejemplo Blatta orientalis, Periplaneta americana, Blattela germanica y Supella spp.

De la subclase de Acaria (Acarida) y los órdenes de Meta- y Mesostigmata, por ejemplo, Argas spp., Ornithodorus spp., Otobius spp., Ixodes spp., Amblyomma spp., Boophilus spp., Dermacentor spp., Haemophysalis spp., Hyalomma spp., Rhipicephalus spp., Dermanyssus spp., Raillietia spp., Pneumonyssus spp., Sternostoma spp. y Varroa spp.

Del orden de Actinedida (Prostigmata) y Acaridida (Astigmata), por ejemplo, Acarapis spp., Cheyletiella spp., Ornithocheyletia spp., Myobia spp., Psorergates spp., Demodex spp., Trombicula spp., Listrophorus spp., Acarus spp., Tyrophagus spp., Caloglyphus spp., Hypodectes spp., Pterolichus spp., Psoroptes spp., Chorioptes spp., Otodectes spp., Sarcoptes spp., Notoedres spp., Knemidocoptes spp., Cytodites spp. y Laminosioptes spp.

Los compuestos activos de fórmula (I) de acuerdo con la invención también son adecuados para controlar artrópodos que infestan ganado productivo agrícola, tal como, por ejemplo, vacas, ovejas, cabras, caballos, cerdos, burros, camellos, búfalos, conejos, pollos, pavos, patos, gansos y abejas, otras mascotas, tales como, por ejemplo, perros, gatos, pájaros enjaulados y peces de acuario, y también los llamados animales de ensayo, tales como, por ejemplo, hámsters, cobayas, ratas y ratones. Controlando estos artrópodos, deben disminuirse los casos de muerte y reducción en la productividad (para la carne, leche, lana, pieles, huevos, miel etc.), de modo que sea posible una cría de animales más económica y fácil mediante el uso de los compuestos activos de acuerdo con la invención.

Los compuestos activos de acuerdo con la invención se usan en el sector veterinario de manera conocida por administración entérica en forma de, por ejemplo, comprimidos, cápsulas, pócimas, pociones, gránulos, pastas, bolos, el proceso a través de la comida y supositorios, por administración parenteral, tal como, por ejemplo, por inyección (intramuscular, subcutánea, intravenosa, intraperitoneal y similares), implantes, por administración nasal, por uso dérmico en forma, por ejemplo, de inmersión o baño, pulverización, vertido y salpicadura, lavado y espolvoreado, y también con la ayuda de artículos moldeados que contienen el compuesto activo, tales como collares, marcas en las orejas, marcas en la cola, correas en las extremidades, dogales, dispositivos de marcaje y similares.

Cuando se usa para ganado, aves, mascotas y similares, los compuestos activos de fórmula (I) pueden usarse como formulaciones (por ejemplo polvos, emulsiones, composiciones de flujo libre), que comprenden los compuestos

activos en una cantidad del 1 al 80% en peso, directamente o después de dilución de 100 a 10.000 veces, o pueden usarse como un baño químico.

Además se ha descubierto que los compuestos de acuerdo con la invención tienen una fuerte acción insecticida contra insectos que destruyen materiales industriales.

Los siguientes insectos pueden mencionarse como ejemplos y como preferidos - pero son limitación:

Escarabajos, tales como

Hylotrupes bajulus, Clorophorus pilosis, Anobium punctatum, Xestobium rufovillosum, Ptilinus pecticornis, Dendrobium pertinex, Ernobius mollis, Priobium carpini, Lyctus brunneus, Lyctus africanus, Lyctus planicollis, Lyctus linearis, Lyctus pubescens, Trogoxilon aequale, Minthes rugicollis, Xyleborus spec. Tryptodendron spec. Apate monachus, Bostrychus capucins, Heterobostrychus brunneus, Sinoxilon spec. Dinoderus minutus.

Himenópteros, tales como

Sirex juvencus, Urocerus gigas, Urocerus gigas taignus, Urocerus augur.

Termitas, tales como

Kalotermes flavicollis, Cryptotermes brevis, Heterotermes indicola, Reticulitermes flavipes, Reticulitermes santonensis, Reticulitermes lucifugus, Mastotermes darwiniensis, Zootermopsis nevadensis, Coptotermes formosanus.

Pececillos de plata, tales como Lepisma saccharina.

Materiales industrial en la presente relación debe entenderse como que significa materiales no vivos, tales como, preferiblemente, plásticos, adhesivos, colas, papeles y cartas, cuero, madera y productos de madera procesados y

composiciones de revestimiento.

La madera y los productos de madera procesados son materiales a proteger, especialmente preferiblemente, de infestación por insectos.

La madera y los productos de madera procesados que pueden protegerse por los agentes de acuerdo con la invención o mezclas que comprenden éstos deben entenderse que significa, por ejemplo:

madera de construcción, vigas de madera, traviesas del ferrocarril, componentes de un puente, embarcaderos, vehículos de madera, cajas, paletas, recipientes, postes telegráfico, panelado de madera, ventanas y puestas de madera, madera contrachapada, madera aglomerada, productos de carpintería o de madera que se usan de manera bastante generalizada en construcción de casas o en carpintería de construcción.

Los compuestos activos pueden usarse como tales, en forma de concentrados o formulaciones generalmente habituales, tales como polvos, gránulos, soluciones, suspensiones, emulsiones o pastas.

Las formulaciones mencionadas pueden prepararse de forma conocida per se, por ejemplo mezclando los compuestos activos con al menos un disolvente o diluyente, emulsionante, agente de dispersión y/o aglutinante o agente de fijación, un repelente de agua, si es apropiado secantes y estabilizadores de UV y si es apropiado colorantes y pigmentos, y también otros agentes auxiliares de procesado.

Las composiciones o concentrados insecticidas usados para la conservación de la madera y productos de vigas derivadas de madera comprenden el compuesto activo de acuerdo con la invención en una concentración del 0,0001 al 95% en peso, en particular del 0,001 al 60% en peso.

La cantidad de las composiciones o concentrados empleados depende de la naturaleza y existencia de los insectos y del medio. La cantidad óptima empleada puede determinarse para el uso en cada caso por una serie de ensayos. En general, sin embargo, es suficiente emplear del 0,0001 al 20% en peso, preferiblemente del 0,001 al 10% en peso, del compuesto activo, en base al material a conservar.

Los disolventes y/o diluyentes que se usan son disolvente químico orgánico o mezcla de disolventes y/o un disolvente químico orgánico oleoso o de tipo oleoso o mezcla de disolventes de baja volatilidad y/o un disolvente químico orgánico polar o mezcla de disolventes y/o agua, y si es apropiado un emulsionante y/o agente humectante.

Los disolventes químicos orgánicos que se usan preferiblemente son disolventes oleosos o de tipo oleoso que tienen un número de evaporación por encima de 35 y un punto de inflamación por encima de 30°C, preferiblemente por encima de 45°C. Las sustancias que se usan como dichos disolventes insolubles en agua oleosos o de tipo oleoso de baja volatilidad son aceites minerales apropiados o fracciones aromáticas de los mismos, o mezclas de disolventes que contienen aceites minerales, preferiblemente bebidas alcohólicas blancas, petróleo y/o alquilbenceno.

Los aceites minerales que tienen un intervalo de ebullición de 170 a 220°C, bebidas alcohólicas blancas que tienen un intervalo de ebullición de 170 a 220°C, aceite extraligero que tiene un intervalo de ebullición de 250 a 350°C, petróleo y compuestos aromáticos que tienen un intervalo de ebullición de 160 a 280°C, aceite de terpentina y similares, se usan ventajosamente.

En una realización preferida, se usan hidrocarburos alifáticos líquidos que

tienen un intervalo de ebullición de 180 a 210°C o mezclas de alta ebullición de hidrocarburos aromáticos y alifáticos que tienen un intervalo de ebullición de 180 a 220°C y/o aceite extraligero y/o monocloronaftaleno, preferiblemente α-monocloronaftaleno.

Los disolventes oleosos o de tipo oleoso orgánicos de baja volatilidad que tienen un número de evaporación por encima de 35 y un punto de inflamación por encima de 30°C, preferiblemente por encima de 45°C, pueden remplazarse en parte por disolventes químicos orgánicos de volatilidad alta o media, con la condición de que la mezcla de disolventes también tenga un número de evaporación por encima de 35 y un punto de inflamación por encima de 30°C, preferiblemente por encima de 45°C, y que la mezcla insecticida/fungicida se soluble o se pueda emulsionar en esta mezcla de disolventes.

De acuerdo con una realización preferida, se remplaza alguno del disolvente químico orgánico o mezcla de disolventes o un disolvente químico orgánico polar alifático o mezcla de disolventes. Se usan preferiblemente disolventes químicos orgánicos alifáticos que contienen hidroxilo y/o grupos éster y/o éter, tales como, por ejemplo, éteres de glicol, ésteres o similares.

Los aglutinantes químicos orgánicos que se usan en el contexto de la presente invención son las resinas sintéticas y/o aceites de secado de unión que son conocidos per se, son diluibles en agua y/o son solubles o dispersables o emulsionables en los disolventes químicos orgánicos empleados, en particular aglutinantes que constan de o comprenden una resina de acrilato, una resina de vinilo, por ejemplo poli(acetato de vinilo), resina de poliéster, resina de policondensación o poliadición, resina de poliuretano, resina de alquido o resina de alquido modificada, resina fenólica, resina de hidrocarburo, tal como

resina de indeno-cumarona, resina de silicona, aceites vegetales de secado y/o aceites de secado y/o aglutinantes físicamente secantes basados en una resina natural y/o sintética.

Las resina sintética usada como aglutinante puede emplearse en forma de una emulsión, dispersión o solución. También pueden usarse sustancias de betún o bituminosas como aglutinantes en una cantidad de hasta el 10% en peso. Pueden emplearse adicionalmente colorantes, pigmentos, agentes que repelen el agua, correctores e inhibidores del olor o agentes anticorrosivos y similares que son conocidos per se.

Se prefiere, de acuerdo con la invención que la composición o concentrado comprenda, como aglutinante químico orgánico, al menos un resina de alquido o resina de alquido modificada y/o un aceite vegetal de secado. Preferiblemente se usan resinas de alquido que tienen un contenido de aceite de más del 45% en peso, preferiblemente del 50 al 68% en peso, de acuerdo con la invención.

Todos o alguno de los aglutinantes mencionados pueden remplazarse por un agente de fijación (mezcla) o un plastificante (mezcla). Estos aditivos están pretendidos para evitar la evaporación de los compuestos activos y cristalización o precipitación. Preferiblemente remplazan del 0,01 al 30% del aglutinante (en base al 100% del aglutinante empleado).

Los plastificantes se originan de las clases químicas de los ésteres de ácido ftálico, tales como dibutil, dioctil o bencil butil ftalato, ésteres del ácido fosfórico, tales como fosfato de tributilo, ésteres del ácido adípico, tales como di-(2-etilhexil) adipato, estearatos, tales como estearato de butilo o estearato de amilo, oleatos, tales como oleato de butilo, éteres de glicerol o éteres de glicol

de peso molecular mayor, ésteres de glicerol y ésteres del ácido *p*-toluenosulfónico.

Los agentes de fijación se basan químicamente en polivinil alquil éteres, tales como, por ejemplo, polivinil metil éter o cetonas, tales como benzofenona o etilenobenzofenona.

Los posibles disolventes o diluyentes son, en particular, además de agua, si es apropiado como una mezcla con uno o más de los disolventes químicos orgánicos o diluyentes, emulsionantes y agentes de dispersión mencionados anteriormente.

La conservación particularmente eficaz de la madera se consigue por procedimientos de impregnación a gran escala industrial, por ejemplo procedimientos de vacío, doble vacío o a presión.

Las composiciones listas para su uso también pueden comprender otros insecticidas, si es apropiado, y también uno o más fungicidas, si es apropiado.

Los posibles compañeros de mezcla adicionales son, preferiblemente, los insecticidas y fungicidas mencionados en el documento WO 94/29 268. Los compuestos mencionados en este documento son constituyentes explícitos en la presente solicitud.

Los compañeros de mezcla especialmente preferidos que pueden mencionarse son insecticidas, tales como clorpirifos, foxim, silafluofin, alfametrina, ciflutrina, cipermetrina, deltametrina, permetrina, imidacloprid, NI-25, flufenoxuron, hexaflumuron, transflutrina, tiacloprid, metoxifenóxido y triflumuron,

y también fungicidas, tales como epoxiconazol, hexaconazol, azaconazol, propiconazol, tebuconazol, ciproconazol, metconazol, imazalil, diclorfluanid, tolilfluanid, carbamato de 3-yodo-2-propinil-butilo, *N*-octil-isotiazolin-3-ona y 4,5-

diclorо-*N*-octilisotiazolin-3-ona.

Los compuestos de acuerdo con la invención pueden emplearse al mismo tiempo para proteger objetos que entran en contacto con agua salada o agua salobre, tales como cascos, filtros, redes, construcciones, amarras y sistemas de señalización, contra la contaminación.

La contaminación por Oligochaeta sésil, tal como Serpulidae, y por conchas y especies del grupo Ledamorfa (peregrinos), tales como diversas especies de Lepas y Scalpellum, o por especies del grupo Balanomorfa (bellotas de mar), tales como especies de Balanus o Pollicipes, aumenta la resistencia a la fricción de los barcos y, como consecuencia, conduce a un marcado aumento en los costes de funcionamiento que llevan a un consumo mayor de energía y adicionalmente a una residencia frecuente en dique seco.

Aparte de la contaminación por algas, por ejemplo Ectocarpus sp. y Ceramium sp., en particular la contaminación por grupos de Entomostraka sésil, que están bajo el término genérico Cirripedia (crustáceos cirrípedos), es de particular importancia.

Sorprendentemente, ahora se ha descubierto que los compuestos de acuerdo con la invención, solos o en combinación con otros compuestos activos, tienen una acción anticontaminante destacada.

Usar compuestos de acuerdo con la invención, solos o en combinación con otros compuestos activos, permite que el uso de metales pesados tales como, por ejemplo, en sulfuros de bis(trialquilestaño), laurato de tri-*N*-butilestaño, cloruro de tri-*N*-butilestaño, óxido de cobre(I), cloruro de trietilestaño, tri-*N*-butil(2-fenil-4-clorofenoxi)estaño, óxido de tributilestaño, disulfuro de molibdeno, óxido de antimonio, titanato de butilo polimérico, cloruro de fenil-

(bispiridina)bismuto, fluoruro de tri-*N*-butilestaño, etilenobistiocarbamato de manganeso, dimetilditiocarbamato de cinc, etilenobistiocarbamato de cinc, sales de cinc y sales de cobre de 1-óxido de 2-piridinatiol, etilenbistiocarbamato de bisdimetilditiocarbamoilcinc, óxido de cinc, etilenbisditiocarbamato de cobre(I), tiocianato de cobre, naftenato de cobre y haluros de tributilestaño se suministren con ellos, o que se reduzca la concentración de estos compuestos sustancialmente.

Si es apropiado, las pinturas anticontaminación listas para su uso pueden comprende adicionalmente otros compuestos activos, preferiblemente alguicidas, fungicidas, herbicidas, moluscicidas, u otros compuestos activos anticontaminantes.

Los componentes preferiblemente adecuados en combinaciones con las composiciones anticontaminantes de acuerdo con la invención son:

alguicidas tales como

2-*terc*-butilamino-4-ciclopropilamino-6-metiltio-1,3,5-triazina, diclorofeno, diuron, endotal, acetato de fentin, isoproturon, metabenztiazuron, oxifluorfeno, quinoclamina y terbutrina;

fungicidas tales como

S,S-dióxido de ciclohexilamida del ácido benzo[*b*]tiofenocarboxílico, diclofluanid, fluorfolpet, 3-yodo-2-propinil butilcarbamato, tolilfluanid y azoles tales como

azaconazol, ciproconazol, epoxiconazol, hexaconazol, metconazol, propiconazol y tebuconazol;

moluscicidas tales como

acetato de fentin, metaldehído, metiocarb, niclosamid, tiodicarb y trimetacarb;

o compuestos activos anticontaminación convencionales tales como 4,5-dicloro-2-octil-4-isotiazolin-3-ona, diyodometilparatril sulfona, 2-(*N,N*-dimetiltiocarbamoiltio)-5-nitrotiazilo, sales de potasio, cobre, sodio y cinc de 1-óxido de 2-piridinatiol, piridina-trifenilborano, tetrabutildistannoxano, 2,3,5,6-tetracloro-4-(metilsulfonil)-piridina, 2,4,5,6-tetracloroisoftalonitrilo, disulfuro de tetrametiltiuram y 2,4,6-triclorofenilmaleinimida.

Las composiciones anticontaminantes usadas comprenden el compuesto activo de acuerdo con la invención de los compuestos de acuerdo con la invención en una concentración del 0,001 al 50% en peso, en particular del 0,01 al 20% en peso.

Además, las composiciones anticontaminación de acuerdo con la invención comprenden los componentes habituales tales como, por ejemplo, los descritos en Ungerer, *Chem. Ind.* **1985**, *37*, 730-732 y Williams, Antifouling Marine Coatings, Noyes, Park Ridge, **1973**.

Además de los compuestos activos alguicida, fungicidas, moluscicidas y compuestos activos insecticidas de acuerdo con la invención, las pinturas anticontaminantes comprenden, en particular, aglutinantes.

Ejemplos de aglutinantes reconocidos son poli(cloruro de vinilo) en un sistema disolvente, goma clorada en un sistema disolvente, resinas acrílicas en un sistema disolvente, en particular en un sistema acuoso, sistemas de copolímero de cloruro de vinilo/acetato de vinilo en forma de dispersiones acuosas o en forma de sistemas disolventes orgánicos, gomas de butadieno/estireno/acrilonitrilo, aceite de secado tales como aceite de linaza, ésteres de resinas o resinas endurecidas modificadas en combinación con alquitrán o betunes, asfalto y compuestos epoxi, pequeñas cantidades de goma

de cloro, polipropileno clorado y resinas de vinilo.

Si es apropiado, las pinturas también comprenden pigmentos inorgánicos, pigmentos orgánicos o colorantes que son preferiblemente insolubles en agua salada. Las pinturas pueden comprender además materiales tales como colofonio para permitir la liberación controlada de los compuestos activos. Además, las pinturas pueden comprender plastificantes, modificadores que afectan a las propiedades reológicas y otros constituyentes convencionales. Los compuestos de acuerdo con la invención o las mezclas mencionadas anteriormente también pueden incorporarse en sistemas anticontaminantes de autopulido.

Los compuestos activos también son adecuados para controlar plagas animales, en particular insectos, arácnidos y ácaros, que se encuentran en espacios cerrados tales como, por ejemplo, viviendas, vestíbulos de fábricas, oficinas, habitáculo de vehículos y similares. Pueden emplearse solos o en combinación con otros compuestos activos y auxiliares en productos insecticidas domésticos para controlar estas plagas. Son activos frente a especies sensibles y resistentes y contra todas las fases de desarrollo. Estas plagas incluyen:

Del orden de Scorpionidea, por ejemplo, Buthus occitanus.

Del orden de Acarina, por ejemplo, Argas persicus, Argas reflexus, Bryobia ssp., Dermanyssus gallinae, Glyciphagus domesticus, Ornithodorus moubat, Rhipicephalus sanguineus, Trombicula alfreddugesi, Neutrombicula autumnalis, Dermatophagoides pteronissimus, Dermatophagoides forinae.

Del orden de Araneae, por ejemplo, Aviculariidae, Araneidae.

Del orden de Opiliones, por ejemplo, Pseudoscorpiones chelifer,

Pseudoscorpiones cheiridium, Opiliones phalangium.

Del orden de Isopoda, por ejemplo, Oniscus asellus, Porcellio scaber.

Del orden de Diplopoda, por ejemplo, Blaniulus guttulatus, Polydesmus spp.

Del orden de Chilopoda, por ejemplo, Geophilus spp.

Del orden de Zygentoma, por ejemplo, Ctenolepisma spp., Lepisma saccharina, Lepismodes inquilinus.

Del orden de Blattaria, por ejemplo, Blatta orientalies, Blattella germanica, Blattella asahinai, Leucophaea maderae, Panclora spp., Parcoblatta spp., Periplaneta australasiae, Periplaneta americana, Periplaneta brunnea, Periplaneta fuliginosa, Supella longipalpa.

Del orden de Saltatoria, por ejemplo, Acheta domesticus.

Del orden de Dermaptera, por ejemplo, Forficula auricularia.

Del orden de Isoptera, por ejemplo, Kalotermes spp., Reticulitermes spp.

Del orden de Psocoptera, por ejemplo, Lepinatus spp., Liposcelis spp.

Del orden de Coleptera, por ejemplo, Anthrenus spp., Attagenus spp., Dermestes spp. Latheticus oryzae, Necrobia spp., Ptinus spp., Rhizopertha dominica, Sitophilus granarius, Sitophilus oryzae, Sitophilus zeamais, Stegobium paniceum.

Del orden de Diptera, por ejemplo, Aedes aegypti, Aedes albopictus, Aedes taeniorhynchus, Anopheles spp., Calliphora erythrocephala, Chrysozona pluvialis, Culex quinquefasciatus, Culex pipiens, Culex tarsalis, Drosophila spp., Fannia canicularis, Musca domestica, Phlebotomus spp., Sarcophaga carnaria, Simulium spp., Stomoxis calcitrans, Tipula paludosa.

Del orden de Lepidoptera, por ejemplo, Achroia grisella, Galleria mellonella, Plodia interpunctella, Tinea cloacella, Tinea pellionella, Tineola bisselliella.

Del orden de Siphonaptera, por ejemplo, Ctenocephalides canis, Ctenocephalides felis, Pulex irritans, Tunga penetrans, Xenopsylla cheopis.

Del orden de Hymenoptera, por ejemplo, Camponotus herculeanus Lasius fuliginosus Lasius niger Lasius umbratus, Monomorium pharaonis, Paravespula spp., Tetramorium caespitum.

Del orden de Anoplura, por ejemplo, Pediculus humanus capitis, Pediculus humanus corporis, Phthirus pubis.

Del orden de Heteroptera, por ejemplo, Cimex hemipterus, Cimex lectularius, Rhodinus prolixus, Triatoma infestans.

En el campo de los insecticidas domésticos, se usan solos o en combinación con otros compuestos activos adecuados, tales como ésteres de ácido fosfórico, carbamatos, piretroides, reguladores del crecimiento o compuestos activos de otras clases conocidas de insecticida.

Se usan como aerosoles, productos de pulverización sin presión, por ejemplo pulverizadores de bomba y atomizador, sistemas de empañamiento automáticos, formadores de nieblas, espumas, geles, productor de evaporador con comprimidos de evaporador fabricados de celulosa o polímero, evaporadores líquidos, evaporadores en gel y de membrana, evaporadores con propulsores, sistemas de evaporación sin energía o pasivos, papeles para las polillas, bolsas para las polillas y geles para las polillas, como gránulos o polvos finos, en cebos para propagarlos o en estaciones de cebo.

Ejemplos

En las descripciones se usan las siguientes abreviaturas

ACN	acetonitrilo
ac.	acuoso
DCI	ionización química directa
DCM	diclorometano
DMF	*N,N*-dimetilformamida
DMSO	dimetilsulfóxido
EDTA	ácido etilendiamina tetra-acético
IEN	ionización por electronebulización
FCS	Suero fetal de ternero
h	hora / horas
HPLC	cromatografía líquida a alta presión
CL/EM	espectroscopía de masas acoplada a cromatografía líquida
min.	minuto(s)
EM	espectroscopía de masas
RMN	espectroscopía por resonancia magnética nuclear
PBS	Solución salina tamponada con fosfato
RP	fase inversa (HPLC)
R_t	tiempo de retención (HPLC)
ta	temperatura ambiente
SDS	Dodecilsulfato sódico
TFA	Ácido trifluoroacético
THF	tetrahidrofurano

UV	ultravioleta
UV/Vis	ultravioleta-visible
% de t.	% del rendimiento teórico

Procedimientos Experimentales Generales

Los productos químicos se obtienen con calidad analítica de Merck (Darmstadt, Alemania) o Sigma-Aldrich (Deisenhofen, Alemania). Los espectros de RMN se registran en DMSO-d_6 usando un espectrómetro Bruker DRX 500 (que funciona a una frecuencia de protones de 500,13 MHz).

Los análisis por HPLC-EM se realizan usando un cromatógrafo de líquidos Agilent HP1100 acoplado con un espectrómetro de masas LCT (Micromass, Manchester, Reino Unido) en modo de ionización por electronebulización positiva y negativa (IEN), basándose en la ligera modificación de un procedimiento descrito previamente (M. Stadler y col., *Phytochemistry*, *56*, 787-793). Se usa una columna de Waters symmetry como fase estacionaria. Fase móvil A: ácido fórmico al 0,1% en agua, fase móvil B: ácido fórmico al 0,1% en acetonitrilo; gradiente: 0-1 min. A al 100%, de 1-6 min. a B al 90%, de 6 a 8 min a B al 100%, de 8-10 min B al 100%. Los espectros de CL-EM se registran en el intervalo de pesos moleculares comprendido entre 150 y 1.600.

Los análisis por HPLC-UV/Vis se realizan de manera análoga a M. Stadler y col., *Mycol. Res.*, **2001**, *105*, 1190-1205 en un sistema de HPLC analítica HP 1100 Series (Agilent, Waldbronn, Alemania) que comprende un sistema de bomba binaria G 1312A, un detector de secuencia de diodos G 1315A, un compartimiento de columna G 1316A, un desgasificador G 1322A y un autoinyector G 1313A. Como fase móvil, se elige ácido fosfónico al

0,01%:acetonitrilo, mientras que una columna Merck (Darmstadt, Alemania) Lichrospher RP 18 (125 x 4 mm, tamaño de partículas 7 µm) sirve como fase estacionaria. Las alícuotas de las muestras (que representan 2 – 10 µg de materiales solubles en metanol, de acuerdo con las concentraciones de los metabolitos principales) se analizan a 40°C con un flujo de 1 ml/min en el siguiente gradiente: Lineal de acetonitrilo al 0% a acetonitrilo al 100% en 10 min, después condiciones isocráticas a acetonitrilo al 100% durante 5 min; seguido de regeneración de la columna durante 5 min. Los cromatogramas de HPLC-UV se registran a 210 nm con una longitud de onda de referencia de 550 nm y un ancho de banda de 80 nm. Se emplea detección de secuencia de diodos (DAD) para registrar los espectros de HPLC-UV/Vis en el intervalo de 210 – 600 nm. El software HP ChemStation permite una búsqueda automatizada para compuestos convencionales calibrados en extractos brutos.

La HPLC preparativa se realiza a temperatura ambiente en un sistema de HPLC preparativa (Gilson Abimed, Ratingen, Alemania), que comprende software Gilson Unipoint, sistema de bomba binaria 306, recolector de fracciones 205, detector 119 UV-Vis, módulo manométrico 806, y mezclador dinámico 811C, usando diferentes gradientes y fases estacionarias como se describe a continuación.

Los espectros de RMN se registran en un Bruker DMX500, que funciona a una frecuencia de protones de 500,13 MHz. Todos los espectros se miden en solución en DMSO-d_6 a 302 K. El pico de disolvente se usa como patrón interno para los desplazamientos químicos de protones y carbono (δ_H: 2,50, δ_C: 39,5).

Caracterización y mantenimiento de la cepa JS360

Medios de cultivo

Medio Yeast-Malt-Glucose (YMG): D-glucosa 0,4%, extracto de malta 1%, extracto de levadura 0,4%, pH 7,2,

Medio Q6: D-glucosa 0,5%, glicerol 2%, harina de semilla de algodón 1%, carbonato de calcio 0,1%, agua corriente, sin ajuste del pH.

Medio C: D-glucosa 1%, extracto de levadura 1%, NZ amina (Sheffield Chemicals, Sheffield, U,.K., Lot ONA 20 2) 0,5%, almidón soluble 2%, después del ajuste del pH a pH 7,2 con adición de carbonato sódico de carbonato de calcio 0,4%.

Medio GS: D-glucosa 2%, harina de soja sin aceite (Soyamin 50 T, Degussa, Düsseldorf, Alemania) 2%, almidón soluble 2%, carbonato de calcio 0,5%, cloruro sódico 0,25%, sulfato de magnesio 0,05%, fosfato de monopotasio 0,025%, ajuste del pH a 6,5-6,8.

Medio MC: D-glucosa 1%, extracto de levadura 0,5%, harina de soja sin aceite (Soyamin 50 T, Degussa, Düsseldorf, Alemania) 1%, almidón soluble 1%, cloruro sódico 0,5%, carbonato de calcio 0,3%, ajuste del pH a 7,2 (solución de hidróxido sódico 0,1 N).

Medio MCPM: Diamalt Maltzin hell (Meistermarken GmbH, Bremen, Alemania) 3,5%, NZ amina (Sheffield Chemicals, Sheffield, U.K., Lot ONA 20 2) 1%, cloruro sódico 0,3%, fosfato de monopotasio 0,1%, sulfato de magnesio 0,05%, sulfato ferroso 0,01%, pH 6,8.

Medio MS: Manitol 2%, harina de soja desgrasada (Soyamin 50 T, Degussa, Düsseldorf, Alemania) 2%, carbonato de calcio 0,3%, ajuste del pH a 7,5.

Medio SP: Manitol 3%, extracto de levadura 0,75%, almidón soluble 0,2%, peptona de soja (Merck, Darmstadt, Alemania Nº 107212,0500)) 0,5%, ajuste

del pH a 6,0 (ácido clorhídrico).

La cepa JS360 se obtiene de una muestra de tierra recogida en Japón. Se mantiene en la colección de cultivos Bayer AG (Wuppertal, Alemania) en glicerol al 10% en nitrógeno líquido. También se ha depositado en DSMZ (Deutsche Sam mlung für Mikroorganismen und Zellkulturen, Mascheroder Weg 1b, D-38124 Braunschweig, Alemania), el 27 de noviembre de 2002 con el número de designación DSM 15324.

En medio YMG, las colonias sencillas de la cepa JS360 consiguen un diámetro de 24 mm después de incubación durante 12 días. Las colonias desarrollan un micelio aéreo blanco y mullido, mientras que el micelio del sustrato es cremoso. El reverso del cultivo es marrón rojizo, y se libera un pigmento rojizo en el medio.

Fermentación y extracción de la cepa JS360

1: Cultivo de siembra

Se usan dos ml de un cultivo de glicerol al 10% para inocular matraces Erlenmeyer de 1 l que contienen 150 ml de medio YMG estéril y se propaga en un agitador rotatorio a 28°C y 240 rpm durante 72-96 h.

2: Fermentación de la cepa JS360 a escala de matraz

Después de inoculación a partir de cultivo de siembra YMG bien cultivado (10 ml de inóculo por matraz), se propaga la cepa JS360 en diez matraces Erlenmeyer de 1 l que contienen 150 ml de medio Q6 (véase anteriormente) y se propaga en un agitador rotatorio a 28°C y 240 rpm durante 118 h. Durante la fermentación, se toman muestras diarias. Se determina el pH, y se estima la glucosa libre usando Bayer Diastix Harnzuckerstreifen. El micelio húmedo se separa del fluido por centrifugación (10 min. a 3000xg) y se extrae con 2 l de

acetona. La acetona se evapora al vacío (40°C). El residuo acuoso restante se diluye con agua a 500 ml y se extrae tres veces con cantidades iguales de acetato de etilo. Las fases orgánicas combinadas se secan sobre sulfato sódico y se evaporan al vacío (40°C) para producir 830 mg de extracto bruto, que se somete después de ello a HPLC preparativa como se describe a continuación (aislamiento).

El fluido de cultivo se aplica sobre una columna de adsorción que contiene 500 ml de resina Bayer Lewapol CA 9225 y se aclaró con 1 l agua. La columna se eluye con 1,5 l de acetona:metanol 4:1. El disolvente se evapora al vacío (40°C). El residuo acuoso restante se diluye con agua a 500 ml y se extrae tres veces con cantidades iguales de acetato de etilo. Las fases orgánicas combinadas se secan sobre sulfato sódico y se evaporan al vacío (40°C) para producir 650 mg de extracto bruto, que se somete después de ello a HPLC preparativa como se describe a continuación (aislamiento).

3: Fermentación de la cepa JS360 a escala de 30 l (fermentador de agitación)

Se esteriliza un fermentador Biostat P de 40 l (Braun Bioengeneering, Melsungen, Alemania) que contiene 30 l de medio Q6 in situ (1 h a 121°C y 0,11 MPa (1,1 bar)) y se inocula con dos cultivos de siembra YMG de 150 ml bien cultivados que se habían propagado durante 76 h. El cultivo de producción se cultiva con agitación (240 rpm) y aireación (0,3 vvm). Se determina el pH, y se estima la glucosa libre usando Bayer Diastix Harnzuckerstreifen. Además, el fermentador está equipado con un electrodo de oxígeno Braun para determinar la saturación de oxígeno del caldo de cultivo. Una HPLC analítica de los extractos brutos preparados a partir de muestras de 50 ml tomadas en

condiciones de esterilidad y extraídas con cantidades iguales de acetato de etilo sirve como medio de detección para el ejemplo 1. Los Ejemplos 2 y 3 también se detectan durante la fermentación por HPLC-EM pero no se pueden estimar en los extractos brutos nativos, debido a las cantidades limitadas y la co-elución de otros metabolitos con tiempos de retención similares en el sistema HPLC empleado. Los extractos de acetato de etilo se secan sobre sulfato sódico, se evaporan a sequedad, se vuelven a disolver en metanol y se analizan usando los sistemas HPLC-UV descritos en Procedimientos Experimentales Generales. Aunque el cultivo está completamente saturado como se deduce de los valores de saturación de oxígeno, el pH baja a valores de aprox. 4,5. Después de que se haya consumido la glucosa libre en el medio, comienza la producción de ejemplo 1 como se estima por metodología de HPLC analítica a aproximadamente 60 h de la fermentación y alcanza un óptimo después de 114 h. Después, se recoge el cultivo porque a fases posteriores se observa degradación del ejemplo 1. Después de recoger el cultivo, se separa el fluido del micelio por centrifugación (10 min. a 3000x g) y se aplica sobre una columna cargada con resina de adsorción Bayer Lewapol CA 9225 y se aclara con 5 l de agua. La columna después de ello se eluye con 6 l de acetona:metanol 4:1. Los productos eluidos se evaporan al vacío (40°C) para producir un residuo acuoso, que se diluye a 1 l con agua y se extrae tres veces con 1 l de acetato de etilo. Las fases orgánicas se combinan, se secan sobre sulfato sódico y se evaporan al vacío (40°C). El extracto resultante (22,7 g) se somete después de ello a HPLC preparativa como se describe a continuación (aislamiento).

El micelio se extrae tres veces cada vez con 5 l de acetona, y la acetona se

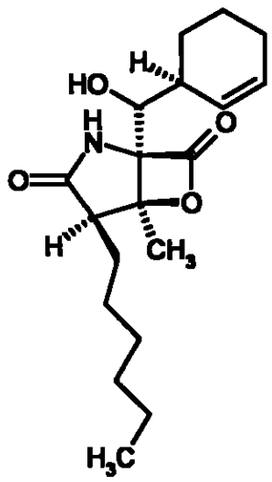
evapora al vacío (40°C) para producir un residuo acuoso, que se diluye a 1 l con agua y se extrae tres veces con 1 l de acetato de etilo. Las fases orgánicas se combinan, se secan sobre sulfato sódico y se evaporan al vacío (40°C). El extracto resultante (13,4 g) se somete después de ello a HPLC preparativa como se describe a continuación (aislamiento).

4. Fermentación en otros medios de cultivo (escala de matraz)

La cepa JS 360 se propaga en diversos medios de cultivo en intentos de optimizar la producción del ejemplo 1 y metabolitos químicamente relacionados. Para este propósito, se realizan fermentaciones en matraces de agitación de una manera similar a la descrita para la que se hace en medio Q6 (véase 2, anteriormente). Se propagan de este modo matraces Erlenmeyer de 1 l que contienen 150 ml de los medios en un agitador rotatorio a 28°C y 240 rpm durante hasta 118 h. Durante la fermentación, se toman muestras diarias. Se determina el pH, y se estima la glucosa libre usando Bayer Diastix Harnzuckerstreifen. Se extraen alícuotas del caldo de cultivo (50 ml) con acetato de etilo. Estos extractos de acetato de etilo se secan sobre sulfato sódico, se evaporan a sequedad, se vuelven a disolver en metanol y se analizan usando los sistemas HPLC-UV y HPLC-EM descritos en Procedimientos Experimentales Generales. Por comparación de los tiempos de retención y espectros, se detecta el ejemplo 1 y compuestos relacionados en los siguientes medios de cultivo: medio YM, medio C, medio GS, medio MC, medio MCPM, medio MS, y medio SP después de 72-96 horas de fermentación. Los rendimientos más altos del ejemplo 1, sin embargo, se observan en medios Q6 y GS.

Ejemplo 1

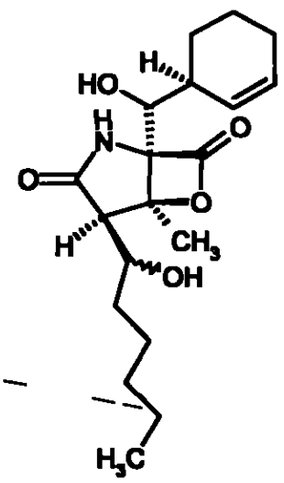
(1*R*,4*R*,5*S*)-1-[(*S*)-(1*S*)-2-ciclohexen-1-il(hidroxi)metil]-4-hexil-5-metil-6-oxa-2-azabiciclo[3.2.0]heptano-3,7-diona



Véase la preparación a continuación.

Ejemplo 2

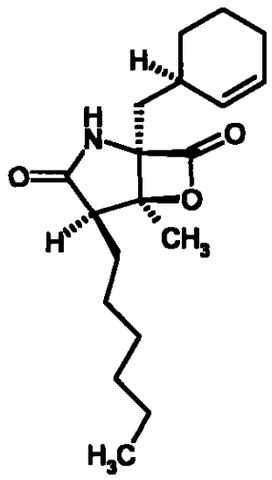
(1*R*,4*R*,5*S*)-1-[(*S*)-(1*S*)-2-ciclohexen-1-il(hidroxi)metil]-4-[1-hidroxi-hexil]-5-metil-6-oxa-2-azabiciclo[3.2.0]heptano-3,7-diona



Véase la preparación a continuación.

Ejemplo 3

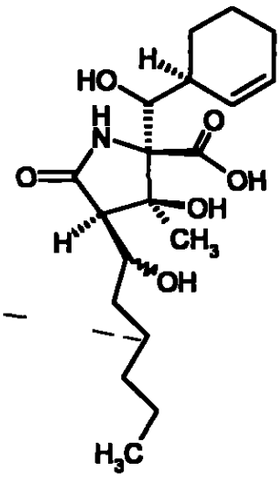
(1*R*,4*R*,5*S*)-1-[(1*R*)-2-ciclohexen-1-ilmetil]-4-hexil-5-metil-6-oxa-2-aza-biciclo[3.2.0]heptano-3,7-diona



Véase la preparación a continuación.

Ejemplo 4

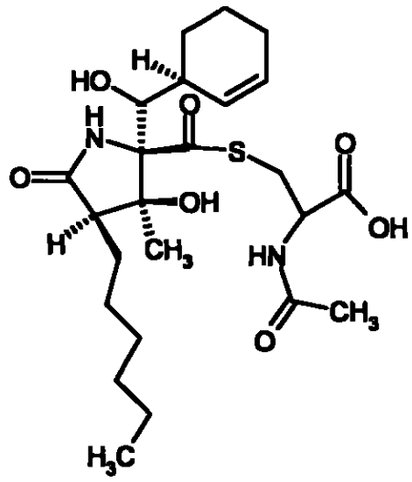
(3*S*,4*R*)-2-[(*S*)-(1*S*)-2-ciclohexen-1-il(hidroxi)metil]-3-hidroxi-4-[1-hidroxi-hexil]-3-metil-5-oxo-*D*-prolina



Véase la preparación a continuación.

Ejemplo 5

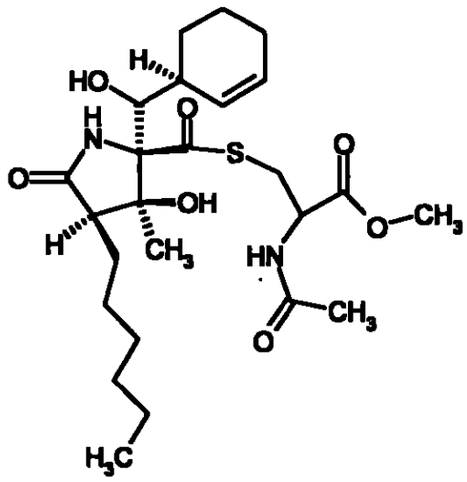
N-acetil-*S*-({(2R,3S,4R)-2-[(S)-(1S)-2-ciclohexen-1-il(hidroxi)metil]-4-hexil-3-hidroxi-3-metil-5-oxo-2-pirrolidinil}carbonil)cisteína



Véase la preparación a continuación.

Ejemplo 6

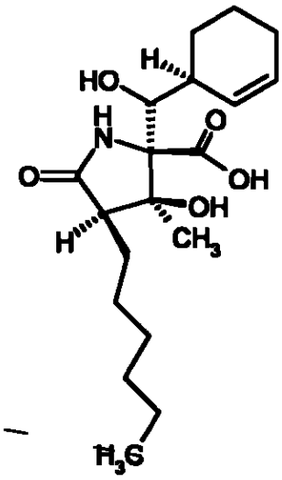
N-acetil-*S*-({(2*R*,3*S*,4*R*)-2-[(*S*)-(1*S*)-2-ciclohexen-1-il(hidroxi)metil]-4-hexil-3-hidroxi-3-metil-5-oxo-2-pirrolidinil}carbonil)cisteinato de metilo



Véase la preparación a continuación.

Ejemplo 7

(3*S*,4*R*)-2-[(*S*)-(1*S*)-2-ciclohexen-1-il(hidroxi)metil]-3-hidroxi-4-hexil-3-metil-5-oxo-*D*-prolina



La estereoquímica de los ejemplos 2 a 7 se representa de manera análoga a la estructura del ejemplo 1 que se determina mediante análisis de rayos X.

Aislamiento de los ejemplos 1 a 7

1. Materiales de fermentaciones en matraz de agitación

Los extractos brutos (620 mg del micelio y 830 mg del fluido de cultivo, respectivamente) se disuelven en 5 ml de metanol, se filtran a través de un cartucho de extracción en fase sólida Bond Elut C18 de 500 mg (Baker, Deventer, Los Países Bajos) y se aplican a una columna MZ Analysentechnik (Mainz, Alemania) Kromasil RP 18 (tamaño de partículas, 7 µm; 250 x 40 mm). Como fase móvil, se emplea un gradiente de TFA al 0,01%:acetonitrilo a un flujo de 10 ml/min: acetonitrilo al 20% a t = 0 min; gradiente lineal: acetonitrilo del 20% al 50% durante 40 min; después, gradiente lineal de acetonitrilo del 50% al 100% durante 20 min; después, condiciones isocráticas a acetonitrilo al 75% durante 30 min, después, regeneración de la columna. Las fracciones se combinan de acuerdo con absorción de UV a 210 nm. El Ejemplo 1 se eluye a un tiempo de retención (R_t) de 80-83 min y se obtiene en cantidades de 14 mg del extracto de micelio y 1,5 mg del extracto de fluido de cultivo, respectivamente. Los Ejemplos 2 a 5 y 7 se encuentran en las fracciones del intermedio minoritario y no se aíslan para purificarlos de este extracto, mientras que el ejemplo 6 no se detecta.

2: Materiales de fermentación a escala 30 l

Se disuelven alícuotas de 2,5-3 gramos de los extractos brutos que se preparan como se ha descrito anteriormente (13,4 g de micelio, 22,7 g del fluido de cultivo) en 5 ml de metanol, se filtran a través de un cartucho de extracción en fase sólida Bond Elut C18 de 500 mg (Baker,

Deventer, Países Bajos) y se aplican a una columna MZ Analysentechnik (Mainz, Alemania) Kromasil RP 18 (tamaño de partículas, 7 µm; 250 x 40 mm; fase móvil, TFA al 0,01%:acetonitrilo). Como fase móvil, se emplea un gradiente de TFA al 0,01%:acetonitrilo a un flujo de 10 ml/min: acetonitrilo al 20% a t = 0 min; gradiente lineal: acetonitrilo del 20% al 50% durante 40 min; después, gradiente lineal de acetonitrilo del 50% al 100% durante 20 min; después, condiciones isocráticas a acetonitrilo al 75% durante 30 min, después, regeneración de la columna. Las fracciones se combinan de acuerdo con absorción de UV a 210 nm. De esta manera, se obtienen cinco productos intermedios bioactivos. Sus tiempos de retención (R_t) en este sistema gradiente se observan como se indica a continuación: 61-64 min para el producto intermedio 1 (que contiene los ejemplos 4 y 7), 65-71 min para el producto intermedio 2 (que contiene los ejemplos 5 y 6), 72-79 min para el producto intermedio 3 (que contiene el ejemplo 2), 79-85 min para el producto intermedio 4 (que contiene el ejemplo 1) y 86-93 min para el producto intermedio 5 (que contiene el ejemplo 3).

La purificación final de los componentes activos de los productos intermedios 1 a 5 se obtiene por HPLC preparativa de fase inversa, usando un flujo de 7 ml/min y una columna MZ Analysentechnik Inertsil C18 (7 µm; 250 x 30 mm) como fase estacionaria y el siguiente gradiente. Condiciones isocráticas de t = 0 min => t = 30 min; después, gradiente lineal de acetonitrilo al 30% => acetonitrilo al 100% durante 50 min, después, condiciones isocráticas (acetonitrilo al 100%) durante 20 min, después, regeneración de la columna. Los rendimientos y los R_t de

los ejemplos 1 a 6 se resumen en la tabla 1.

Tabla 1

Ejemplo	Rendimiento (Extracto de fluido de cultivo)	Rendimiento (Extracto de micelio)	R_t (min)
1	14 mg	160 mg	59-65
2	29 mg	43 mg	33-35
3	5 mg	18 mg	77-80
4	12 mg	17 mg	51-54
5	2 mg	14 mg	69-71
6	(no aislado)	2 mg	72-73
7	19 mg	(no aislado)	55-58

Caracterización de los ejemplos 1 a 7

Los Ejemplos 1 a 6 se detectan por HPLC-UV y HPLC-EM usando los procedimientos descritos en los Procedimientos Experimentales Generales. Sus características en los sistemas de HPLC analítica se resumen en la tabla 2. Mientras que los ejemplos 1, 2, 4 y 7 dan resultados concluyentes con respecto a sus picos moleculares, la CL-EM del ejemplo 3 sólo revela el pico molecular en el modo IEN positivo, ya que debido a la pérdida de dióxido de carbono en el modo IEN negativo, se observa un fragmento con masa principal menor. En los ejemplos 5 y 6, se forman fácilmente dímeros en las condiciones empleadas de HPLC-EM, y la señal principal de CL-EM se refiere por tanto a estos dímeros, mientras que los picos moleculares sólo constituyen señales minoritarias. Estas características también sirven para identificar los ejemplos

por HPLC analítica en caldos de fermentación y fracciones intermedias obtenidas durante la extracción, procesamiento corriente abajo y cromatografía.

Tabla 2

Ejemplo	R_t (HPLC-UV-Vis) [min]	R_t (HPLC-EM) [min]	Pico molecular m/z (IEN pos.)	Pico molecular m/z (IEN neg.)
1	8,95-8,97	6,39-6,43	336 $(M+H)^+$	334 $(M-H)^-$
2	7,75-7,85	5,73-5,81	352 $(M+H)^+$	350 $(M-H)^-$
3	9,74-9,76	6,86-6,90	320 $(M+H)^+$	276 $(M-CO_2-H)^-$
4	6,85-6,87	5,28-5,30	368 $(M+H)^+$	370 $(M-H)^-$
5	7,41-7,43	5,61-5,63	499 $(M+H)^+$; 997 $(2M+H)^+$	497 $(M-H)^-$; 995 $(2M-H)^-$
6	8,00-8,05	5,81-5,84	513 $(M+H)^+$; 1025 $(2M+H)^+$	511 $(M-H)^-$
7	7,48-7,51	5,57-5,61	354 $(M+H)^+$	352 $(M-H)^-$

Las estructuras de los ejemplos 1 a 7 se determinan por espectrometría CL-EM de baja resolución y de alta resolución y mediante espectroscopía de RMN (resonancia magnética nuclear) de una y dos dimensiones. Para los parámetros instrumentales, véanse los Procedimientos Experimentales Generales.

Los datos de RMN revelan la presencia de un doble enlace *cis* dentro de un anillo ciclohexilo. El análisis detallado de los datos de HSQC, HMBC y COSY/TOCSY permite establecer la estructura del anillo bicíclico, que, junto

con el resto de ciclohexenilcarbinol, es idéntica a la encontrada en *Salinosporamida A*. Los datos de HSQC apuntan a la presencia de al menos dos grupos metilo en cada molécula. Junto con TOCSY y HMBC, se identifica un resto de hexilo no ramificado. Un pico cruzado no ambiguo en el espectro de COSY localiza esta cadena en la posición 2 del sistema de anillos heterocíclicos. Se revela que el ejemplo 7 (comparado con el ejemplo 1) y el ejemplo 4 (comparado con el ejemplo 2), por los datos de RMN y EM, constituyen las formas seco respectivas de las moléculas de beta-lactona correspondientes. La presencia de un grupo hidroxilo adicional (comparado con Salinosporamida *A*) en la posición 12 (ejemplos 2 y 4) se hace evidente debido a la multiplicidad y a los desplazamientos químicos característicos de carbono y protones.

Los espectros de RMN de los ejemplos 5 y 6 muestran una nueva subserie completa de señales que pertenecen a un resto de cisteína N-acilado. La *N*-acetil-cisteína se une a la estructura del anillo heterocíclico mediante el grupo carbonilo del anillo de beta lactona anterior, o el grupo carboxilo del ejemplo 7, respectivamente. El enlace tioéster se identifica por su desplazamiento químico de carbonilo (>200 ppm) y conectividad derivada de HMBC a los beta-hidrógenos de cisteína. Todas las conectividades internas del resto de cisteína se establecen asignando las señales correspondientes de los espectros de HMBC y COSY. De esta manera, las estructuras de los ejemplos 5 y 6 son análogas a la de la lactacisteína.

Datos espectroscópicos

Ejemplo 1

^{1}H RMN (500 MHz, DMSO-d_6): δ = 0,87 (t), 1,28 (m), 1,29 (m), 1,23 (m), 1,40

(m), 1,45 (m), 1,47 (m), 1,54 (m), 1,58 (m), 1,68 (m), 1,74 (s), 1,80 (m), 1,90 (m), 2,29 (m), 2,41 (t), 3,65 (m), 5,47 (m), 5,73 (m), 5,81 (m), 8,92 (s).

^{13}C RMN (DMSO-d_6): δ = 13,8, 21,7, 21,8, 24,2, 25,2, 26,1, 26,8, 28,5, 30,8, 37,3, 47,5, 69,3, 78,4, 86,4, 127,8, 128,6, 169,1, 174,1.

Ejemplo 2

^{1}H RMN (500 MHz, DMSO-d_6): δ = 0,88 (t), 1,27 (m), 1,29 (m), 1,35 (s), 1,37 (m), 1,49 (m), 1,58 (m), 1,59 (m), 1,71 (m), 1,75 (m), 1,93 (m), 2,35 (d), 2,76 (m), 3,49 (m), 4,00 (d), 4,68 (m), 5,70 (m), 5,91 (m), 6,11 (a), 8,52 (s).

^{13}C RMN (DMSO-d_6): δ = 13,4, 21,0, 21,4, 23,7, 24,2, 29,6, 30,1, 31,5, 36,1, 54,6, 69,4, 75,0, 76,0, 76,5, 127,9, 170,9, 172,3.

Ejemplo 3

^{1}H RMN (500 MHz, DMSO-d_6): δ = 0,88 (t), 1,27 (m), 1,30 (m), 1,31 (m), 1,33 (m), 1,46 (m), 1,48 (m), 1,50 (m), 1,61 (s), 1,62 (m), 1,63 (m), 1,76 (m), 1,92 (m), 2,27 (m), 2,55 (t), 5,45 (m); 5,68 (m), 8,98 (s).

^{13}C RMN (DMSO-d_6): δ = 13,3, 19,6, 21,4, 24,0, 24,2, 26,5, 28,2, 28,5, 29,9, 30,9, 32,5, 46,7, 74,0, 86,1, 127,7, 130,9, 170,4, 170,8.

Ejemplo 4

^{1}H RMN (500 MHz, DMSO-d_6): δ = 0,82 (m), 1,17 (m), 1,20 (m), 1,24 (m), 1,32 (m), 1,47 (m), 1,60 (m), 1,62 (m), 1,63 (m), 1,84 (m), 2,08 (m) 2,44 (d), 3,68 (m), 3,80 (m), 5,60 (m), 5,76 (m).

^{13}C RMN (DMSO-d_6): δ = 13,1, 20,1, 20,6, 21,0, 23,5, 23,6, 30,5, 33,5, 37,7, 52,7, 67,1, 73,6, 75,2, 80,1, 126,3, 128,6, 171,2, 176,5.

Ejemplo 5

^{1}H RMN (500 MHz, DMSO-d_6): δ = 0,87 (m), 1,09 (m), 1,24 (m), 1,25 (m), 1,27 (m), 1,33 (m), 1,35 (m), 1,37 (m), 1,44 (m), 1,46 (m), 1,50 (m), 1,61 (m), 1,64

(m), 1,84 (s), 1,87 (m), 2,13 (m), 2,47 (t), 2,96 (m), 3,30 (m), 3,78 (m), 4,36 (m), 5,64 (m), 5,79 (m).

^{13}C RMN (DMSO-d_6): δ = 13,9, 20,8, 21,7, 22,0, 22,1, 22,2, 23,4, 24,3, 26,8, 27,7, 28,7, 29,2, 31,1, 38,1, 50,3, 51,0, 75,3, 79,7, 80,6, 127,0, 129,3, 169,3, 178,9, 201,2.

Ejemplo 6

^{1}H RMN (500 MHz, DMSO-d_6): δ = 0,87 (m), 1,09 (m), 1,24 (m), 1,25 (m), 1,27 (m), 1,33 (m), 1,35 (m), 1,37 (m), 1,44 (m), 1,46 (m), 1,50 (m), 1,61 (m), 1,64 (m), 1,84 (s), 1,87 (m), 2,13 (m), 2,47 (t), 3,00 (m), 3,24 (m), 3,64 (s), 3,78 (m), 4,39 (m), 5,64 (m), 5,79 (m).

^{13}C RMN (DMSO-d_6): δ = 13,6, 20,8, 21,7, 22,0, 22,1, 23,4, 24,3, 26,8, 27,7, 28,7, 29,3, 31,1, 38,1, 50,3, 51,4, 51,8, 75,3, 79,7, 80,6, 127,0, 129,3, 169,3, 171,0, 178,9, 201,2.

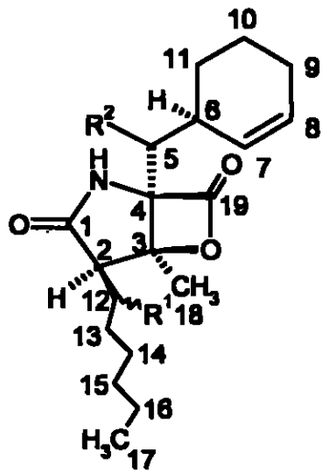
Ejemplo 7

^{1}H RMN (500 MHz, DMSO-d_6): δ = 0,86 (t), 1,25 (m), 1,26 (m), 1,33 (m), 1,34 (m), 1,36 (m), 1,44 (m), 1,46 (s), 1,51 (m), 1,66 (m), 1,67 (m), 1,88 (m), 2,12 (m), 2,45 (t), 3,77 (d), 5,64 (m), 5,82 (m), 7,66 (s).

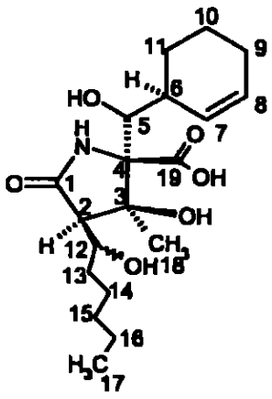
^{13}C RMN (DMSO-d_6): δ = 13,8, 20,3, 21,5, 21,7, 23,3, 24,4, 26,5, 27,9, 28,9, 31,0, 38,5, 50,5, 74,6, 75,5, 80,4, 127,4, 129,7, 177,5.

Interpretación de las listas de picos de RMN:

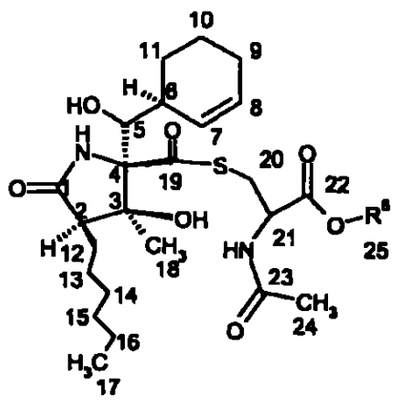
ejemplo 1: R^1 = H, R^2 = OH, ejemplo 2: R^1 = OH, R^2 = OH, ejemplo 3: R^1 = H, R^2 = H.



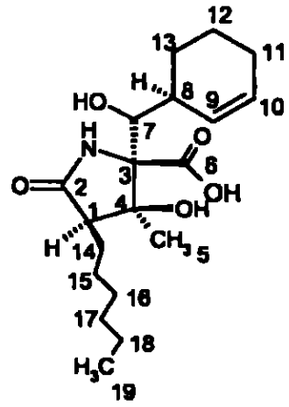
ejemplo 4, ejemplo 5: R^8 = H, ejemplo 6: R^8 = CH_3, ejemplo 7 (no se ha determinado la estereoquímica por RMN).



ejemplo 4



ejemplos 5 y 6



ejemplo 7

Tabla 3a

Desplazamientos químicos para los ejemplos 1 a 3, medidos a 500 MHz, a 302 K en DMSO-d_6.

carbono	ejemplo 1	ejemplo 2	ejemplo 3

carbono	ejemplo 1	ejemplo 2	ejemplo 3
C-1	174,1	172,3	170,8
C-2	47,5	54,6	46,7
C-3	86,4	76,0**	86,1
C-4	78,4	69,4**	74,0
C-5	69,3	75,0	32,5
C-6	37,3	36,1	29,9
C-7	128,6	127,9	130,9
C-8	127,8	127,9	127,7
C-9	25,2	24,2	24,0
C-10	21,7	21,0	19,6
C-11	26,1	29,6	28,2
C-12	24,2	76,5	24,2
C-13	26,8	31,5	26,5
C-14	28,5	23,7	28,5
C-15	30,8	30,1	30,9
C-16	21,8	21,4	21,4
C-17	13,8	13,4	13,3
C-18	21,8	21,4	21,4
C-19	169,1	170,9	170,4

** *Estas asignaciones de resonancia pueden intercambiarse*

Tabla 3b

Desplazamientos químicos para los ejemplos 4 a 6, medidos a 500 MHz, a 302 K en DMSO-d_6.

carbono	ejemplo 4	ejemplo 5	ejemplo 6
C-1	176,5	178,9	178,9
C-2	52,7	50,3	50,3
C-3	80,1	80,6	80,6
C-4	75,2	79,7	79,7
C-5	73,8	75,3	75,3
C-6	37,7	38,1	38,1
C-7	128,6	129,3	129,3
C-8	126,3	127,0	127,0
C-9	23,5	24,3	24,3
C-10	20,6	21,7	21,7
C-11	23,8	26,8	26,8
C-12	67,1	23,4	23,4
C-13	33,5	27,7	27,7
C-14	23,6	28,7	28,7
C-15	30,5	31,1	31,1
C-16	21,0	22,0	22,0
C-17	13,1	13,9	13,6
C-18	20,1	20,8	20,8
C-19	171,2	201,2	201,2
C-20	-	29,2	29,3
C-21	-	51,0	51,4
C-22	-	169,3	171,0
C-23	-	22,2	169,3

carbono	ejemplo 4	ejemplo 5	ejemplo 6
C-24	-	22,1	22,1
C-25	-	-	51,8

Tabla 3c

Desplazamientos químicos para el ejemplo 7, medidos a 500 MHz, a 302 K en DMSO-d_6.

carbono	ejemplo 7
C-1	50,5
C-2	177,5
C-3	75,5
C-4	80,4
C-5	20,3
C-6	-
C-7	74,6
C-8	38,5
C-9	129,7
C-10	127,4
C-11	24,4
C-12	21,5
C-13	26,5
C-14	23,3
C-15	27,9
C-16	28,9

carbono	ejemplo 7
C-17	31,0
C-18	21,7
C-19	13,8

Tabla 4a

Desplazamientos químicos para los ejemplos 1 a 3, medidos a 500 MHz, a 302 K en DMSO-d_6.

protón	ejemplo 1	ejemplo 2	ejemplo 3
H-1	-	-	-
H-2	2,41 t	2,35 d	2,55 t
H-3	-	-	-
H-4	-	-	-
H-5	3,65 m	3,49 m	1,76 m
H-6	2,29 m	2,76 m	2,27 m
H-7	5,81 m	5,91 m	5,45 m
H-8	5,73 m	5,70 m	5,68 m
H-9	1,90,1,90 m	1,93, 1,93 m	1,92, 1,92 m
H-10	1,40, 1,68 m	1,75, 1,49 m	1,46, 1,63 m
H-11	1,23, 1,80 m	1,59, 1,71 m	1,33, 1,33 m
H-12	1,47, 1,58 m	4,68 m	1,62, 1,50 m
H-13	1,45, 1,54 m	1,58, 1,58 m	1,48, 1,48 m
H-14	1,29, 1,29 m	1,37, 1,37 m	1,31, 1,31 m
H-15	1,28, 1,28 m	1,27, 1,27 m	1,27, 1,27 m

protón	ejemplo 1	ejemplo 2	ejemplo 3
H-16	1,28, 1,28 m	1,29, 1,29 m	1,30, 1,30 m
H-17	0,87 t	0,88 t	0,88 t
H-18	1,74 s	1,35 s	1,61 s
H-19	-	-	-
H-N	8,92 s	8,52 s	8,98 s
H-O-C-5	5,47	4,00 d	-
H-O-C-12	-	6,11 (tent.)	-

Tabla 4b

Desplazamientos químicos para los ejemplos 4 a 6, medidos a 500 MHz, a 302 K en DMSO-d_6.

protón	ejemplo 4	ejemplo 5	ejemplo 6
H-1	-	-	-
H-2	2,44 d	2,47 t	2,47 t
H-3	-	-	-
H-4	-	-	-
H-5	3,68 m	3,78 m	3,78 m
H-6	2,08 m	2,13 m	2,13 m
H-7	5,76 m	5,79 m	5,79 m
H-8	5,60 m	5,64 m	5,64 m
H-9	1,84 m	1,87 m	1,87 m
H-10	1,62,1,32 m	1,61,1,33 m	1,61,1,33 m
H-11	1,63,1,17 m	1,64,1,09 m	1,64,1,09 m

protón	ejemplo 4	ejemplo 5	ejemplo 6
H-12	3,80 m	1,46,1,37 m	1,46,1,37 m
H-13	1,60 m	1,50,1,35 m	1,50,1,35 m
H-14	1,32,1,20 m	1,24 m	1,24 m
H-15	1,20 m	1,25 m	1,25 m
H-16	1,24 m	1,27 m	1,27 m
H-17	0,82	0,87	0,87
H-18	1,47	1,44	1,44
H-19	-	-	-
H-20	-	3,30,2,96 m	3,24,3,00 m
H-21	-	4,36 m	4,39 m
H-22	-	-	-
H-23	-	-	-
H-24	-	1,84 s	1,84 s
H-25	-	-	3,64 s

Tabla 4c

Desplazamientos químicos para el ejemplo 7, medidos a 500 MHz, a 302 K en DMSO-d_6.

protón	ejemplo 7
H-1	2,45 t
H-5	1,46 s
H-7	3,77 d
H-8	2,12 m

H-9	5,82 m
H-10	5,64 m
H-11	1,88, 1,88 m
H-12	1,36,1,66 m
H-13	1,67,1,25 m
H-14	1,34,1,44 m
H-15	1,33,1,51 m
H-16	1,25 m
H-17	1,25 m
H-18	1,26 m
H-19	0,86 t
N-H	7,66 s

Espectrometría de masas de alta resolución

ejemplo 1: IEN-; Masa encontrada: 334,1977, calculada: 334,2014 (correspondiente a una desviación de 4,1 mDa para la fórmula molecular $C_{19}H_{28}NO_4$)

ejemplo 2: IEN-; Masa encontrada: 350,1968, calculada: 350,1967 (correspondiente a una desviación de 0,1 mDa para la fórmula molecular $C_{19}H_{28}NO_5$)

ejemplo 3: IEN+; Masa encontrada: 276,2388, calculada 276,2327 (correspondiente a una desviación de 6,1 mDa para la fórmula molecular $C_{18}H_{30}NO$). Aquí, sólo puede observarse el fragmento $(M - CO_2)$ en las condiciones de IEN.

ejemplo 4: IEN+; Masa encontrada: 368,2107, calculada 368,2073

(correspondiente a una desviación de 3,3 mDa para la fórmula molecular $C_{19}H_{31}NO_6$

ejemplo 5: IEN-; Masa encontrada: 497,2322, calculada: 497,2321 (correspondiente a una desviación de 0,0 mDa para la fórmula molecular $C_{24}H_{38}N_2O_7S$)

ejemplo 6: IEN-; Masa encontrada: 511,2584, calculada: 511,2478 (correspondiente a una desviación de 11,6 mDa para la fórmula molecular $C_{25}H_{40}N_2O_7S$)

ejemplo 7: IEN+; Masa encontrada: 354,2268, calculada 354,2280 (correspondiente a una desviación de 1,3 mDa para la fórmula molecular $C_{19}H_{32}NO_5$).

Ejemplos para la síntesis de compuestos de acuerdo con la invención de acuerdo con el procedimiento B

Se sintetizó 5*S*-isopropil-2-fenil-4,5-dihidro-1,3-oxazol-4*R*-carboxilato de metilo mediante el procedimiento descrito en la bibliografía (J. Am. Chem. Soc. 1999, 121, 9967-9976).

4-[2-Hidroxi-3-(metoxicarbonil)-nonil]-5*S*-isopropil-2-fenil-4,5-dihidro-1,3-oxazol-4*R*-carboxilato de metilo

A una solución de 2,00 g (8,10 mmol) de 5*S*-isopropil-2-fenil-4,5-dihidro-1,3-oxazol-4*R*-carboxilato de metilo en THF seco (45 ml) se le añadieron 16,2 ml de LHMDS (1 M en THF, 16,2 mmol) a -80°C. Después de 60 min, se añadieron gota a gota 32,4 ml de cloruro de dimetilaluminio (1 M en hexano) durante 45 min y la agitación se continuó durante 90 min a -80°C. Se añadió una solución de 4,86 g (24,3 mmol) de 2-acetiloctanoato de metilo en 10 ml de THF durante un periodo de 15 min. Después, la mezcla de reacción se calentó a -20°C y la agitación se continuó durante 60 min. Después de enfriar de nuevo a -75°C, se añadieron 20 ml de cloruro de amonio acuoso saturado. La mezcla se vertió en 100 ml de cloruro de amonio acuoso saturado, 20 ml de HCl 6 N y 100 ml de acetato de etilo. La fase acuosa se extrajo con acetato de etilo y las fases orgánicas combinadas se lavaron sucesivamente con 100 ml de agua, 100 ml de $NaHCO_3$ acuoso saturado y salmuera y finalmente se secaron sobre $NaSO_4$. Después de la evaporación del disolvente, el residuo se purificó por cromatografía sobre sílice (ciclohexano/acetato de etilo), produciendo los cuatro diastereómeros:

4-[2*S*-Hidroxi-3*S*-(metoxicarbonil)-nonil]-5*S*-isopropil-2-fenil-4,5-dihidro-1,3-

oxazol-4*R*-carboxilato de metilo: 385 mg, logP 5,93;

Una mezcla inseparable de 4-[2*S*-hidroxi-3*R*-(metoxicarbonil)-nonil]-5*S*-isopropil-2-fenil-4,5-dihidro-1,3-oxazol-4*R*-carboxilato de metilo (MATA107-4-3) y 4-[2*R*-hidroxi-3*S*-(metoxicarbonil)-nonil]-5*S*-isopropil-2-fenil-4,5-dihidro-1,3-oxazol-4*R*-carboxilato de metilo: 560 mg, logP 5,48 y 5,56;

4-[2*R*-Hidroxi-3*R*-(metoxicarbonil)-nonil]-5*S*-isopropil-2-fenil-4,5-dihidro-1,3-oxazol-4*R*-carboxilato de metilo: 520 mg, logP 5,32.

4*R*-Hexil-3*S*-hidroxi-2*R*-[1*S*-hidroxi-2-metilpropil]-3-metil-5-oxo-pirrolidina-2-carboxilato de metilo y 4*S*-hexil-3*R*-hidroxi-2*R*-[1*S*-hidroxi-2-metilpropil]-3-metil-5-oxo-pirrolidina-2-carboxilato de metilo

Una solución de 500 mg de una mezcla inseparable de 4-[2*R*-hidroxi-3*R*-(metoxicarbonil)-nonil]-5*S*-isopropil-2-fenil-4,5-dihidro-1,3-oxazol-4*R*-carboxilato de metilo y 784 mg de $Pd(OH)_2$al 20%/C en 6 ml de MeOH/AcOH (9:1) se agitó a 20 bar (2000 kPa) de hidrógeno durante 72 h a temperatura ambiente. Después de la filtración sobre sílice, los disolventes se evaporaron. El residuo se disolvió en 20 ml de acetato de etilo y se lavó sucesivamente con 10 ml de una solución 4,5 M acuosa saturada de K_2CO_3 y 10 ml de salmuera. La fase orgánica se secó sobre $NaSO_4$ y se evaporó al vacío. El producto bruto se purificó por cromatografía sobre sílice (ciclohexano/acetato de etilo), produciendo 4*R*-hexil-3*S*-hidroxi-2*R*-[1*S*-hidroxi-2-metilpropil]-3-metil-5-oxo-pirrolidina-2-carboxilato de metilo y 4*S*-hexil-3*R*-hidroxi-2*R*-[1*S*-hidroxi-2-metilpropil]-3-metil-5-oxo-pirrolidina-2-carboxilato de metilo: (185 mg, logP 2,16 y 2,58).

ácido 4*R*-hexil-3*S*-hidroxi-2*R*-[1*S*-hidroxi-2-metilpropil]-3-metil-5-oxo-pirrolidina-2-carboxílico y ácido 4*S*-hexil-3*R*-hidroxi-2*R*-[1*S*-hidroxi-2-metilpropil]-3-metil-5-

oxo-pirrolidina-2-carboxílico

Una solución de 180,0 mg de 4*R*-hexil-3*S*-hidroxi-2*R*-[1*S*-hidroxi-2-metilpropil]-3-metil-5-oxo-pirrolidina-2-carboxilato de metilo, 4*S*-hexil-3*R*-hidroxi-2*R*-[1*S*-hidroxi-2-metilpropil]-3-metil-5-oxo-pirrolidina-2-carboxilato de metilo y 731 mg de LiI en piridina seca (18 ml) se calentó a reflujo durante 3 h. Después de enfriar de nuevo, el disolvente se evaporó al vacío. El residuo se disolvió en agua (20 ml) y se extrajo con acetato de etilo (10 ml). La fase acuosa se acidificó con HCl 0,5 M a pH 2 y se extrajo con acetato de etilo (3 x 15 ml). La fase orgánica se lavó con salmuera, se secó sobre $NaSO_4$ y se concentró, produciendo 90 mg de una mezcla de isómeros inseparables (logP 1,86 y 1,98).

Ejemplos 8 y 9 (Tabla 1)

(1*R*,4*R*,5*S*)-4-hexil-1-[(1*S*)-1-hidroxi-2-metilpropil]-5-metil-6-oxa-2-azabiciclo[3.2.0]heptano-3,7-diona (MATA121-1) y (1*R*,4*S*,5*S*)-4-hexil-1-[(1*S*)-1-hidroxi-2-metilpropil]-5-metil-6-oxa-2-azabiciclo[3.2.0]heptano-3,7-diona

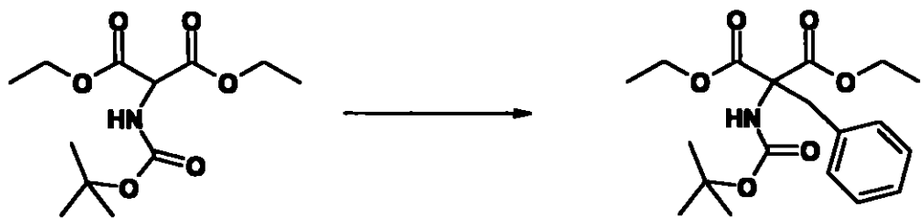
A una solución fría (<5°C) de 90 mg de una mezcla de ácido 4*R*-hexil-3*S*-hidroxi-2-[1*S*-hidroxi-2-metilpropil]-3-metil-5-oxo-pirrolidina-2-carboxílico y ácido 4*S*-hexil-3*S*-hidroxi-2-[1*S*-hidroxi-2-metilpropil]-3-metil-5-oxo-pirrolidina-2-carboxílico en THF seco (4,5 ml), que contenía 60 µl de trietilamina, se le añadió gota a gota cloroformiato de isopropenilo (38 mg). La mezcla de reacción se agitó durante 60 min a <5°C y durante 60 min más a temperatura ambiente. La adición de acetato de etilo (10 ml) produjo después de 20 min de agitación una suspensión que se filtró y se evaporó. El residuo se purificó por cromatografía sobre sílice (ciclohexano/acetato de etilo), produciendo (1*R*,4*S*,5*S*)-4-hexil-1-[(1*S*)-1-hidroxi-2-metilpropil]-5-metil-6-oxa-2-

azabiciclo[3.2.0]heptano-3,7-diona (12 mg; logP 2,79) y (1*R*,4*R*,5*S*)-4-hexil-1-[(1*S*)-1-hidroxi-2-metilpropil]-5-metil-6-oxa-2-azabiciclo[3.2.0]heptano-3,7-diona (16 mg; logP 2,87).

Ejemplos para la síntesis de compuestos de acuerdo con la invención de acuerdo con el procedimiento F

2-(*terc*-Butoxicarbonilamino)malonato de dietilo está disponible en el mercado o puede sintetizarse mediante protección con boc convencional de clorhidrato de aminomalonato de dietilo.

1. 2-Bencil-2-(*terc*-butoxicarbonilamino)malonato de dietilo



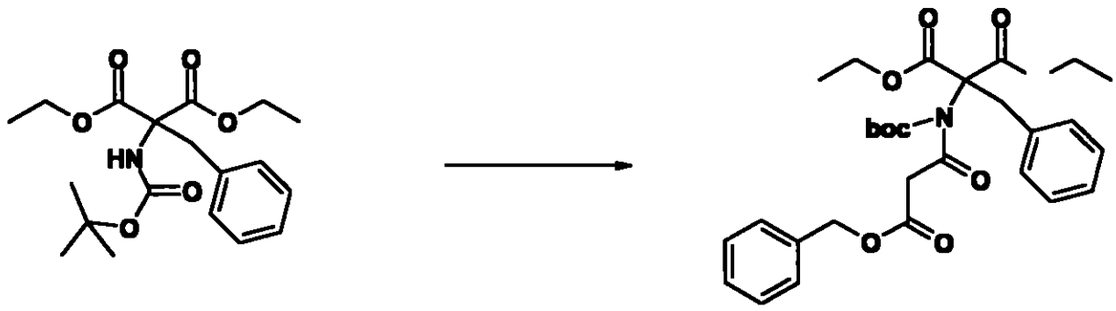
Se disuelven 4,3 g (190 mmol) de sodio en 600 ml de etanol seco y la mezcla se trata lentamente con una solución de 47 g (170 mmol) de 2-(*terc*-butoxicarbonilamino)malonato de dietilo en 200 ml de etanol. Después de agitar durante 30 min, se añaden gota a gota 29,2 g (170 mmol) de bromuro de bencilo a temperatura ambiente. La mezcla de reacción se calienta a reflujo durante 12 h seguido de la adición de HCl ac. (pH 6-7), evaporación del disolvente y posterior extracción con diclorometano/agua. Las fases orgánicas combinadas se secan sobre $MgSO_4$ y el disolvente se evapora, produciendo el producto puro con un rendimiento del 88% (55 g).

^{1}H RMN{400 MHz, DMSO-d_6}: 1,18 (t, $^3J_{HH}$ = 7 Hz, 6H, CH_3); 1,42 (s, 9H, CH_3);

3,44 (s, 2H, CH_2); 4,18 (m, 4H, CH_2); 6,2 (a, 1H, NH); 7,01 (a, 2H, Ph-H); 7,26 (a, 3H, Ph-H).

CL: pureza del 87%, EM: 266 (M-boc)

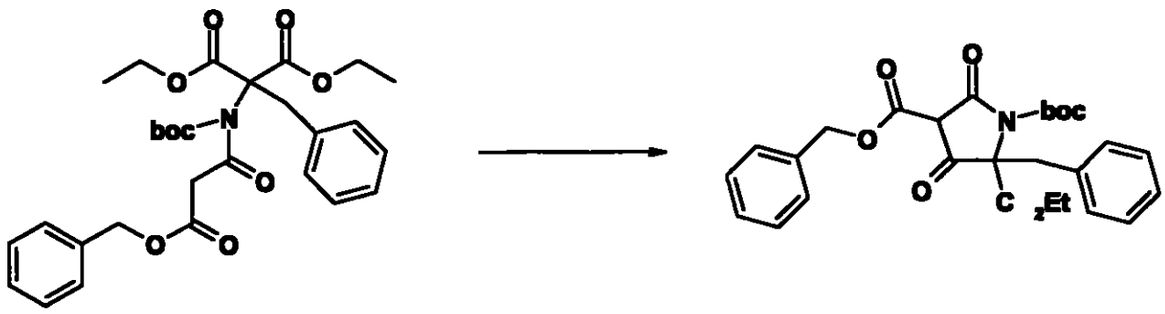
2. Bencil[[3-benciloxi-3-oxopropanoil](*terc*-butoxicarbonil)amino]malonato de dietilo



Se disuelven 28,2 g (77 mmol) de 2-bencil-2-(*terc*-butoxicarbonilamino)malonato de dietilo, 15 g (77 mmol) de malonato de monobencilo y 12,5 g (97 mmol) de *N,N*-diisopropiletilamina en 300 ml de diclorometano y la mezcla se trata con 14,8 g (77 mmol) de clorhidrato de 1-(3-dimetilaminopropil)-3-etilcarbodiimida a temperatura ambiente. La mezcla de reacción se agita durante 12 h, se diluye con acetato de etilo, se lava con HCl ac. 1 N (200 ml) y $NaHCO_3$ ac. (2 x 200 ml) y se seca sobre $MgSO_4$. Después de la evaporación del disolvente, se obtiene el producto con un rendimiento del 78% (32,5 g).

^{1}H RMN{400 MHz, DMSO-d_6}: 1,18 (t, $^3J_{HH}$ = 7 Hz, 6H, CH_3); 1,43 (s, 9H, CH_3); 3,64 (s, 2H, CH_2); 4,17 (m, 4H, CH_2); 5,15 (s, 2H, CH_2); 7,00 (a, 2H, Ph-H); 7,26 (a, 3H, Ph-H); 7,35 (a, 5H, Ph-H).

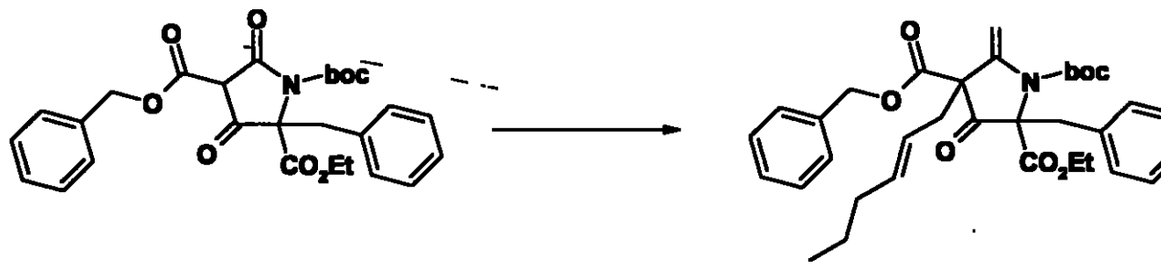
3. 4-Bencil-1-*terc*-butil-2-etil-2-bencil-3,5-dioxopirrolidina-1,2,4-tricarboxilato



Se disuelven 6,0 g (11 mmol) de bencil[[3-benciloxi-3-oxopropanoil](*terc*-butoxicarbonil)-amino]malonato de dietilo en 100 ml de dimetilformamida y la mezcla se trata con 3,1 g (27 mmol) de *terc*-butilato sódico a temperatura ambiente. La mezcla de reacción se agita durante 12 h a 50°C, se diluye con diclorometano, se neutraliza con HCl ac. 1 N, se lava con agua (1 x 50 ml) y $NaHCO_3$ ac. (1 x 500 ml) y se seca sobre $MgSO_4$. Después de la evaporación del disolvente, se obtiene el producto bruto en forma de un aceite que se purifica por cromatografía (1:1 de ciclohexano:acetato de etilo), produciendo 2,6 g (47%) de producto en forma de una mezcla de diastereoisómeros.

^{1}H RMN{400 MHz, DMSO-d_6}: 1,13 y 1,18 (t, 3H, $^3J_{HH}$ = 7 Hz, CH_3); 1,39 y 1,43 (s, 9H, CH_3); 3,46 y 3,64 (s, 2H, CH_2); 4,15 (m, 2H, CH_2); 5,15 (s, 2H, CH_2); 7,03 (a, 2H, Ph-H); 7,26 (a, 3H, Ph-H); 7,35 (a, 5H, Ph-H).

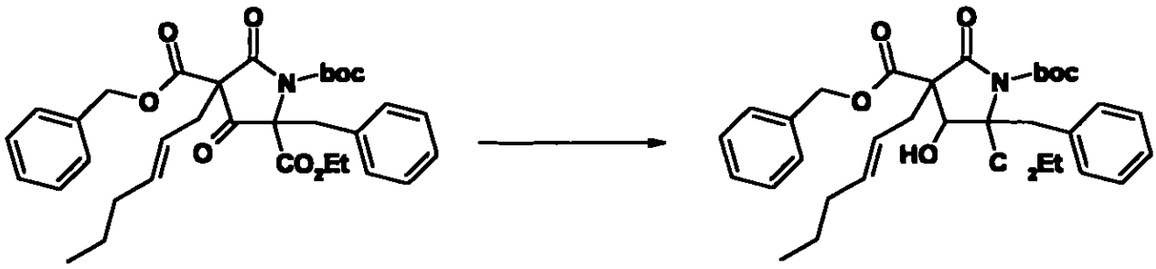
4. 4-Bencil-1-*terc*-butil-2-etil-2-bencil-4-[(2-E)-hex-2-en-1-il]-3,5-dioxopirrolidina-1,2,4-tri-carboxilato



Se agitan 0,4 g (0,8 mmol) de 4-bencil-1-*terc*-butil-2-etil-2-bencil-3,5-dioxopirrolidina-1,2,4-tricarboxilato, 0,2 g (1,9 mmol) de *trans*-2-hexen-1-ol, 0,1 g (0,9 mmol) de trietilamina, 18 mg (0,08 mmol) de acetato de paladio, 40 mg (0,16 mmol) de trifenilfosfina y 80 mg (0,8 mmol) de trietilborano en 20 ml de THF durante 4 h. La mezcla de reacción se diluye con acetato de etilo, se lava con HCl ac. 1 N (1 x 20 ml), agua (2 x 20 ml) y $NaHCO_3$ ac. (1 x 20 ml) y se seca sobre $MgSO_4$. Después de la evaporación del disolvente, se obtiene el producto bruto en forma de una mezcla de diastereoisómeros (0,43 g, 92%).

^{1}H RMN(400 MHz, DMSO-d_6): 0,88 (t, 3H, $^3J_{HH}$ = 7 Hz, CH_3); 1,13 y 1,18 (t, 3H, $^3J_{HH}$ = 7 Hz, CH_3); 1,20-1,35 (m, 4H, CH_2); 1,39 y 1,42 (s, 9H, CH_3); 1,90 (m, 2H, CH_2); 3,46 y 3,64 (s, 2H, CH_2); 4,15 (m, 2H, CH_2); 5,14 (s, 2H, CH_2); 5,54 (m, 2H, CH); 7,02 (a, 2H, Ph-H); 7,25 (a, 3H, Ph-H); 7,33 (a, 5H, Ph-H).

5. 4-Bencil-1-*terc*-butil-2-etil-2-bencil-4-[(2-E)-hex-2-en-1-il]-3-hidroxi-5-oxopirrolidina-1,2,4-tricarboxilato (Ejemplo 462)



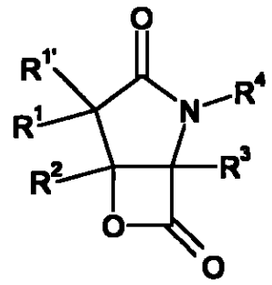
Se agitan 2,1 g (3,6 mmol) de 4-bencil-1-*terc*-butil-2-etil-2-bencil-4-[(2-E)-hex-2-en-1-il]-3,5-dioxopirrolidina-1,2,4-tricarboxilato y 770 mg (3,6 mmol) de $NaBH(OAc)_3$ en 40 ml de ácido acético glacial a temperatura ambiente durante 36 h. La mezcla de reacción se diluye con agua y se extrae con diclorometano.

Las fases orgánicas combinadas se lavan con agua (2 x 20 ml) y $NaHCO_3$ ac. (1 x 20 ml) y se secan sobre $MgSO_4$. Después de la evaporación del disolvente, se obtiene el producto bruto en forma de una mezcla de diastereoisómeros (1,25 g, 60%).

^{1}H RMN{400 MHz, DMSO-d_6}: 0,89 (t, 3H, $^3J_{HH}$ = 7 Hz, CH_3); 1,14 y 1,18 (t, 3H, $^3J_{HH}$ = 7 Hz, CH_3); 1,20-1,35 (m, 4H, CH_2); 1,39 y 1,42 (s, 9H, CH_3); 1,90 (m, 2H, CH_2); 3,42, 3,46 y 3,64 (s, 2H, CH_2); 4,15 (m, 2H, CH_2); 5,14 (s, 2H, CH_2); 5,54 (m, 2H, CH); 7,02 (a, 2H, Ph-H); 7,25 (a, 3H, Ph-H); 7,33 (a, 5H, Ph-H), OH no detectado.

EM: 480 (M-boc)

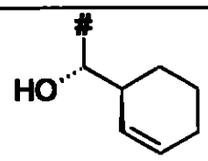
De acuerdo con los procedimientos mencionados anteriormente, pueden obtenerse o se han obtenido las lactamas condensadas de fórmula

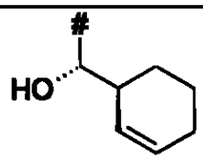
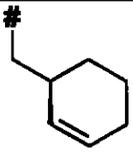
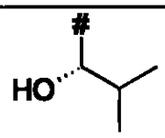
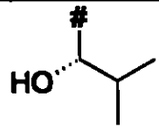
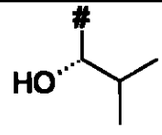


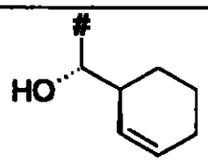
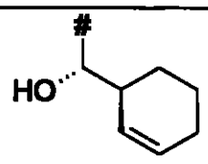
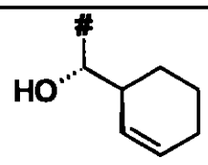
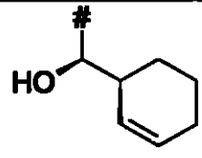
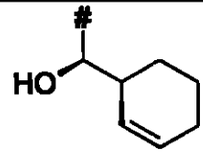
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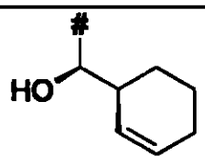
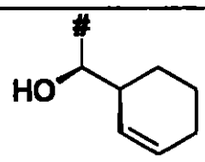
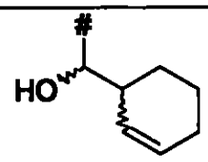
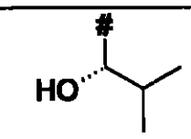
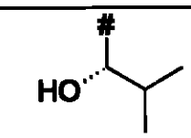
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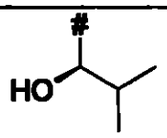
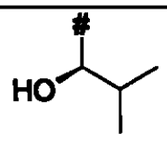
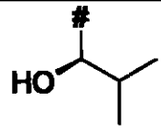
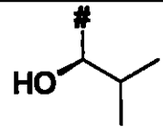
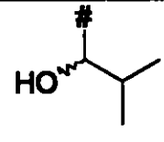
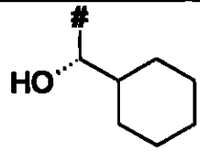
Tabla 5

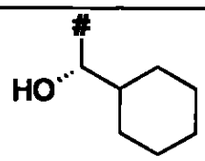
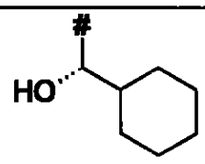
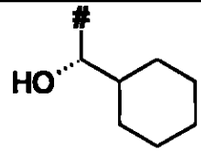
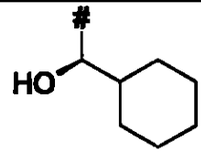
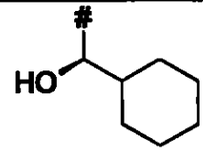
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP^{**})
1	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	

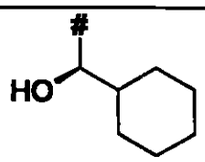
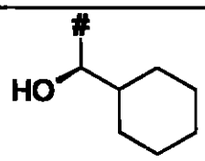
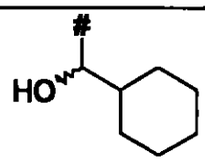
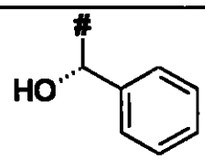
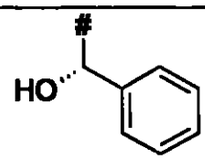
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
2	1-hidroxi-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
3	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
8	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	2,87
9	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	2,79
10	CH_3 / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	

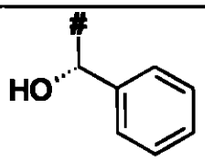
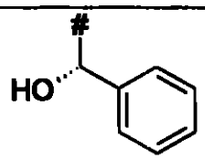
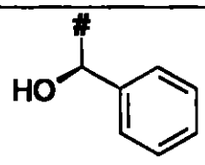
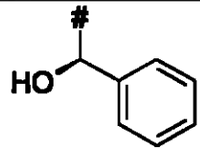
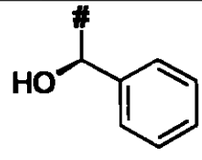
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
11	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
12	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
13	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
14	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
15	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	

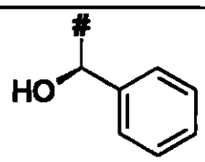
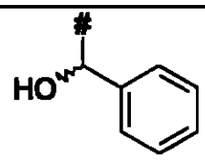
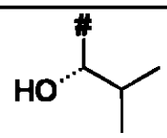
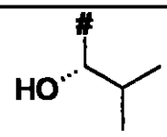
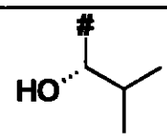
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
16	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
17	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
18	*n*-hexilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
19	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
20	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	

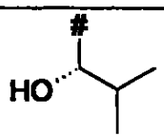
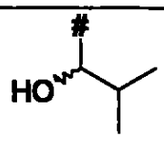
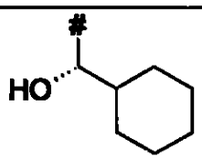
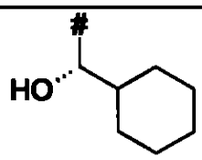
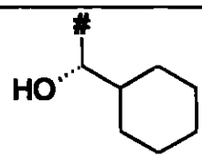
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
21	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
22	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
23	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
24	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
25	*n*-hexilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
26	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	

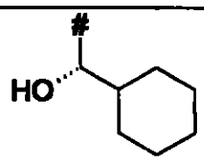
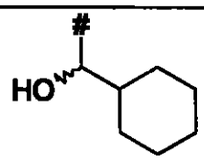
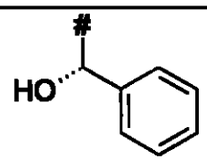
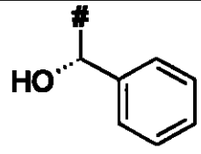
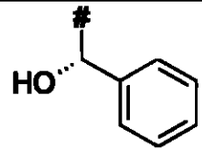
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
27	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
28	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
29	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
30	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
31	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	

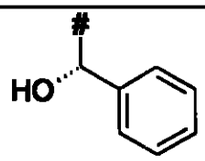
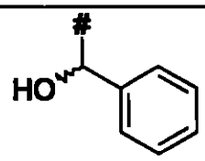
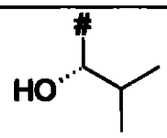
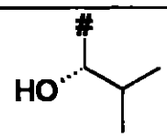
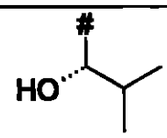
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{(a)}$)
32	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
33	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
34	*n*-hexilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
35	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
36	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	

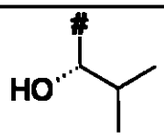
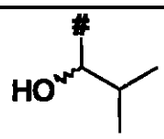
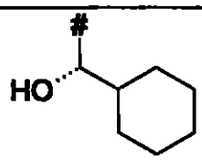
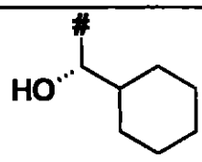
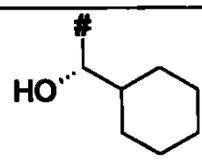
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
37	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
38	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
39	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
40	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
41	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

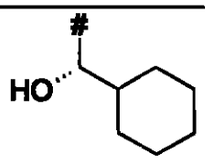
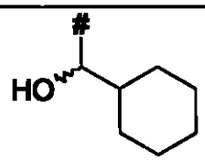
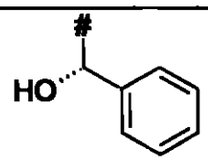
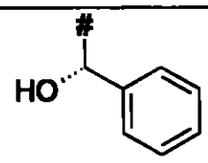
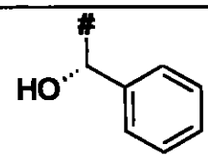
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
42	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
43	*n*-hexilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
44	cloroetilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
45	cloroetilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
46	cloroetilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

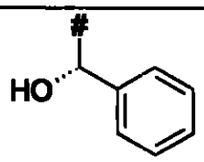
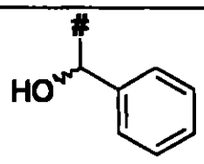
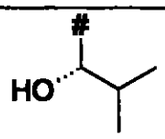
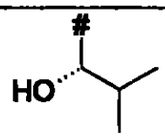
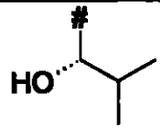
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
47	cloroetilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
48	cloroetilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
49	cloroetilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
50	cloroetilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
51	cloroetilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

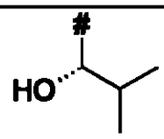
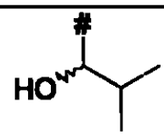
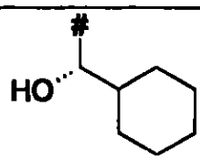
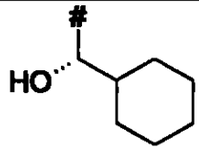
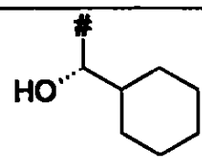
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
52	cloroetilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
53	cloroetilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
54	cloroetilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
55	cloroetilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
56	cloroetilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

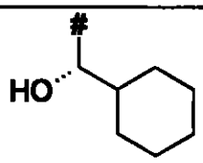
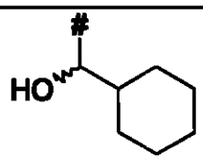
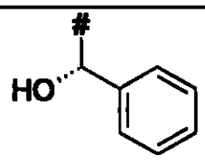
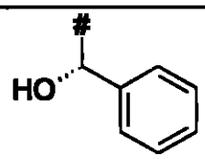
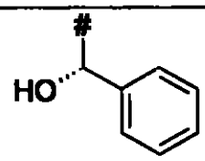
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
57	cloroetilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
58	cloroetilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
59	bromoetilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
60	bromoetilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
61	bromoetilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

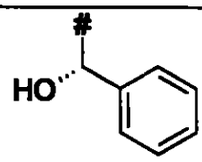
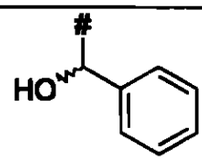
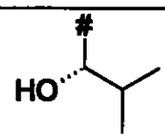
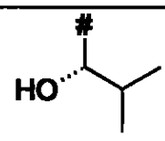
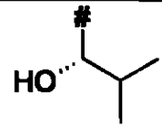
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log(P^{oct})
62	bromoetilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
63	bromoetilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
64	bromoetilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
65	bromoetilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
66	bromoetilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

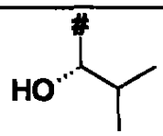
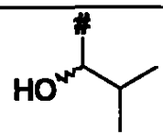
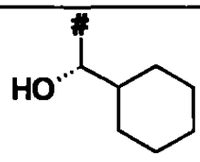
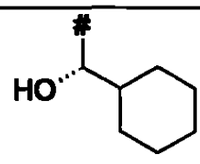
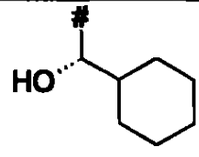
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
67	bromoetilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
68	bromoetilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
69	bromoetilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
70	bromoetilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
71	bromoetilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

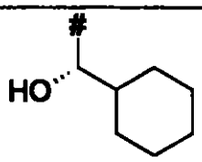
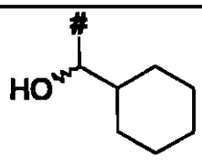
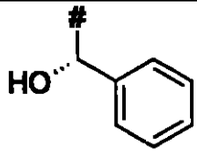
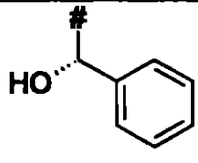
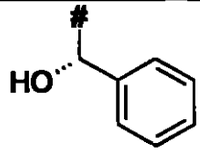
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
72	bromoetilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
73	bromoetilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
74	yodoetilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
75	yodoetilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
76	yodoetilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

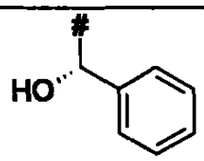
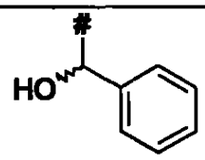
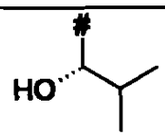
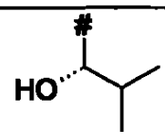
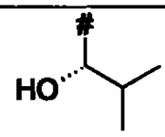
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
77	yodoetilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
78	yodoetilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
79	yodoetilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
80	yodoetilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
81	yodoetilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

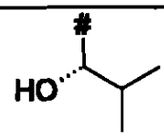
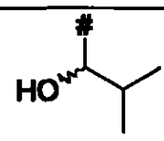
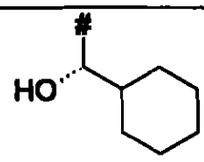
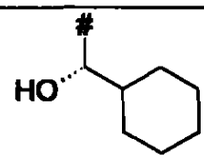
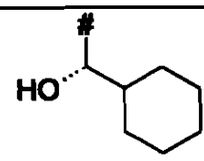
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
82	yodoetilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
83	yodoetilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
84	yodoetilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
85	yodoetilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
86	yodoetilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

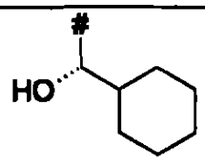
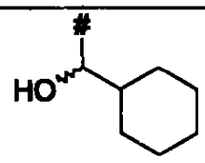
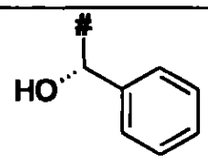
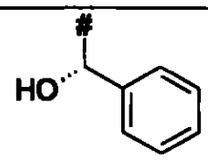
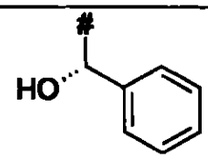
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
87	yodoetilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
88	yodoetilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
89	hidroxietilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
90	hidroxietilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
91	hidroxietilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

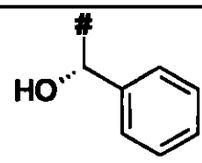
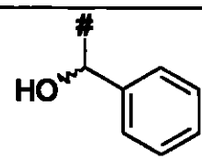
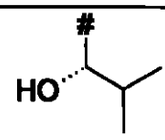
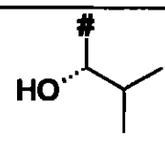
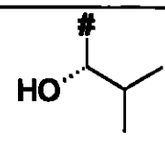
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
92	hidroxietilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
93	hidroxietilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
94	hidroxietilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
95	hidroxietilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
96	hidroxietilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

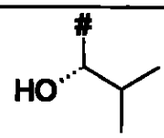
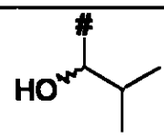
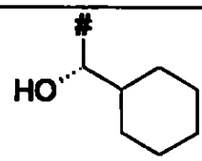
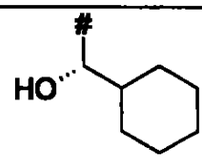
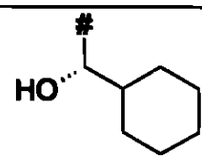
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
97	hidroxietilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
98	hidroxietilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
99	hidroxietilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
100	hidroxietilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
101	hidroxietilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

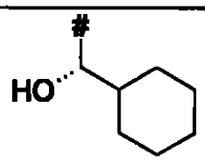
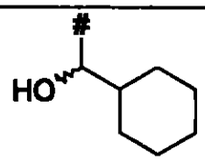
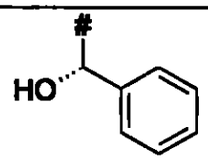
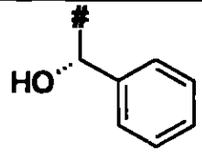
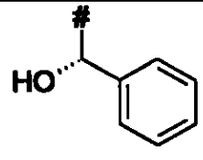
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
102	hidroxietilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
103	hidroxietilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
104	*n*-butilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
105	*n*-butilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
106	*n*-butilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

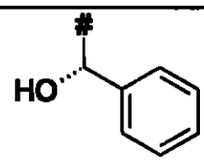
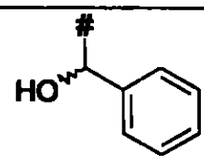
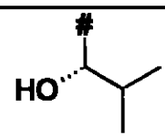
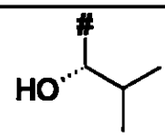
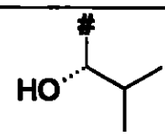
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
107	*n*-butilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
108	*n*-butilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
109	*n*-butilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
110	*n*-butilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
111	*n*-butilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

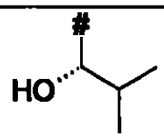
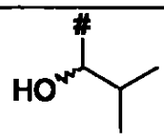
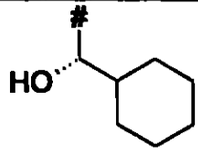
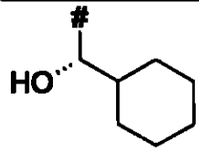
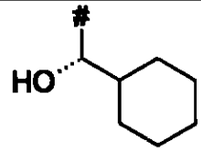
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
112	*n*-butilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
113	*n*-butilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
114	*n*-butilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
115	*n*-butilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
116	*n*-butilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

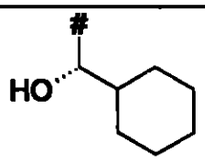
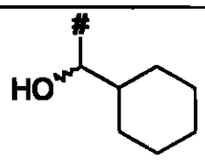
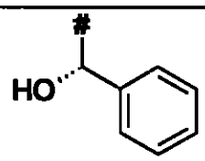
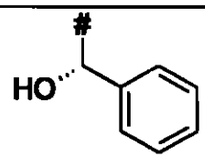
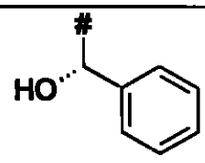
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
117	*n*-butilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
118	*n*-butilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
119	etilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
120	etilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
121	etilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

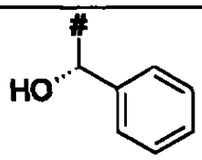
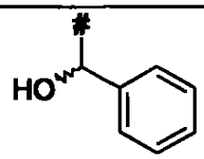
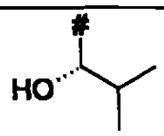
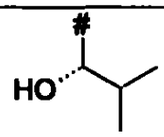
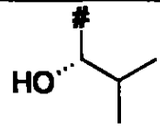
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
122	etilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
123	etilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
124	etilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
125	etilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
126	etilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

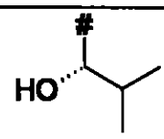
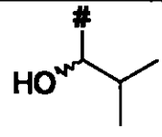
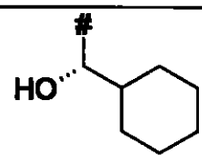
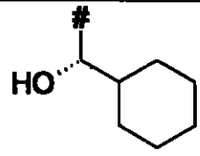
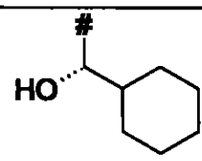
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
127	etilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
128	etilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
129	etilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
130	etilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
131	etilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

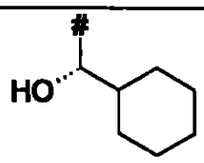
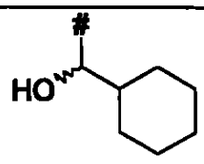
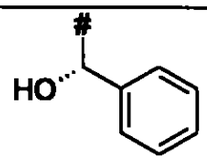
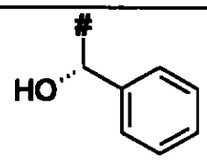
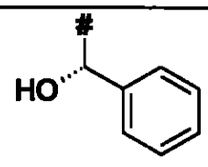
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
132	etilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
133	etilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
134	*n*-propilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
135	*n*-propilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
136	*n*-propilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

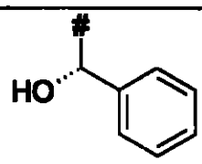
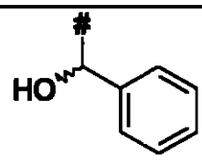
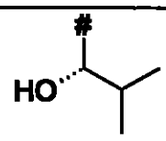
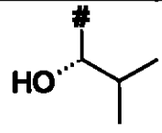
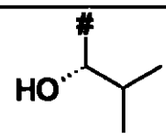
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
137	*n*-propilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
138	*n*-propilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
139	*n*-propilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
140	*n*-propilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
141	*n*-propilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

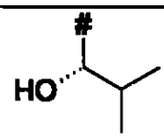
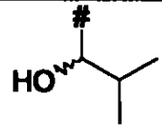
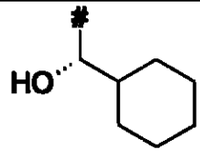
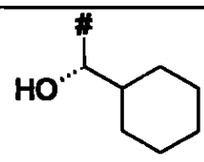
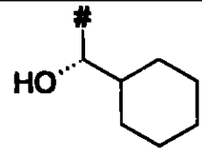
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
142	*n*-propilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
143	*n*-propilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
144	*n*-propilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
145	*n*-propilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
146	*n*-propilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

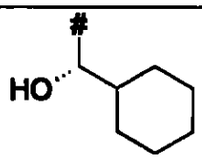
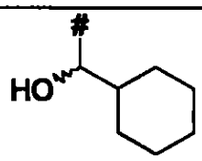
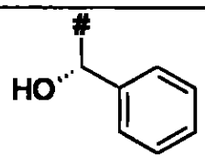
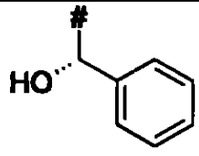
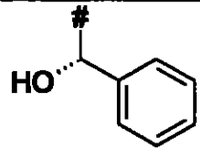
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
147	*n*-propilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
148	*n*-propilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
149	3-cloro-*n*-propilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
150	3-cloro-*n*-propilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
151	3-cloro-*n*-propilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

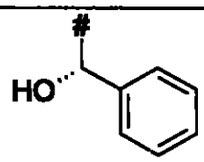
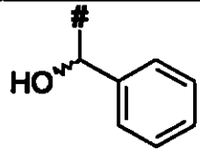
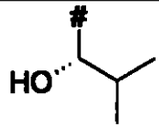
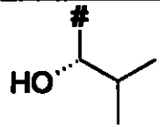
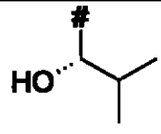
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log(P^{2a})
152	3-cloro-*n*-propilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
153	3-cloro-*n*-propilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
154	3-cloro-*n*-propilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
155	3-cloro-*n*-propilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
156	3-cloro-*n*-propilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

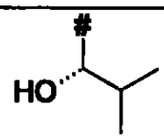
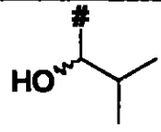
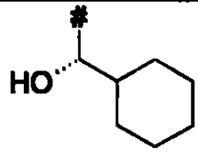
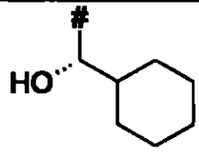
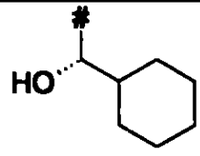
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
157	3-cloro-*n*-propilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
158	3-cloro-*n*-propilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
159	3-cloro-*n*-propilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
160	3-cloro-*n*-propilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
161	3-cloro-*n*-propilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

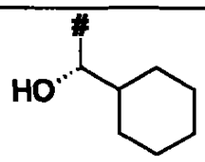
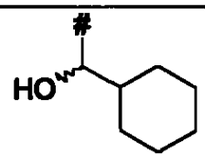
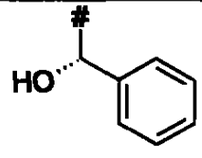
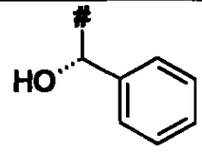
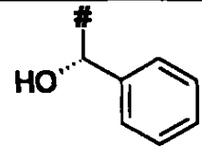
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
162	3-cloro-*n*-propilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
163	3-cloro-*n*-propilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
164	4-cloro-*n*-butilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
165	4-cloro-*n*-butilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
166	4-cloro-*n*-butilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

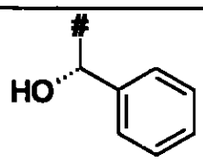
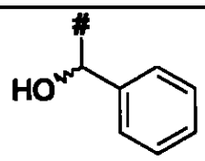
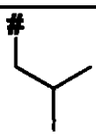
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
167	4-cloro-*n*-butilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
168	4-cloro-*n*-butilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
169	4-cloro-*n*-butilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
170	4-cloro-*n*-butilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
171	4-cloro-*n*-butilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

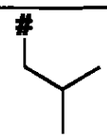
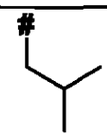
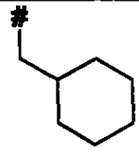
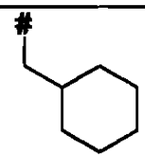
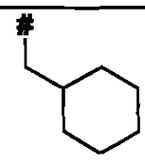
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
172	4-cloro-*n*-butilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
173	4-cloro-*n*-butilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
174	4-cloro-*n*-butilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
175	4-cloro-*n*-butilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
176	4-cloro-*n*-butilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

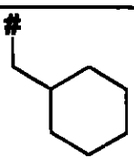
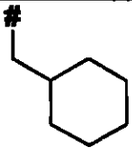
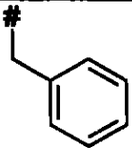
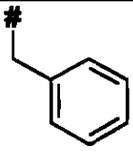
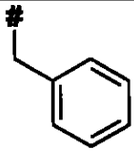
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
177	4-cloro-*n*-butilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
178	4-cloro-*n*-butilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
179	2-propioniloxi-etilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
180	2-propioniloxi-etilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
181	2-propioniloxi-etilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

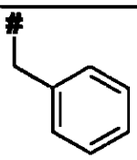
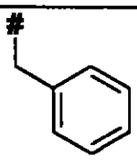
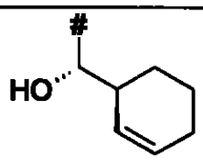
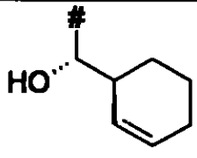
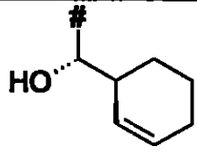
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
182	2-propioniloxi-etilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
183	2-propioniloxi-etilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
184	2-propioniloxi-etilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
185	2-propioniloxi-etilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
186	2-propioniloxi-etilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

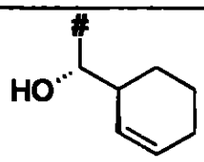
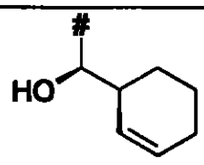
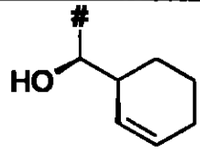
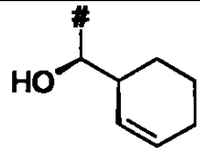
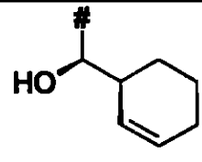
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[2])
187	2-propioniloxi-etilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
188	2-propioniloxi-etilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
189	2-propioniloxi-etilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
190	2-propioniloxi-etilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
191	2-propioniloxi-etilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

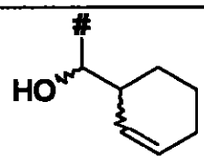
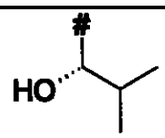
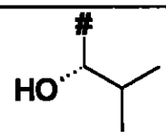
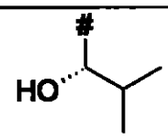
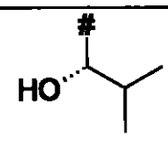
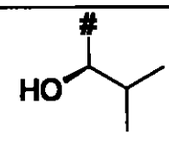
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
192	2-propioniloxi-etilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
193	2-propioniloxi-etilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
194	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
195	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
196	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

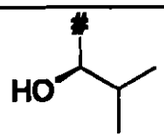
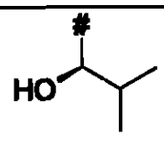
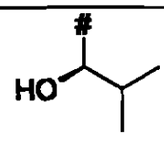
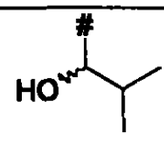
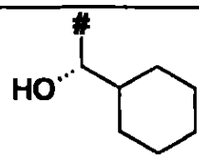
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
197	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
198	*n*-hexilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
199	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
200	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
201	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

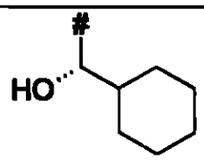
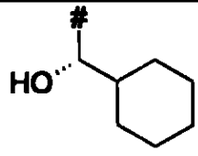
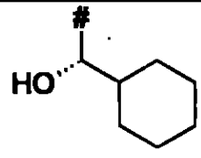
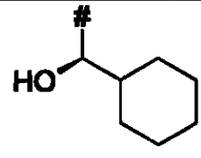
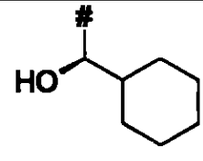
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
202	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
203	*n*-hexilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
204	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
205	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
206	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

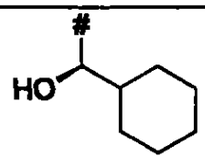
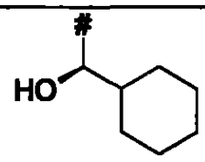
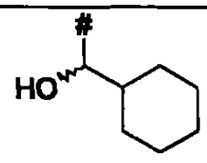
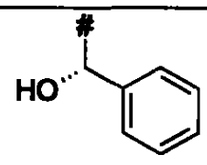
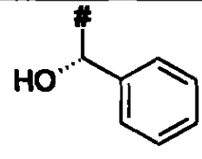
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
207	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
208	*n*-hexilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
209	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
210	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
211	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	

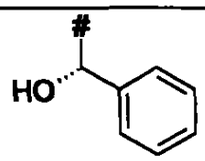
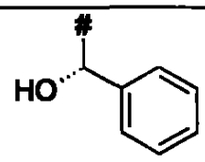
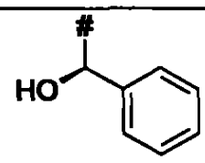
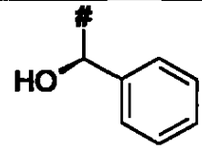
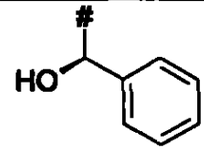
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
212	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
213	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
214	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
215	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
216	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	

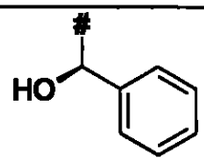
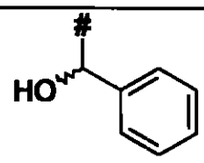
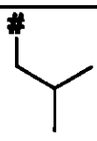
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
217	*n*-hexilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	
218	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
219	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
220	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
221	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
222	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	

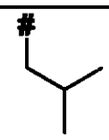
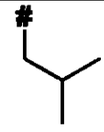
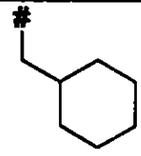
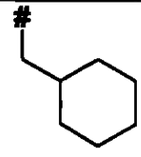
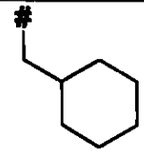
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
223	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
224	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
225	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
226	*n*-hexilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	
227	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	

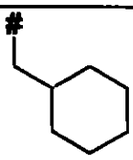
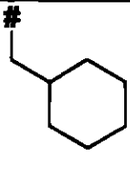
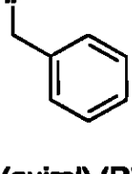
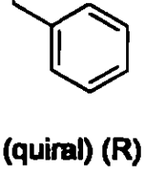
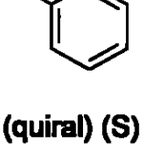
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
228	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
229	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
230	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
231	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
232	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	

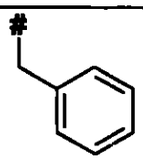
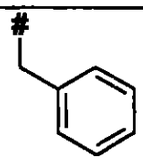
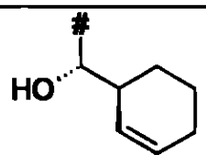
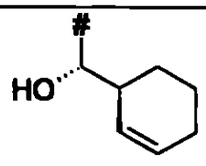
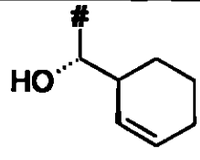
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
233	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
234	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
235	*n*-hexilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	
236	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
237	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	

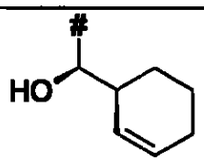
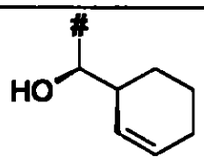
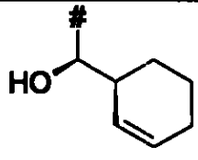
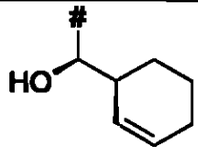
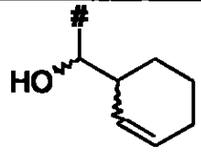
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
238	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
239	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
240	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
241	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
242	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	

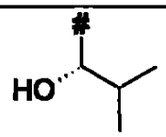
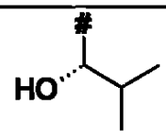
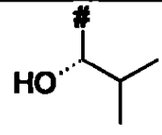
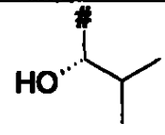
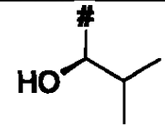
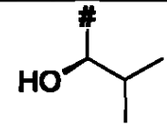
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
243	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
244	*n*-hexilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	
245	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
246	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
247	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	

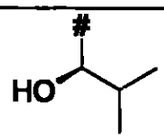
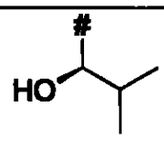
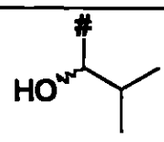
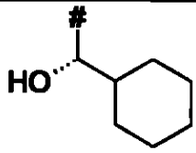
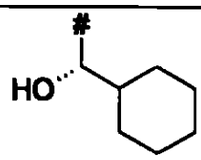
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
248	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
249	*n*-hexilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	
250	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
251	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
252	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	

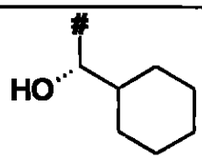
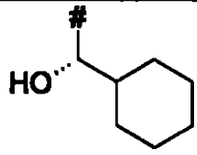
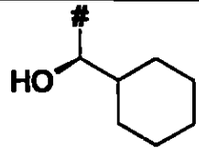
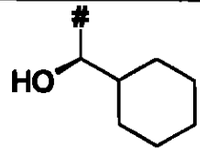
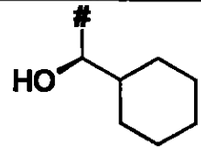
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
253	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
254	*n*-hexilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	
255	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
256	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
257	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	

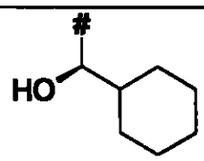
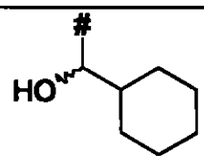
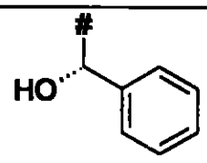
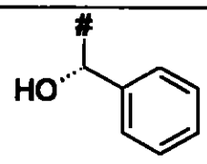
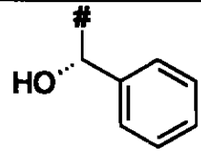
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
258	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
259	*n*-hexilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	
260	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
261	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
262	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	

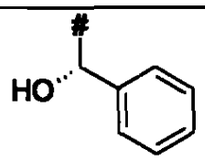
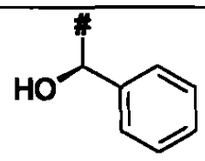
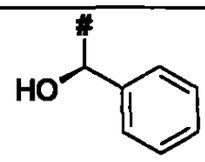
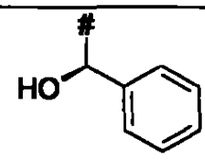
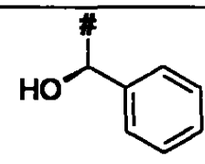
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
263	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
264	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
265	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
266	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
267	*n*-pentilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	

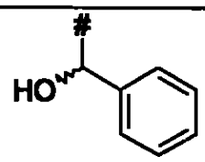
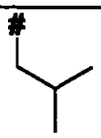
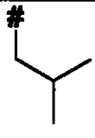
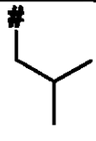
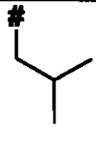
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
268	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
269	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
270	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
271	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
272	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
273	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	

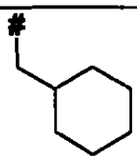
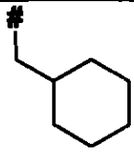
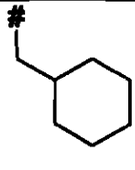
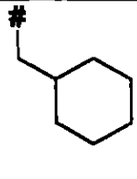
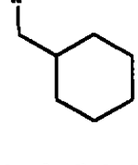
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
274	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
275	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
276	*n*-pentilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
277	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
278	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	

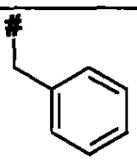
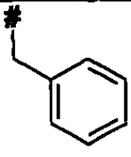
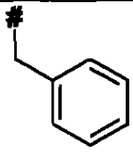
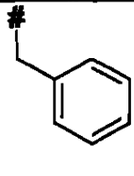
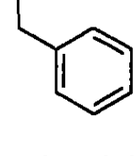
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
279	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
280	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
281	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
282	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
283	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

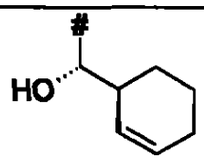
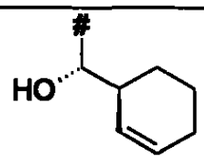
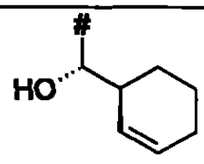
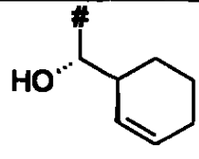
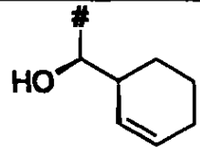
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
284	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
285	*n*-pentilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
286	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
287	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
288	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

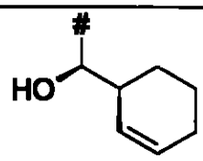
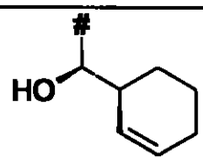
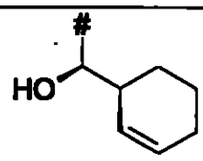
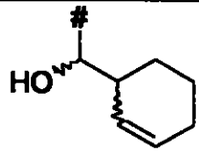
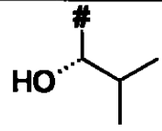
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
289	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
290	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
291	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
292	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
293	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	

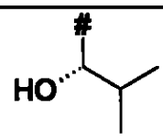
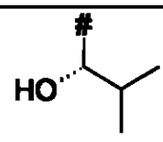
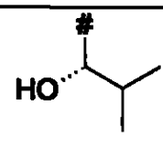
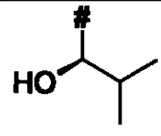
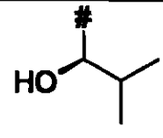
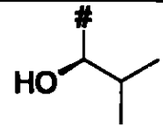
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
294	*n*-pentilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
295	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
296	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
297	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
298	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
299	*n*-pentilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	

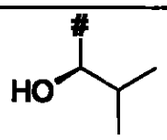
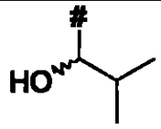
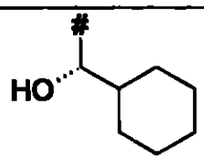
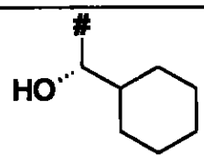
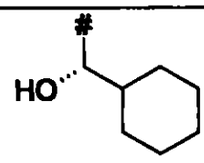
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
300	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
301	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
302	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
303	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
304	*n*-pentilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	

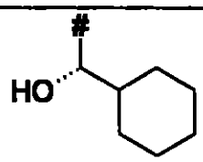
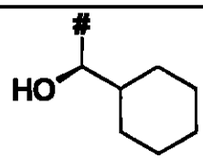
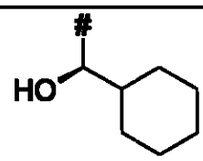
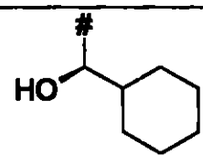
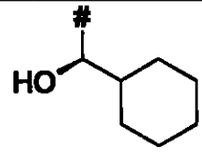
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
305	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
306	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
307	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
308	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
309	*n*-pentilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	

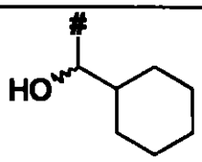
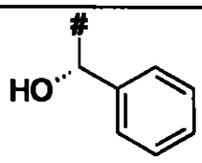
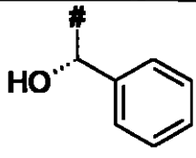
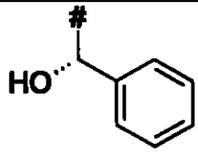
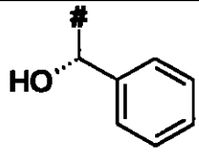
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
310	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
311	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
312	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
313	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
314	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	

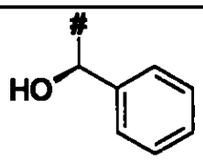
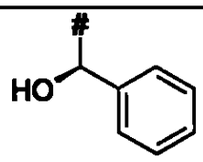
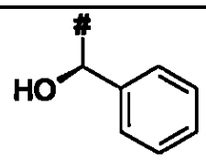
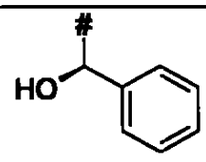
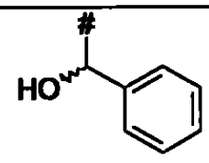
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
315	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
316	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
317	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
318	*n*-pentilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	
319	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	

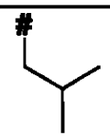
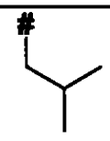
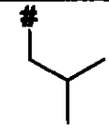
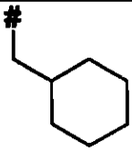
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
320	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
321	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
322	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
323	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
324	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
325	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	

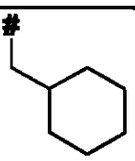
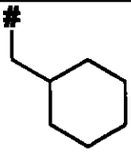
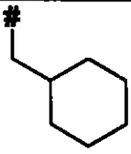
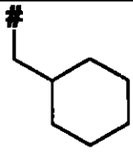
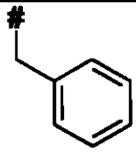
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
326	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
327	*n*-pentilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	
328	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
329	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
330	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	

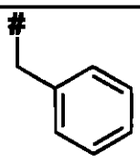
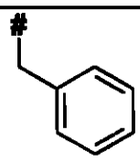
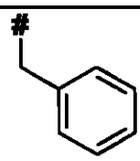
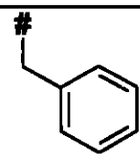
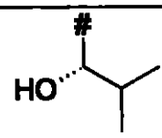
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
331	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
332	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
333	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
334	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
335	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	

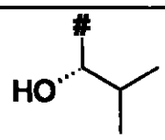
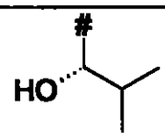
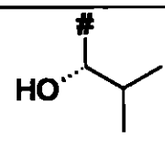
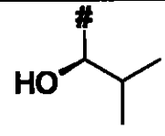
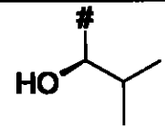
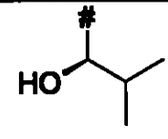
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
336	*n*-pentilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	
337	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
338	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
339	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
340	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	

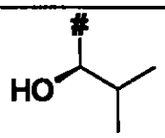
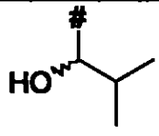
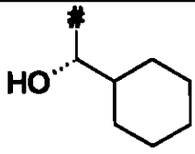
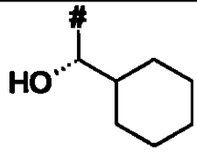
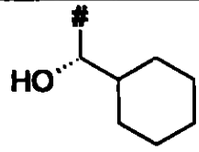
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
341	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
342	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
343	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
344	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
345	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	

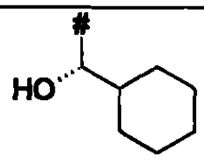
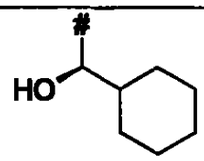
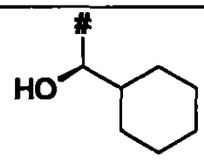
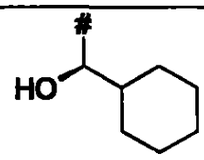
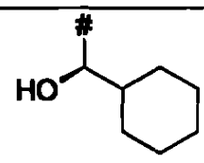
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
346	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
347	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
348	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
349	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
350	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	
351	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	

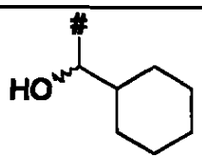
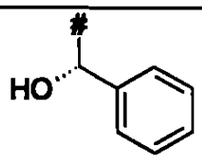
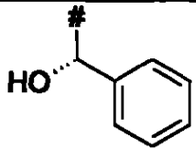
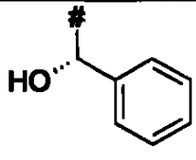
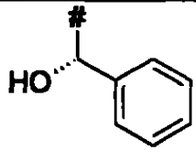
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
352	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
353	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
354	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
355	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	
356	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	

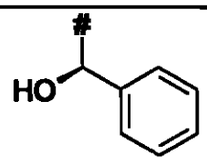
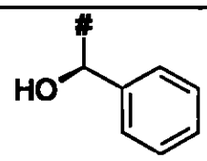
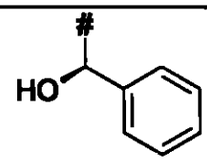
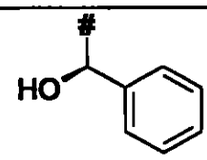
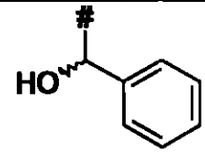
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
357	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
358	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
359	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
360	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	
361	CH_3 / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	

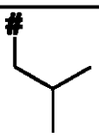
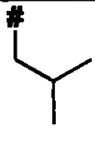
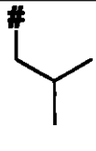
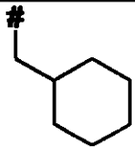
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
362	CH_3 / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
363	CH_3 / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
364	CH_3 / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
365	CH_3 / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
366	CH_3 / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
367	CH_3 / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

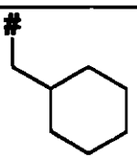
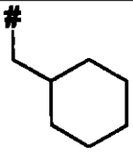
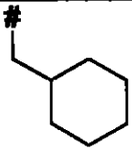
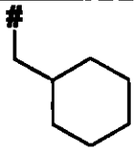
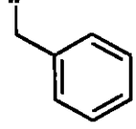
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
368	CH_3 / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
369	CH_3 / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	
370	CH_3 / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
371	CH_3 / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
372	CH_3 / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

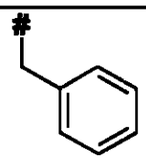
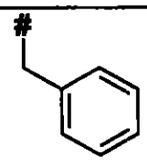
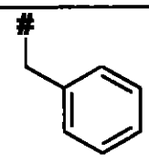
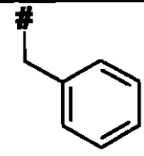
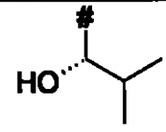
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
373	CH_3 / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
374	CH_3 / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
375	CH_3 / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
376	CH_3 / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
377	CH_3 / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	

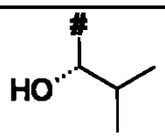
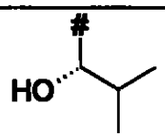
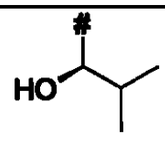
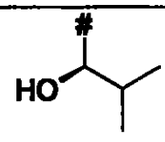
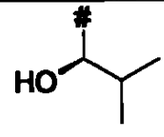
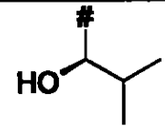
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{a)}$
378	CH_3 / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	
379	CH_3 / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
380	CH_3 / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
381	CH_3 / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
382	CH_3 / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	

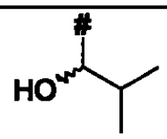
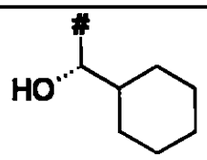
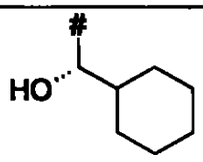
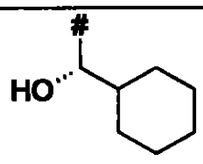
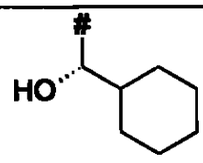
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{(a)}$
383	CH_3 / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
384	CH_3 / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
385	CH_3 / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
386	CH_3 / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
387	CH_3 / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	

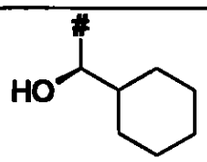
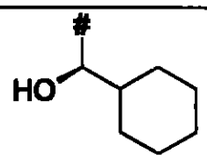
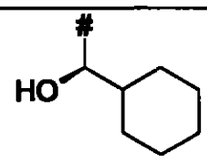
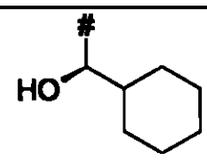
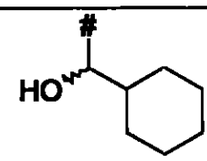
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
388	CH_3 / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	
389	CH_3 / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
390	CH_3 / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
391	CH_3 / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
392	CH_3 / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	
393	CH_3 / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	

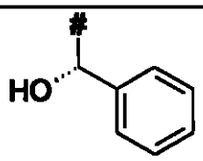
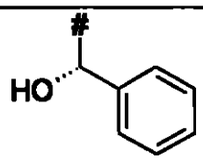
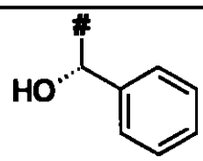
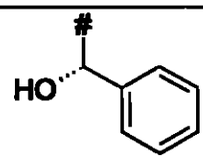
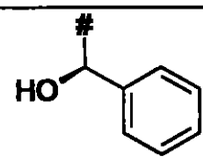
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
394	CH_3 / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
395	CH_3 / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
396	CH_3 / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
397	CH_3 / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	
398	CH_3 / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	

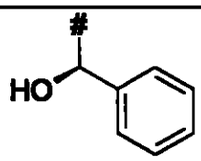
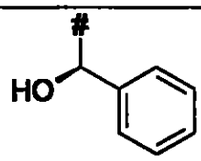
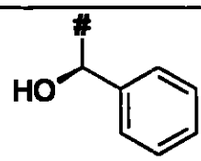
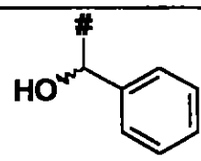
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
399	CH_3 / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	
400	CH_3 / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	
401	CH_3 / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	
402	CH_3 / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	
403	CH_3 / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	

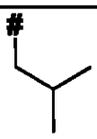
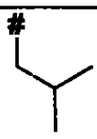
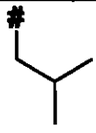
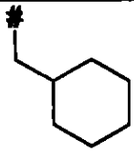
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
404	CH_3 / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
405	CH_3 / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
406	CH_3 / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
407	CH_3 / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
408	CH_3 / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
409	CH_3 / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	

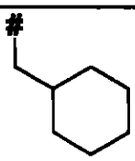
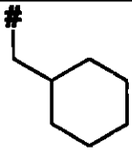
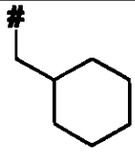
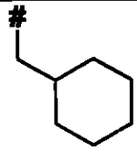
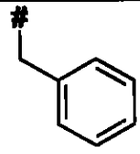
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log P*)
410	CH_3 / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	
411	CH_3 / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
412	CH_3 / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
413	CH_3 / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
414	CH_3 / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	

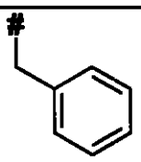
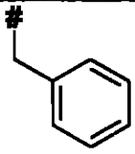
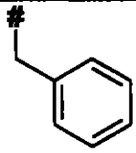
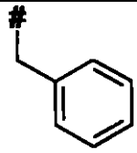
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
415	CH_3 / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
416	CH_3 / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
417	CH_3 / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
418	CH_3 / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
419	CH_3 / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	

Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
420	CH_3 / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
421	CH_3 / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
422	CH_3 / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
423	CH_3 / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
424	CH_3 / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	

Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	log$P^{(a)}$
425	CH_3 / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	
426	CH_3 / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
427	CH_3 / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
428	CH_3 / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	
429	CH_3 / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	

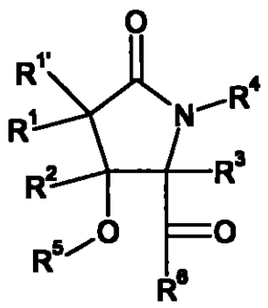
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
430	CH_3 / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
431	CH_3 / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
432	CH_3 / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
433	CH_3 / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	
434	CH_3 / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	

Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP[a])
435	CH_3 / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
436	CH_3 / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
437	CH_3 / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
438	CH_3 / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	
439	CH_3 / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	

Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	logP*)
440	CH_3 / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	
441	CH_3 / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	
442	CH_3 / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	
443	CH_3 / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	

La determinación de los valores de logP se realizó de acuerdo con EEC-Directive 79/831, Annex V. A8 por HPLC (procedimiento de gradiente, acetonitrilo/ácido fosfórico acuoso al 0,1%).

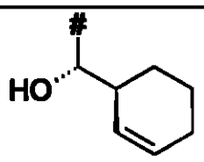
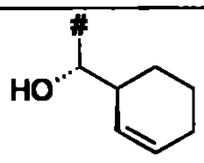
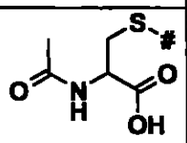
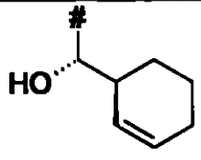
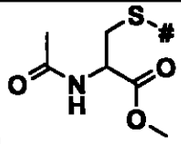
De acuerdo con los procedimientos mencionados anteriormente, pueden obtenerse o no obtenerse las lactamas de fórmula

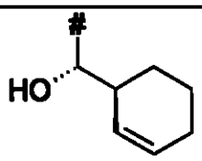
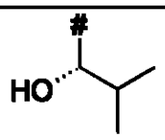
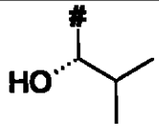
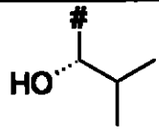
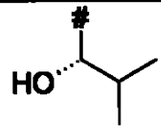


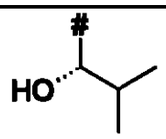
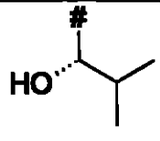
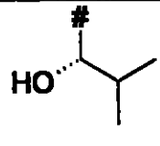
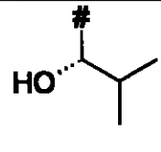
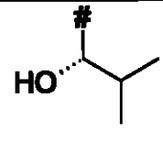
(I)

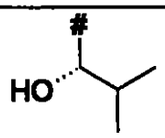
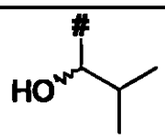
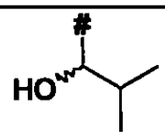
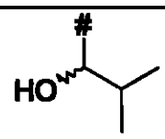
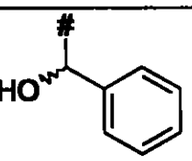
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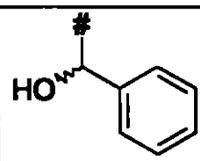
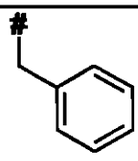
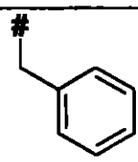
Tabla 6

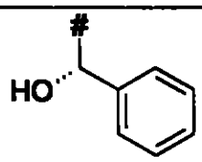
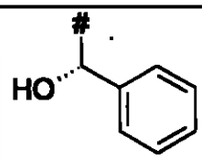
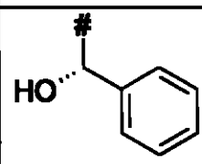
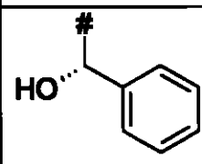
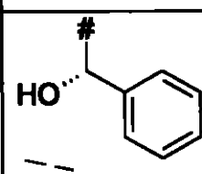
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP[a])
4	1-hidroxi-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
5	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H		
6	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H		

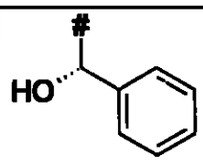
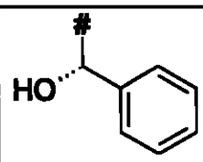
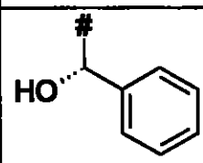
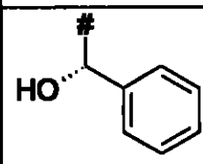
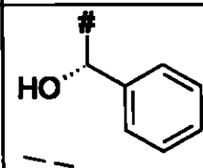
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	log P[a])
7	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
444	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	2,30
445	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
446	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	2,58
447	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	

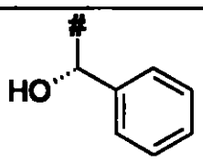
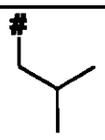
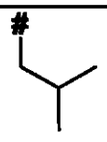
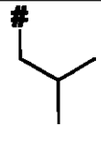
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
448	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
449	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
450	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	2,16
451	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
452	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_3	

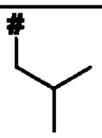
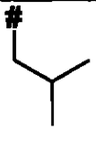
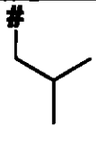
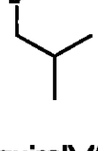
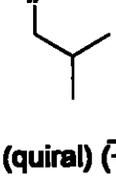
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	log$P^{a)}$
453	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	H	OCH_3	
454	*n*-hexilo / H (quiral) (+)	CH_3 (quiral) (+)	 (quiral) (+)	H	H	OCH_3	
455	*n*-hexenilo / BnOCO (quiral) (+)	H (quiral) (+)	 (quiral) (+)	BOC	H	OCH_3	
456	*n*-hexenilo / BnOCO (quiral) (+)	H (quiral) (+)	 (quiral) (+)	BOC	H	OCH_2CH_3	
457	*n*-hexenilo / BnOCO (quiral) (+)	H (quiral) (+)	 (quiral) (+)	BOC	H	OCH_3	

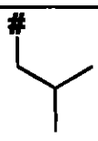
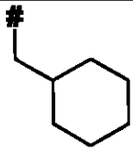
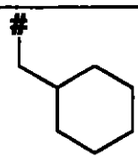
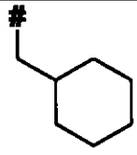
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
458	*n*-hexenilo / BnOCO (quiral) (+)	H (quiral) (+)	 (quiral) (+)	BOC	H	OCH_2CH_3	
459	*n*-hexenilo / BnOCO (quiral) (+)	H (quiral) (+)	 (quiral) (+)	BOC	H	OCH_3	
460	*n*-hexenilo / BnOCO (quiral) (+)	H (quiral) (+)	 (quiral) (+)	BOC	H	OCH_2CH_3	
461	*n*-hexenilo / BnOCO (quiral) (+)	H (quiral) (+)	 (quiral) (+)	BOC	H	OCH_3	
462	*n*-hexenilo / BnOCO (quiral) (+)	H (quiral) (+)	 (quiral) (+)	BOC	H	OCH_2CH_3	

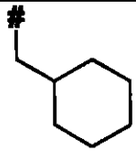
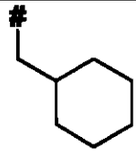
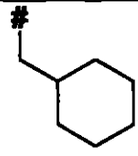
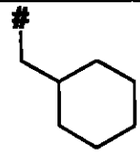
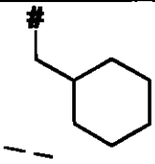
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
463	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
464	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
465	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
466	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
467	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	

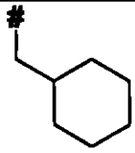
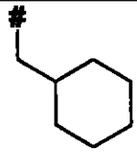
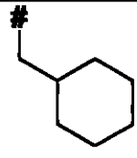
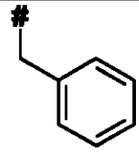
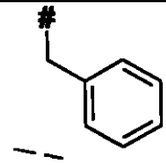
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
468	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
469	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
470	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
471	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
472	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	

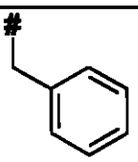
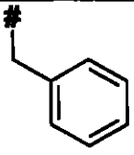
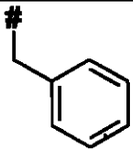
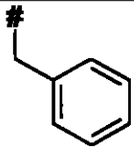
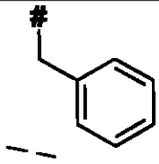
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
473	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
474	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
475	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
476	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
477	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	

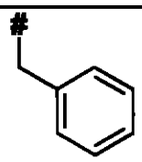
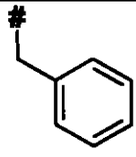
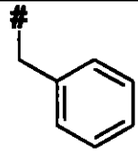
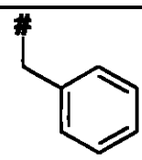
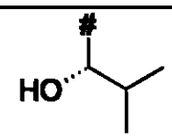
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP*)
478	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
479	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
480	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
481	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
482	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_3	

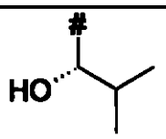
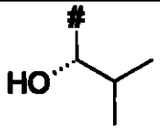
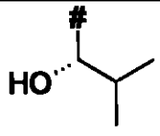
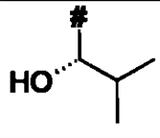
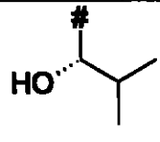
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
483	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	H	OCH_3	
484	*n*-hexilo / H (quiral) (+)	CH_3 (quiral) (+)	 (quiral) (+)	H	H	OCH_3	
485	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
486	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
487	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	

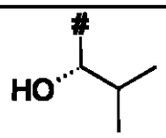
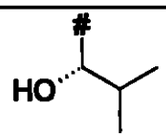
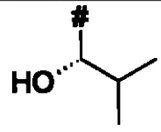
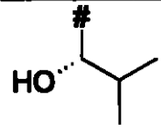
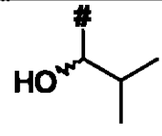
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
488	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
489	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
490	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
491	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
492	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	

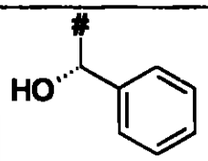
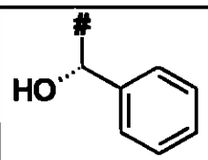
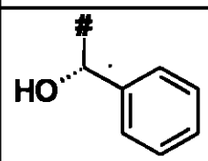
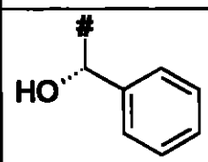
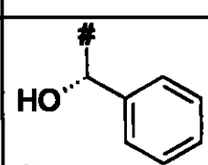
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
493	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
494	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
495	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
496	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
497	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	

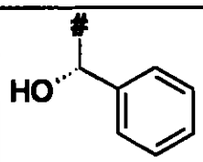
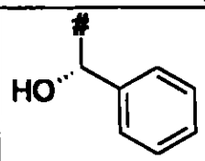
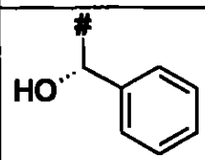
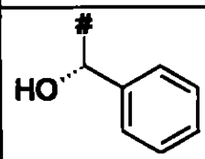
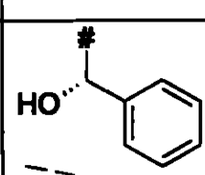
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
498	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
499	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
500	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
501	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
502	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	

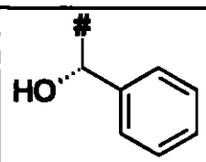
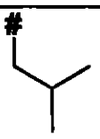
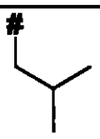
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
503	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
504	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
505	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
506	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
507	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	

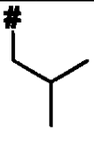
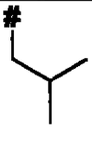
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
508	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
509	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
510	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
511	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
512	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	

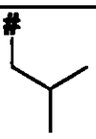
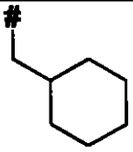
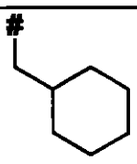
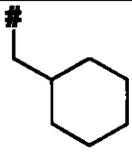
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
513	*n*-hexilo / H (quiral) (S)	H (quiral)-(S)	 (quiral) (R)	H	H	OCH_3	
514	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
515	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
516	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
517	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	

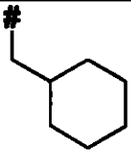
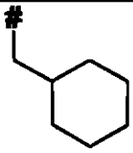
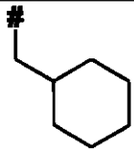
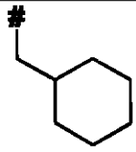
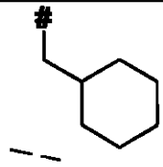
Ejemplo	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
518	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
519	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
520	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
521	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
522	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	

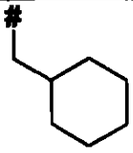
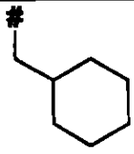
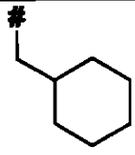
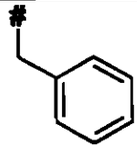
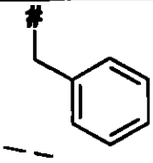
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
523	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
524	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
525	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
526	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
527	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	

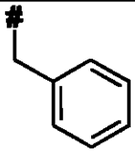
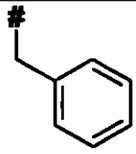
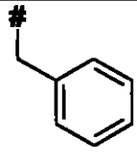
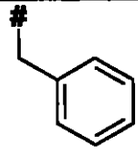
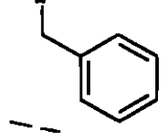
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP
528	*n*-hexilo / H (quiral) (+)	H (quiral) (+)	 (quiral) (+)	H	H	OCH_3	
529	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
530	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
531	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
532	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	

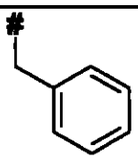
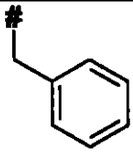
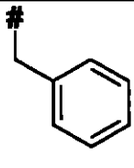
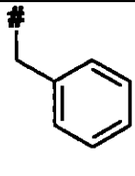
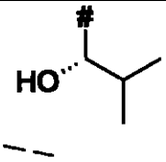
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
533	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
534	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
535	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
536	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
537	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_3	

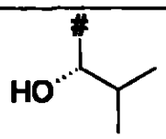
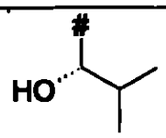
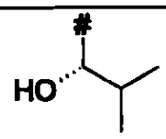
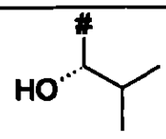
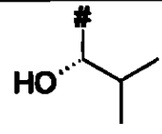
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
538	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
539	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
540	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
541	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
542	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	

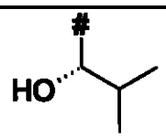
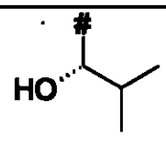
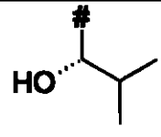
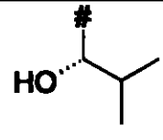
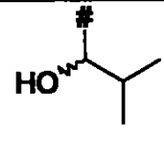
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	log$P^{a)}$
543	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	#  (quiral) (S)	H	H	OCH_3	
544	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	#  (quiral) (R)	H	H	OCH_3	
545	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	#  (quiral) (S)	H	H	OCH_3	
546	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	#  (quiral) (R)	H	H	OCH_3	
547	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	#  (quiral) (S)	H	H	OCH_3	

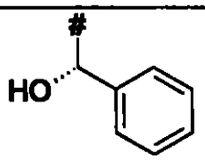
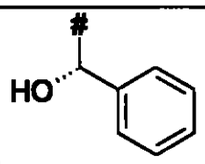
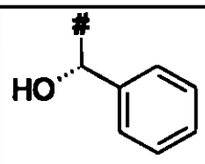
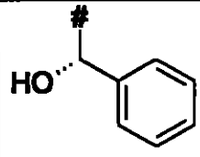
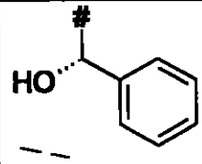
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
548	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
549	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
550	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
551	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
552	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	

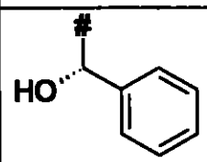
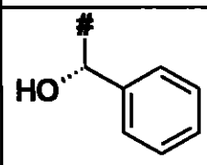
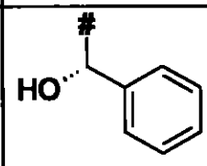
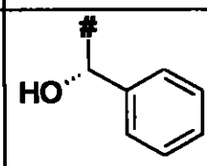
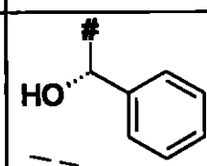
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
553	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
554	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
555	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
556	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
557	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	

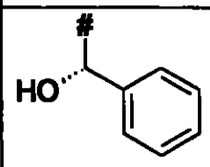
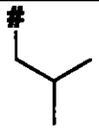
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
558	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
559	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (+/-)	H	H	OCH_3	
560	*n*-hexilo / H (quiral) (R)	H (quiral) (+)	 (quiral) (+)	H	H	OCH_3	
561	*n*-hexilo / H (quiral) (+)	H (quiral) (+)	 (quiral) (+)	H	H	OCH_3	
562	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	

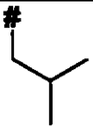
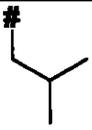
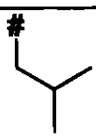
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^8	log$P^{a)}$
563	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
564	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
565	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
566	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
567	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	

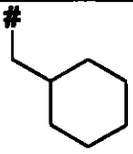
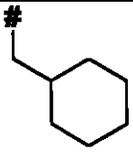
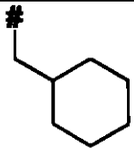
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
568	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
569	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
570	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
571	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
572	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	

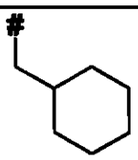
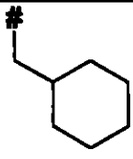
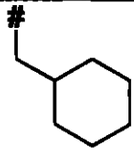
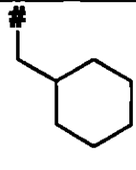
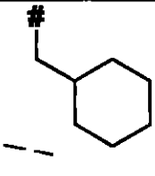
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
573	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
574	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
575	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
576	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
577	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	

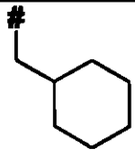
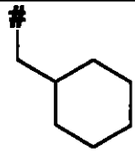
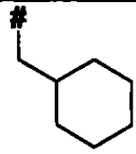
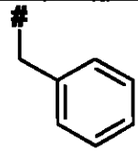
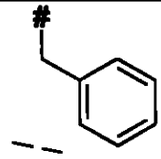
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^6	R^8	logP*)
578	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
579	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
580	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
581	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
582	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	

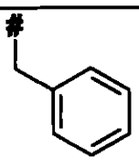
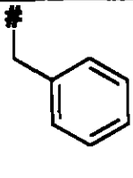
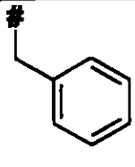
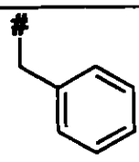
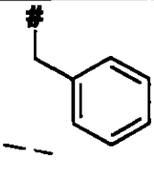
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
583	*n*-pentilo / H (quiral) (+)	CH_3 (quiral) (+)	 (quiral) (+)	H	H	OCH_3	
584	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
585	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
586	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
587	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	

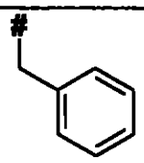
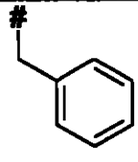
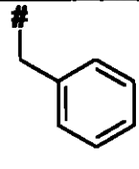
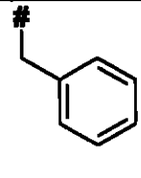
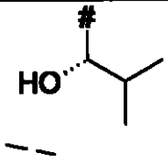
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
588	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	#  (quiral) (R)	H	H	OCH_3	
589	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	#  (quiral) (S)	H	H	OCH_3	
590	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	#  (quiral) (R)	H	H	OCH_3	
591	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	#  (quiral) (S)	H	H	OCH_3	
592	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	#  (quiral) (±)	H	H	OCH_3	

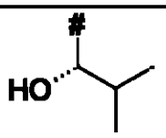
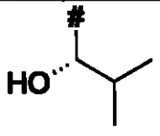
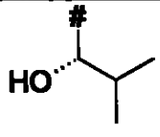
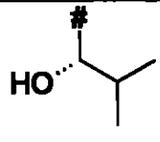
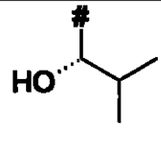
Ejemplo	R^1 / R^{1*}	R^2	R^3	R^{4a}	R^5	R^6	log($P^{a)}$)
593	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	H	OCH_3	
594	*n*-pentilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	H	OCH_3	
595	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
596	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
597	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	

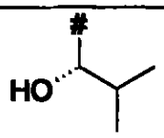
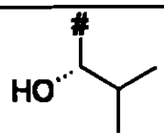
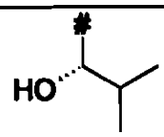
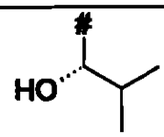
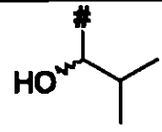
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
598	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
599	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
600	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
601	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
602	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	

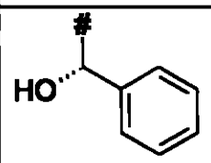
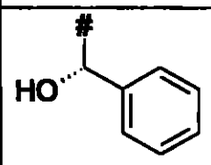
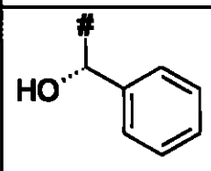
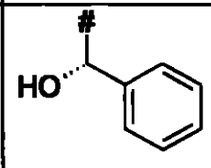
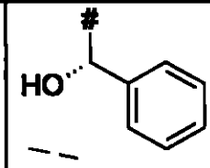
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
603	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
604	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
605	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
606	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
607	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	

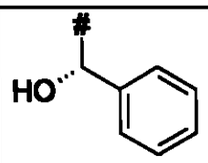
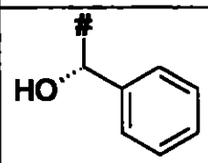
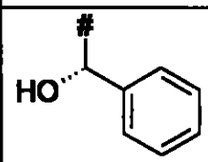
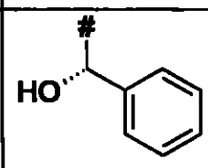
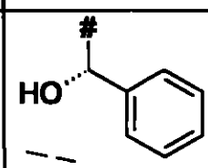
Ejemplo	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^6	R^8	logP^{**})
608	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
609	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
610	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
611	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
612	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_3	

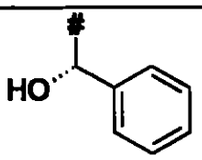
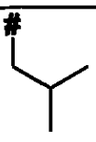
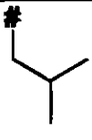
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
613	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
614	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
615	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
616	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
617	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	

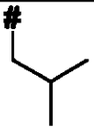
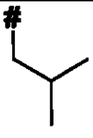
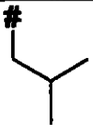
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
618	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
619	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
620	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
621	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
622	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	

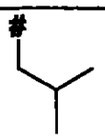
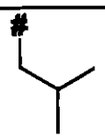
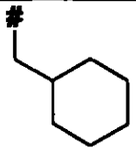
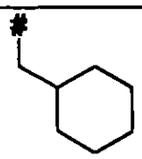
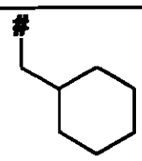
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^6	R^8	logP*)
623	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
624	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
625	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
626	*n*-pentilo / H (quiral) (R)	H (quiral) (+)	 (quiral) (+)	H	H	OCH_3	
627	*n*-pentilo / H (quiral) (+)	H (quiral) (+)	 (quiral) (+)	H	H	OCH_3	

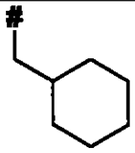
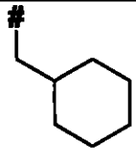
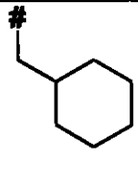
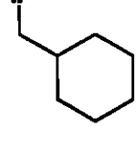
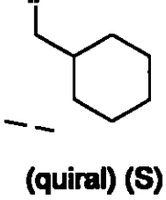
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
628	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
629	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
630	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
631	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
632	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	

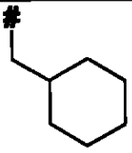
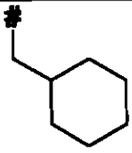
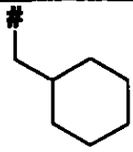
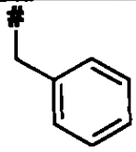
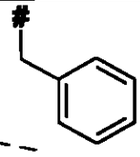
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
633	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
634	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
635	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
636	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
637	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	

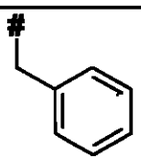
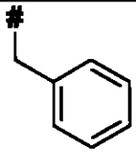
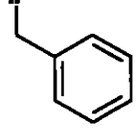
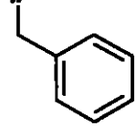
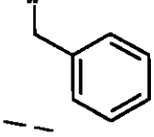
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^8	log$P^{(a)}$)
638	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
639	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
640	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
641	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
642	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	

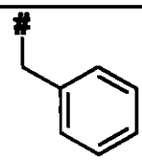
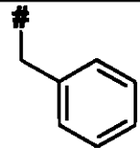
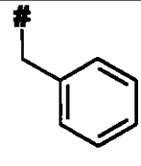
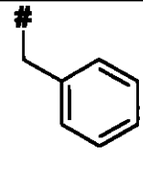
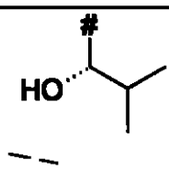
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
643	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
644	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
645	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
646	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
647	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_3	

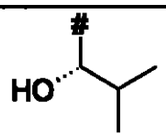
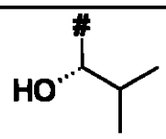
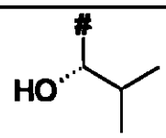
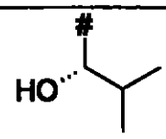
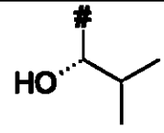
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
648	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
649	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
650	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
651	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
652	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	

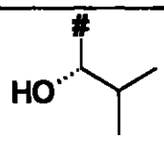
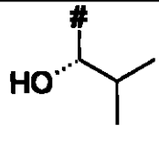
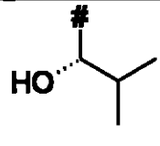
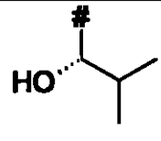
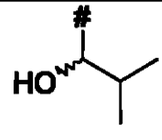
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
653	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
654	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
655	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
656	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
657	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	

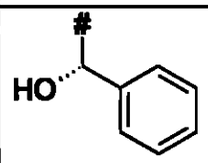
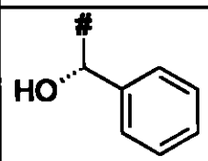
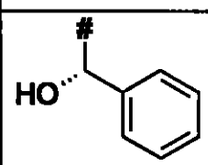
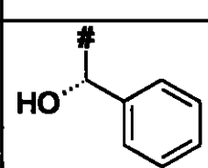
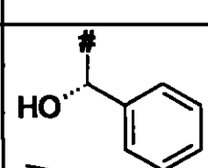
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	log$P^{a)}$
658	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (+/-)	H	H	OCH_3	
659	*n*-pentilo / H (quiral) (R)	H (quiral) (+)	 (quiral) (+)	H	H	OCH_3	
660	*n*-pentilo / H (quiral) (+)	H (quiral) (+)	 (quiral) (+)	H	H	OCH_3	
661	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
662	*n*-pentilo / H (quiral) (-)	H (quiral) (-)	 (quiral) (S)	H	H	OCH_3	

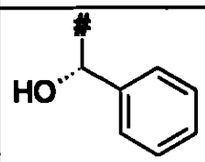
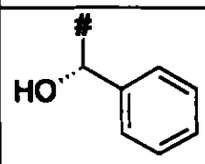
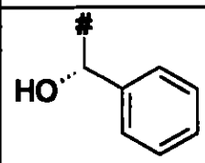
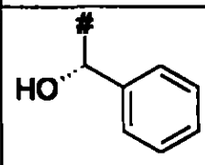
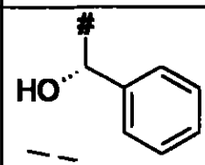
Ejemplo	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
663	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	
664	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
665	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_3	
666	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_3	
667	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_3	

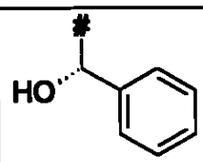
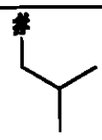
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP[a])
668	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_3	
669	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_3	
670	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
671	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_3	
672	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	

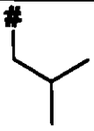
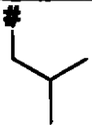
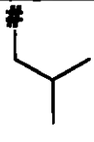
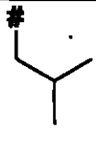
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	log$P^{a)}$
673	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
674	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
675	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
676	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
677	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	

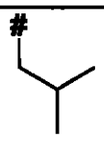
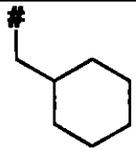
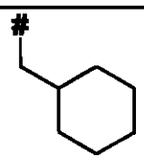
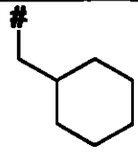
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^8	logP[a])
678	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
679	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
680	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OH	
681	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
682	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	

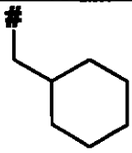
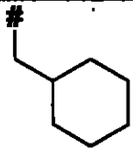
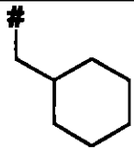
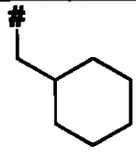
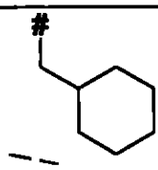
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
683	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
684	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
685	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
686	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
687	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	

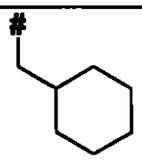
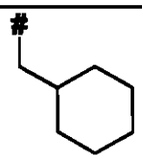
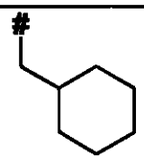
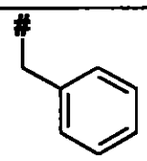
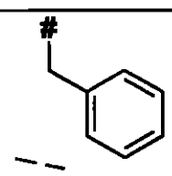
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
688	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
689	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
690	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
691	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OH	
692	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	

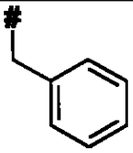
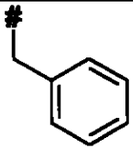
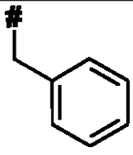
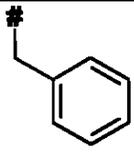
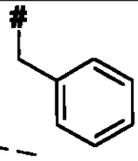
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
693	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
694	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
695	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
696	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
697	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	

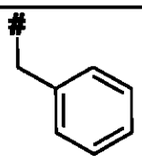
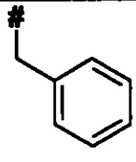
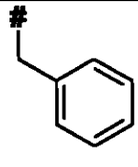
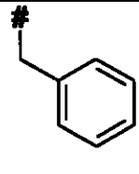
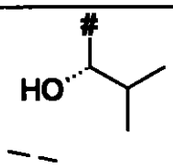
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
698	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
699	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
700	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
701	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
702	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (+/-)	H	H	OH	

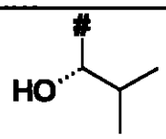
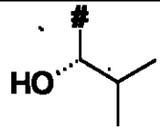
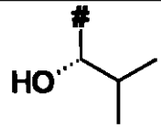
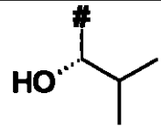
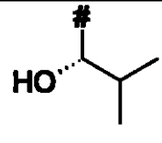
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
703	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	H	OH	
704	*n*-hexilo / H (quiral) (+/-)	CH_3 (quiral) (+/-)	 (quiral) (+/-)	H	H	OH	
705	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
706	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
707	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	

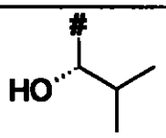
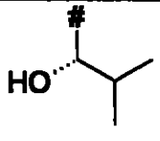
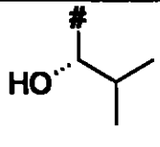
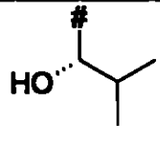
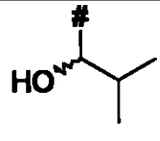
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP[a])
708	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
709	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
710	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
711	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
712	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	

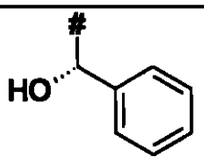
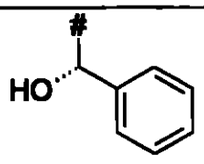
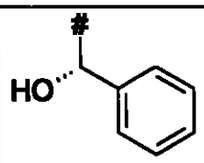
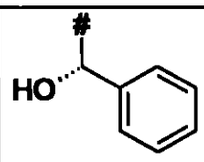
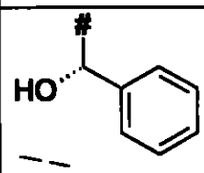
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^8	logP[a])
713	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OH	
714	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
715	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
716	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
717	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	

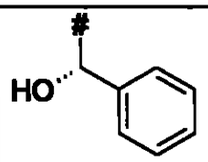
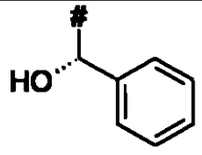
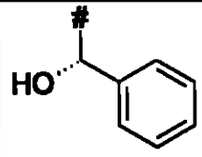
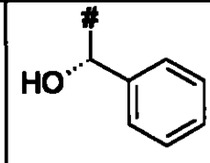
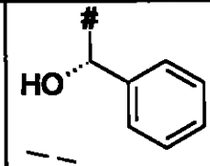
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4m}	R^5	R^6	logP[m])
718	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
719	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
720	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
721	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
722	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	

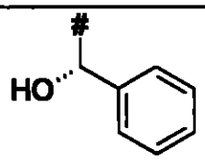
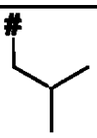
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
723	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
724	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OH	
725	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
726	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
727	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OH	

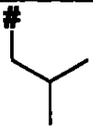
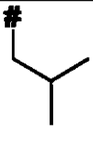
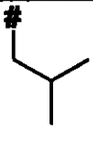
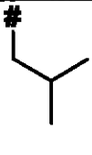
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^4	R^6	logP[a])
728	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
729	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
730	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
731	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
732	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OH	

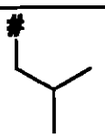
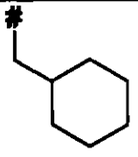
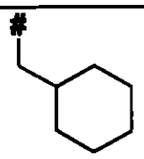
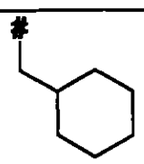
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
733	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
734	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
735	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OH	
736	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
737	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OH	

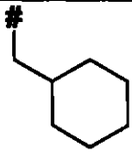
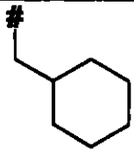
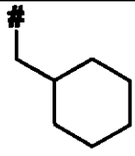
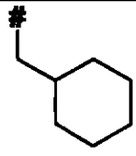
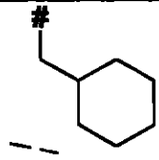
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
738	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
739	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
740	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
741	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
742	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OH	

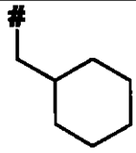
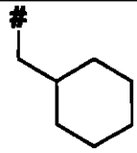
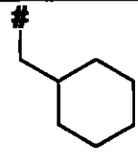
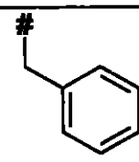
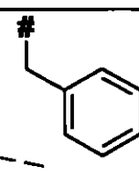
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
743	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
744	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
745	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
746	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (+/-)	H	H	OH	
747	*n*-hexilo / H (quiral) (R)	H (quiral) (+/-)	 (quiral) (+/-)	H	H	OH	

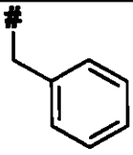
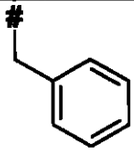
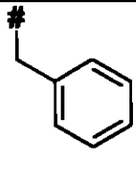
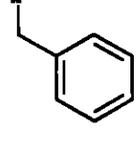
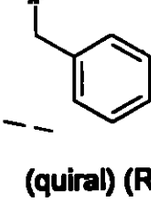
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
748	*n*-hexilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	H	OH	
749	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
750	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
751	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
752	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OH	

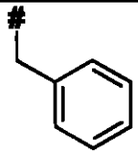
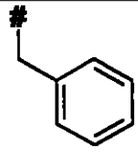
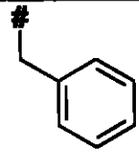
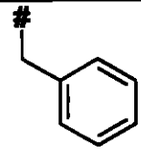
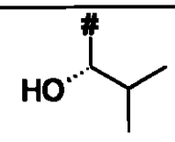
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
753	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
754	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
755	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
756	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
757	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OH	

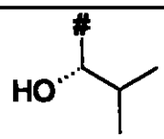
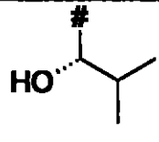
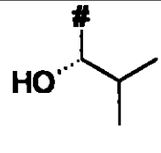
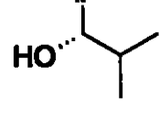
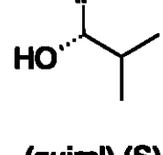
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP[a])
758	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
759	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
760	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
761	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
762	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OH	

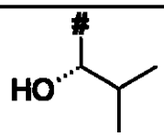
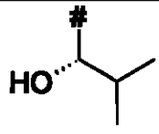
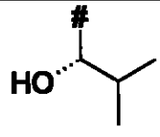
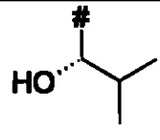
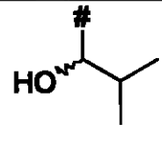
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
763	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
764	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
765	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
766	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
767	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OH	

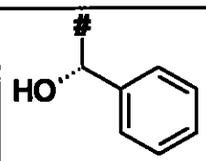
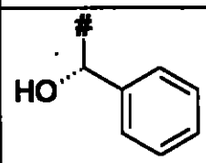
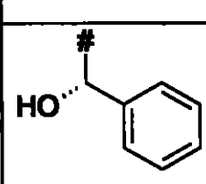
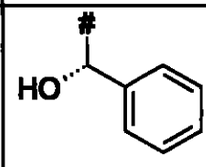
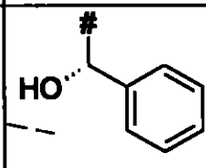
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	log(P^a)
768	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OH	
769	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
770	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
771	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
772	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OH	

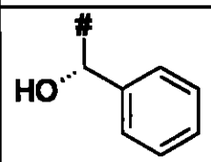
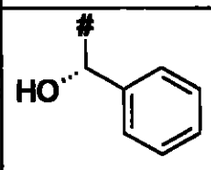
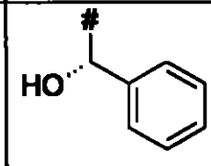
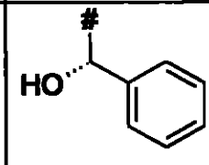
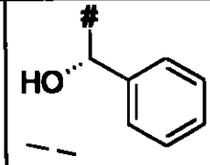
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
773	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
774	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
775	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
776	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
777	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OH	

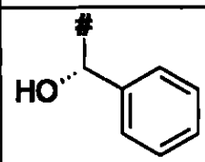
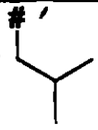
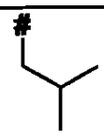
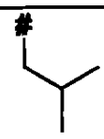
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^8	logP[a])
778	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
779	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OH	
780	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
781	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
782	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	

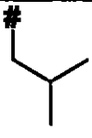
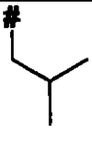
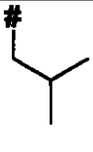
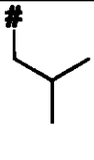
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
783	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
784	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
785	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
786	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
787	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	

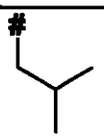
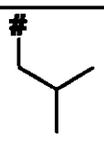
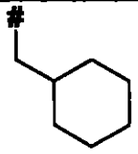
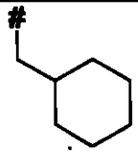
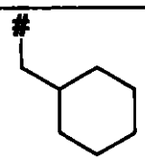
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
788	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
789	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
790	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OH	
791	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
792	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	

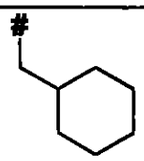
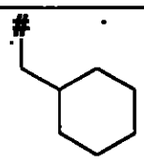
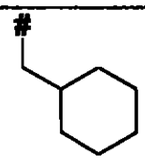
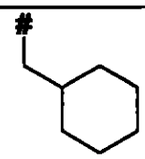
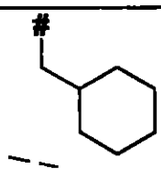
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
793	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
794	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
795	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
796	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
797	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	

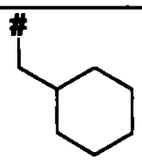
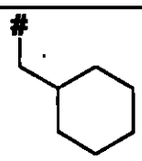
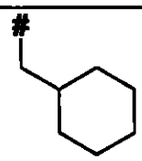
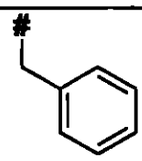
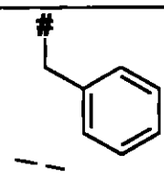
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
798	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
799	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
800	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
801	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OH	
802	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	

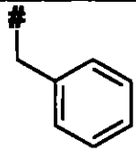
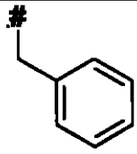
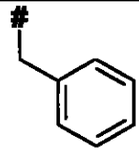
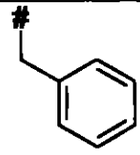
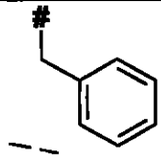
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
803	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
804	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
805	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
806	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
807	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	

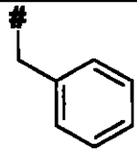
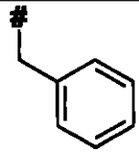
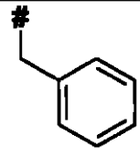
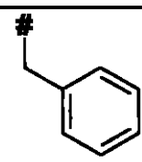
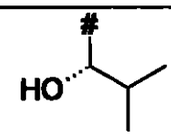
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
808	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
809	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
810	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
811	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
812	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OH	

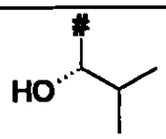
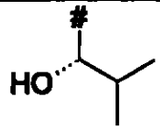
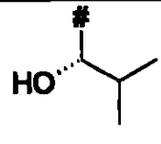
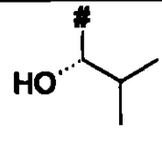
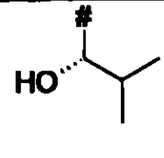
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
813	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
814	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
815	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
816	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
817	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	

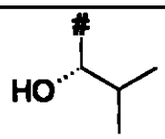
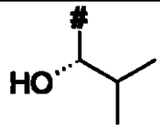
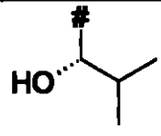
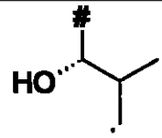
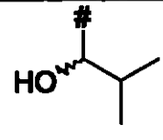
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP[a])
818	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
819	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
820	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
821	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
822	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	

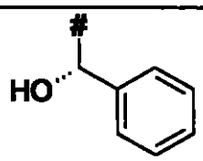
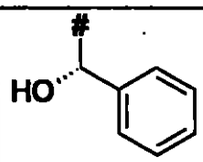
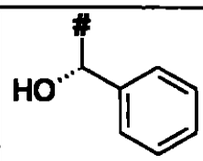
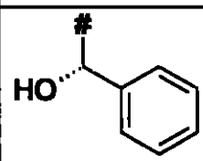
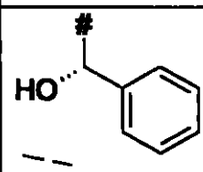
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
823	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OH	
824	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
825	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
826	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
827	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	

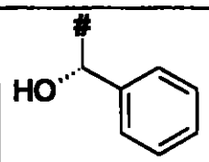
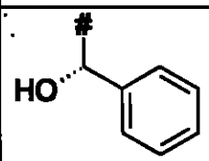
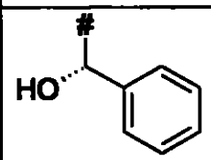
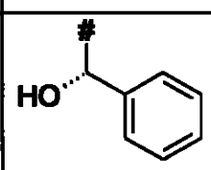
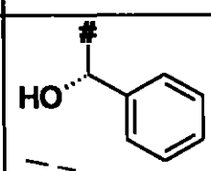
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
828	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	
829	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
830	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OH	
831	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OH	
832	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OH	

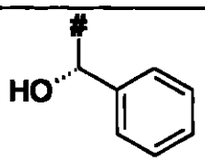
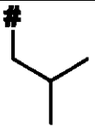
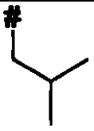
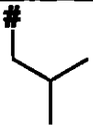
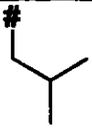
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
833	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OH	
834	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OH	
835	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
836	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OH	
837	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OH	

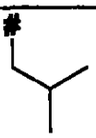
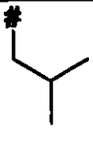
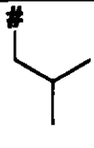
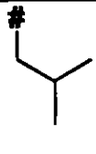
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^8	logP[a])
838	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
839	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
840	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
841	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
842	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OH	

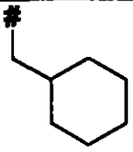
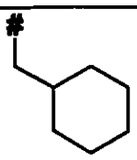
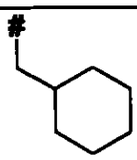
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
843	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
844	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
845	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OH	
846	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
847	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OH	

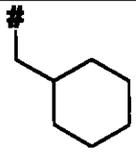
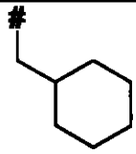
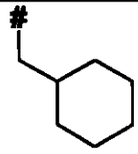
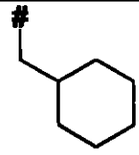
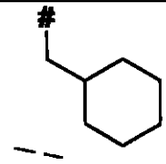
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
848	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
849	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
850	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
851	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
852	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OH	

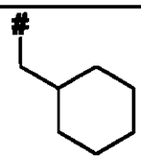
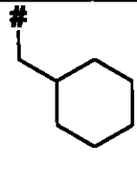
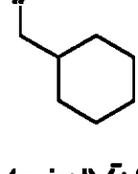
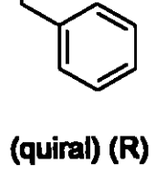
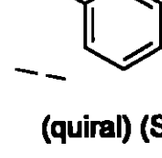
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
853	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
854	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
855	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
856	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OH	
857	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OH	

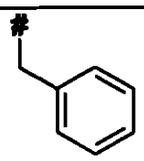
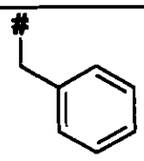
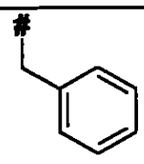
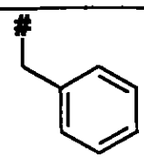
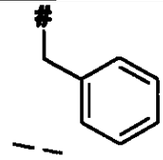
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP*)
858	*n*-pentilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	H	OH	
859	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
860	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
861	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
862	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OH	

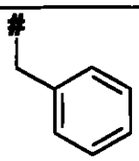
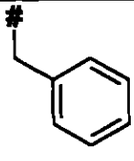
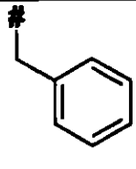
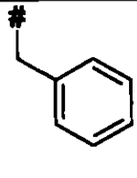
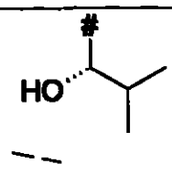
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
863	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
864	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
865	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
866	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
867	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OH	

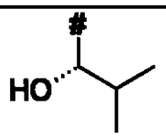
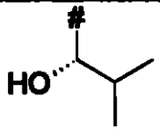
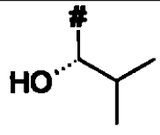
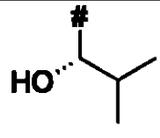
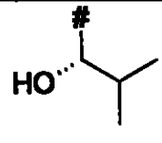
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^6	R^8	logP[a])
868	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
869	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
870	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
871	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
872	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OH	

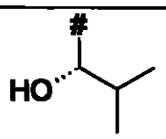
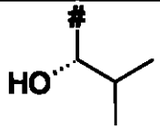
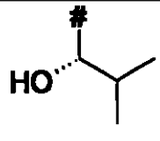
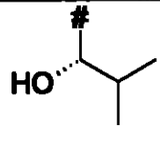
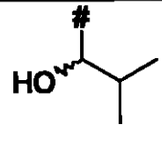
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^4	R^5	logP[a])
873	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
874	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
875	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
876	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
877	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OH	

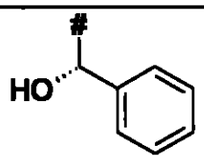
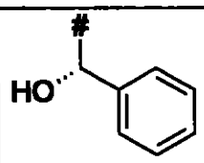
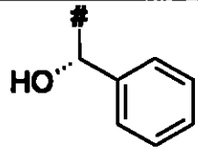
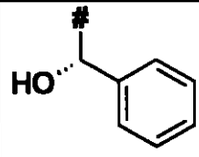
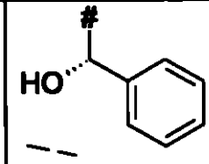
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
878	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OH	
879	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
880	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
881	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
882	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OH	

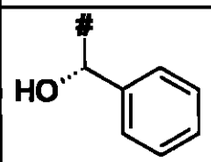
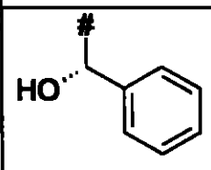
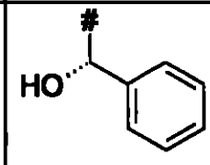
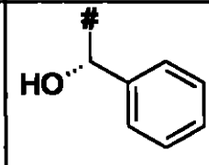
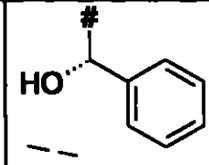
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP[a])
883	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OH	
884	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
885	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OH	
886	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OH	
887	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OH	

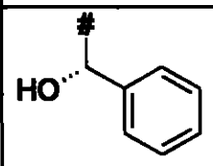
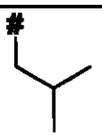
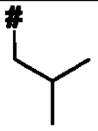
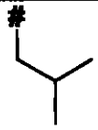
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^8	logP[a])
888	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OH	
889	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OH	
890	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
891	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OH	
892	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	

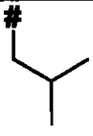
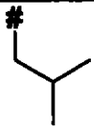
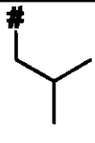
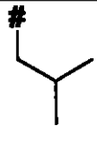
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
893	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
894	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
895	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
896	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
897	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	

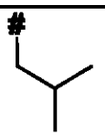
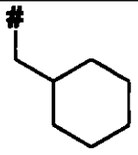
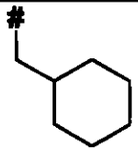
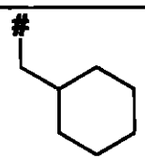
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
898	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
899	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
900	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
901	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
902	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	

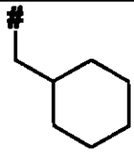
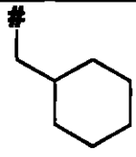
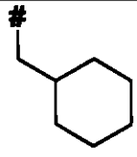
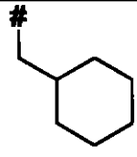
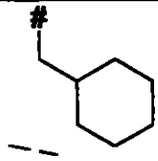
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
903	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
904	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
905	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
906	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
907	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	

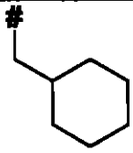
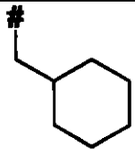
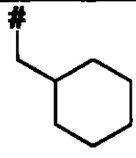
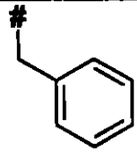
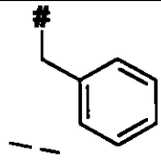
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
908	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
909	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
910	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
911	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
912	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	

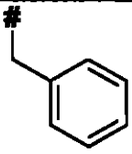
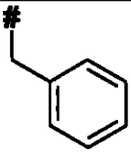
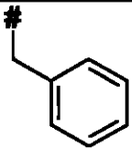
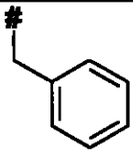
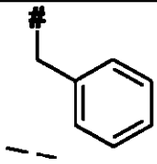
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
913	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
914	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
915	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
916	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
917	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	

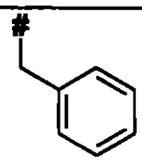
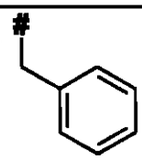
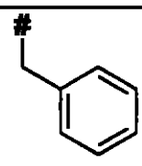
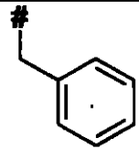
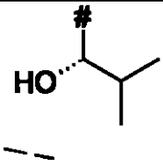
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
918	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
919	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
920	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
921	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
922	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	

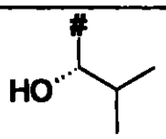
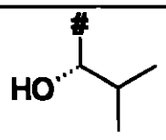
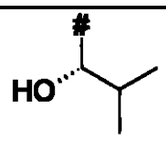
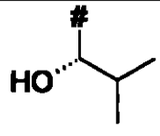
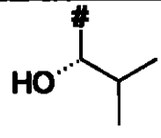
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP[a])
923	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
924	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
925	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
926	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
927	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	

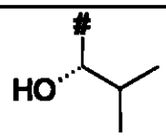
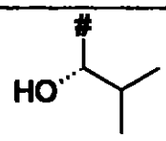
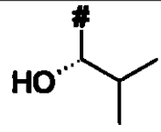
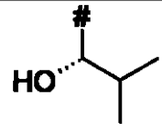
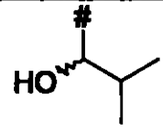
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
928	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
929	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
930	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
931	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
932	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	

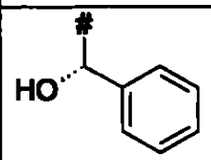
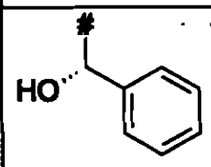
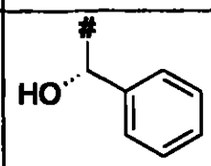
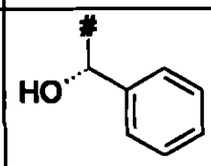
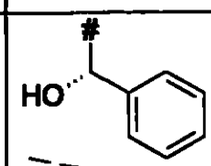
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
933	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
934	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
935	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
936	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
937	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	

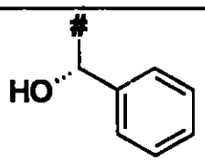
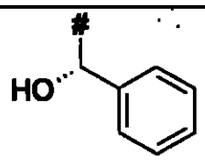
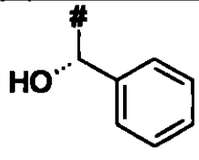
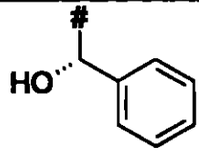
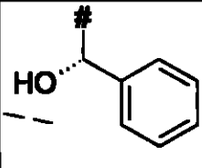
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP
938	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	#  (quiral) (R)	H	H	OCH_2CH_3	
939	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	#  (quiral) (S)	H	H	OCH_2CH_3	
940	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	#  (quiral) (R)	H	H	OCH_2CH_3	
941	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	#  (quiral) (S)	H	H	OCH_2CH_3	
942	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	#  (quiral) (R)	H	H	OCH_2CH_3	

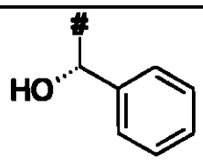
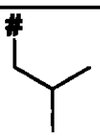
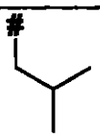
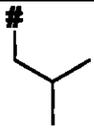
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	log$P^{(a)}$
943	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
944	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
945	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
946	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
947	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	

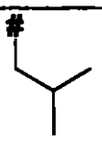
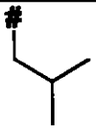
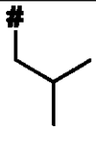
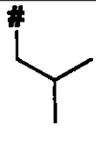
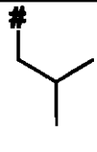
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
948	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
949	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
950	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
951	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
952	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	

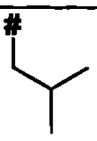
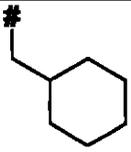
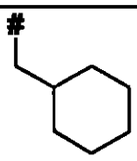
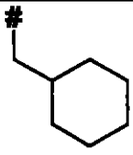
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
953	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
954	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
955	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
956	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
957	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	

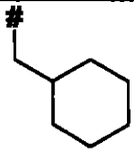
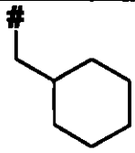
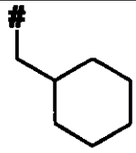
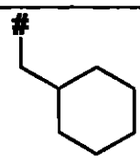
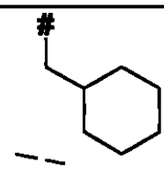
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
958	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
959	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
960	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
961	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
962	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	

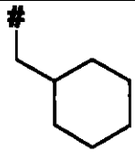
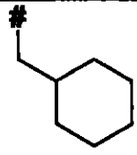
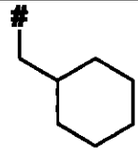
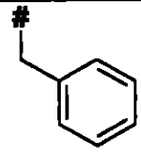
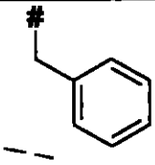
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^8	logP[a])
963	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
964	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
965	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
966	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (+/-)	H	H	OCH_2CH_3	
967	*n*-hexilo / H (quiral) (R)	H (quiral) (+/-)	 (quiral) (+/-)	H	H	OCH_2CH_3	

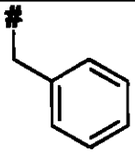
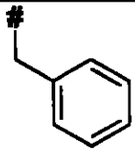
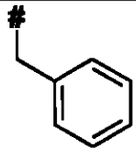
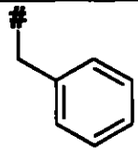
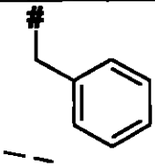
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
968	*n*-hexilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	H	OCH_2CH_3	
969	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
970	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
971	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
972	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	

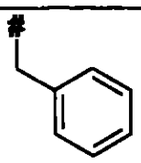
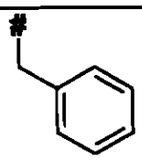
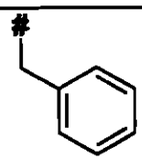
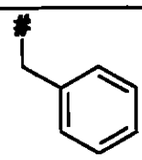
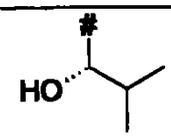
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
973	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
974	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
975	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
976	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
977	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	

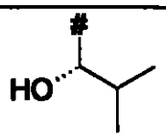
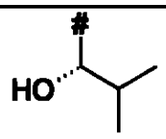
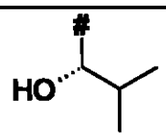
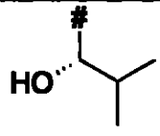
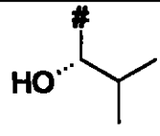
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
978	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
979	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
980	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
981	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
982	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	

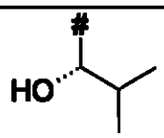
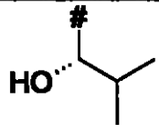
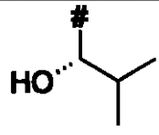
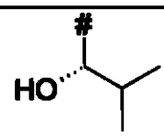
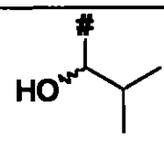
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^8	logP*)
983	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
984	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
985	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
986	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
987	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	

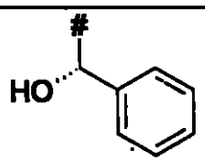
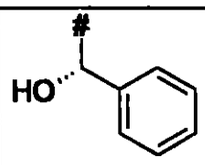
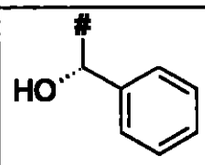
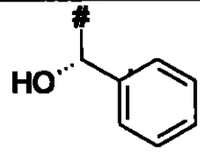
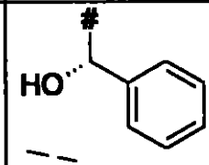
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
988	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
989	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
990	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
991	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
992	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	

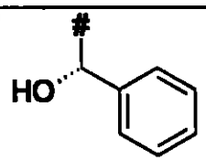
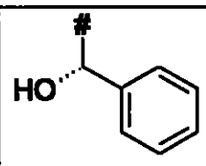
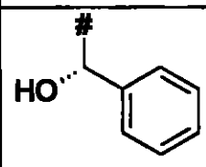
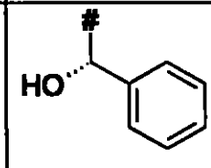
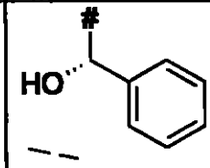
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
993	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
994	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
995	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
996	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
997	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	

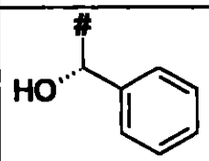
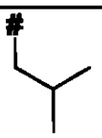
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
998	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
999	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
1000	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1001	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1002	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	

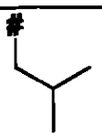
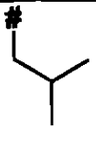
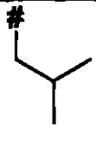
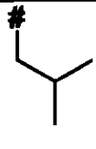
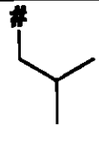
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[m])
1003	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1004	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1005	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1006	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1007	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	

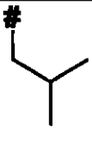
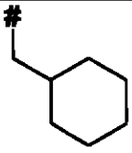
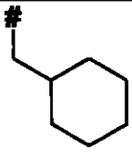
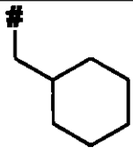
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	log($P^{a)}$)
1008	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1009	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1010	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
1011	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1012	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	

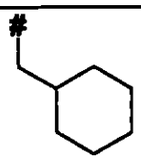
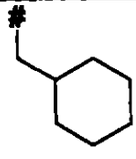
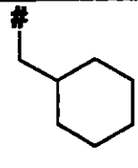
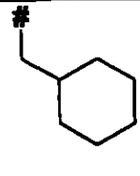
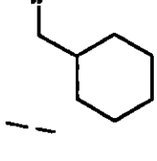
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP*)
1013	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1014	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1015	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1016	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1017	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	

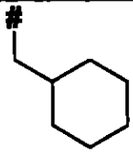
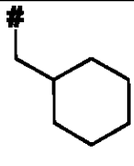
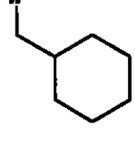
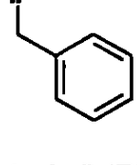
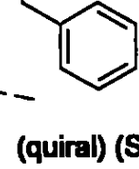
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
1018	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1019	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1020	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1021	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
1022	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	

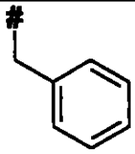
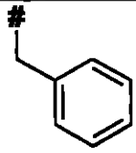
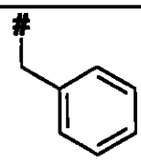
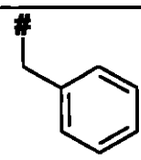
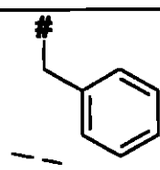
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1023	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1024	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1025	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1026	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1027	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	

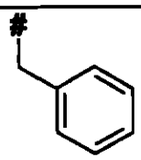
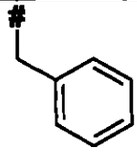
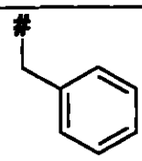
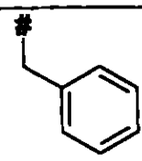
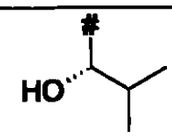
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP*)
1028	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1029	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1030	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1031	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1032	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	

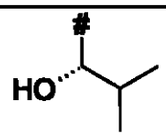
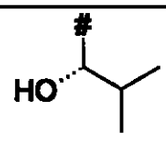
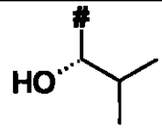
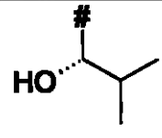
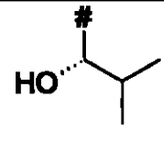
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP[a])
1033	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1034	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1035	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1036	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1037	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	

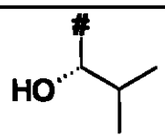
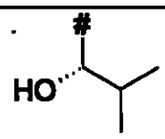
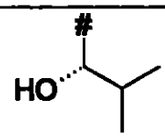
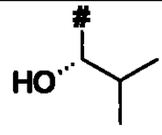
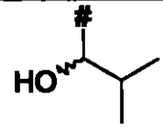
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
1038	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1039	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1040	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1041	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1042	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	

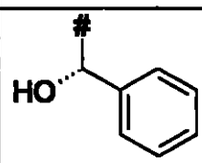
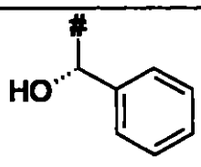
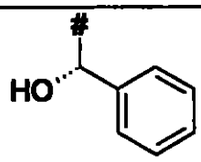
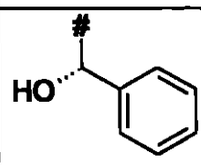
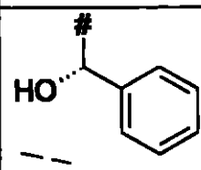
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4'}$	R^5	R^6	logP[a])
1043	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
1044	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1045	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1046	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1047	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	

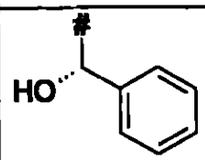
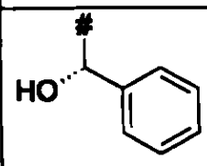
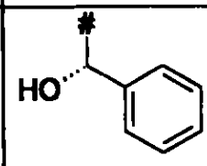
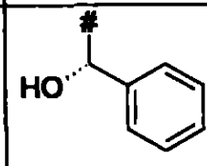
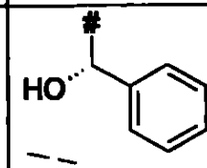
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
1048	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1049	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1050	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1051	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1052	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	

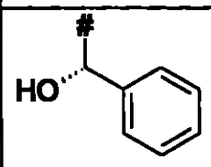
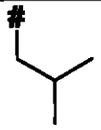
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
1053	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1054	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
1055	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1056	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1057	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	

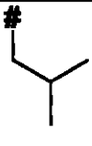
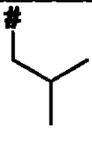
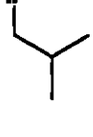
Ejemplo	R^1 / R^{1a}	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
1058	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1059	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1060	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1061	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1062	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	

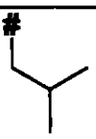
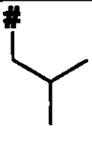
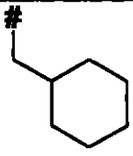
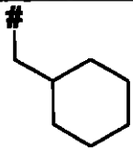
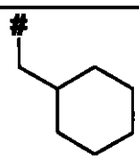
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
1063	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1064	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1065	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
1066	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1067	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	

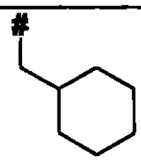
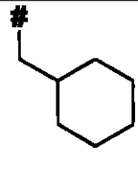
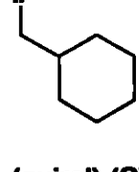
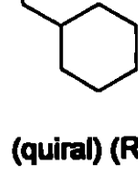
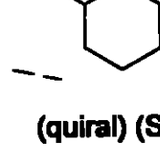
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
1068	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1069	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1070	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1071	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1072	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	

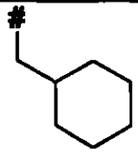
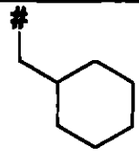
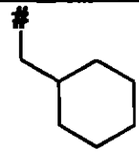
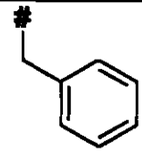
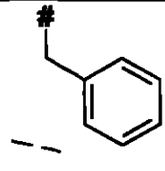
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	log$P^{(a)}$
1073	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1074	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1075	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1076	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
1077	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	

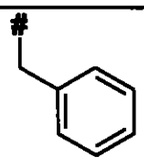
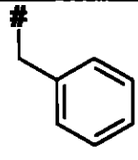
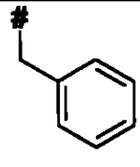
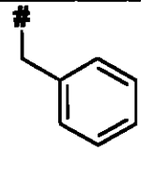
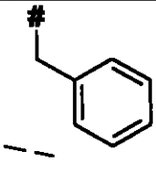
Ejemplo	R^1 / $R^{1,*}$	R^2	R^3	R^{4a}	R^5	R^8	logP[a])
1078	*n*-pentilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	H	OCH_2CH_3	
1079	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1080	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1081	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1082	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	

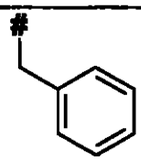
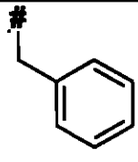
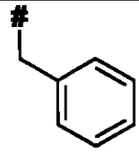
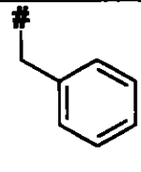
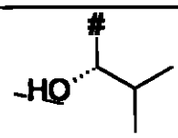
Ejemplo	R^1 / $R^{1,*}$	R^2	R^3	R^{4a}	R^5	R^6	logP*)
1083	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1084	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1085	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1086	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1087	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	

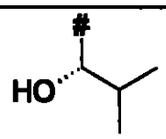
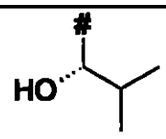
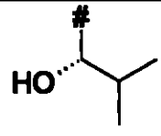
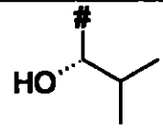
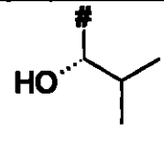
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
1088	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1089	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1090	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1091	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1092	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	

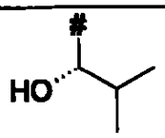
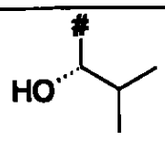
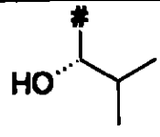
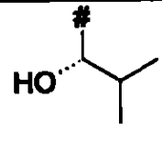
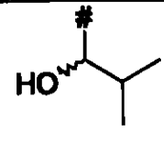
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[20]
1093	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1094	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1095	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1096	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1097	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	

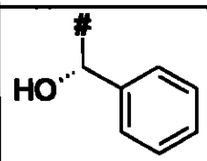
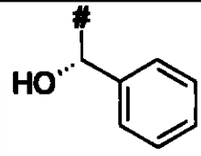
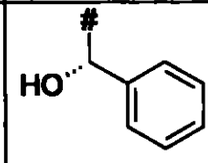
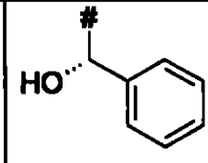
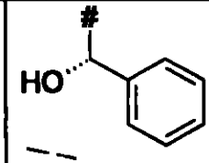
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP[a])
1098	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
1099	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1100	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1101	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1102	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	

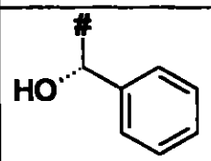
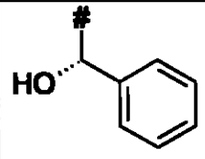
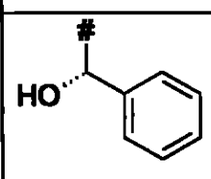
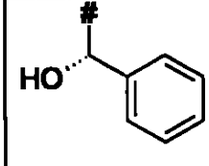
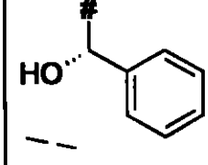
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
1103	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	
1104	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1105	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	OCH_2CH_3	
1106	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	OCH_2CH_3	
1107	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	OCH_2CH_3	

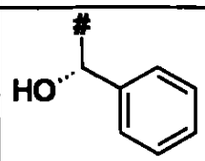
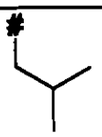
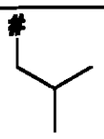
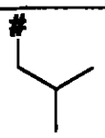
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP[a])
1108	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	OCH_2CH_3	
1109	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	OCH_2CH_3	
1110	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1111	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	OCH_2CH_3	
1112							
1113	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	

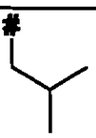
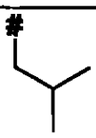
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
1114	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1115	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1116	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1117	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1118	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	

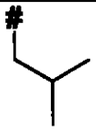
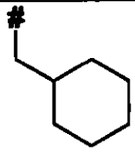
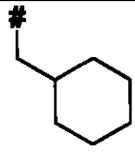
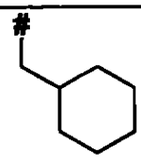
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^8	log$P^{(a)}$
1119	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1120	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1121	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1122	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1123	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	

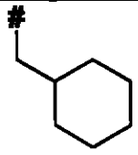
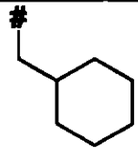
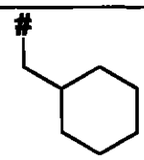
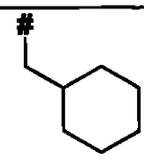
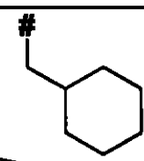
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1124	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1125	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1126	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1127	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1128	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	

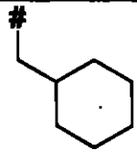
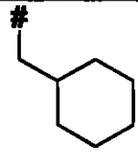
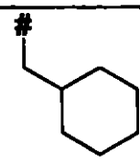
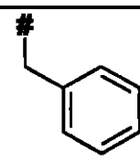
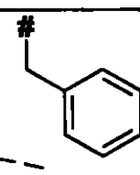
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
1129	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1130	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1131	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1132	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1133	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	

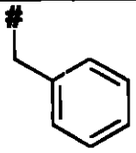
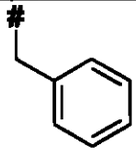
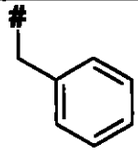
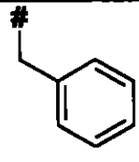
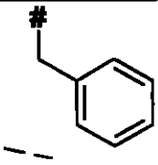
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^8	logP*)
1134	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1135	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1136	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1137	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1138	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	

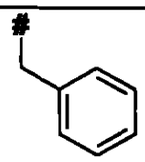
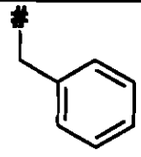
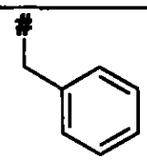
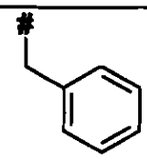
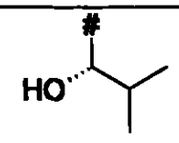
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
1139	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1140	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1141	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1142	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1143	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	SCH_3	

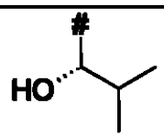
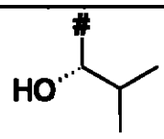
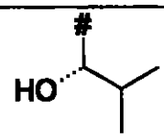
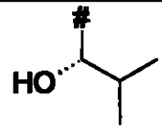
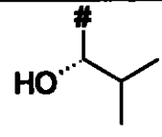
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1144	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1145	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1146	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1147	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1148	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	

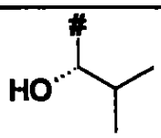
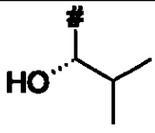
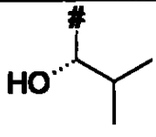
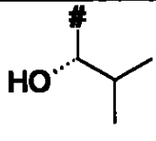
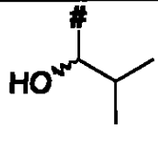
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1149	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1150	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1151	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1152	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1153	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	

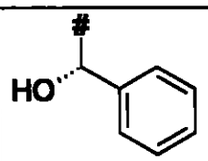
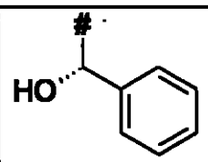
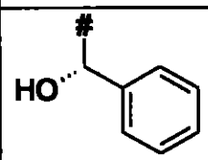
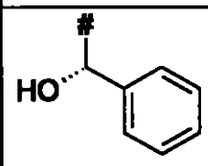
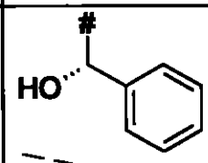
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP$^{(a)}$)
1154	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1155	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1156	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1157	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1158	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	

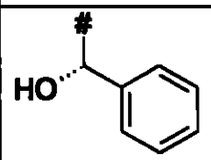
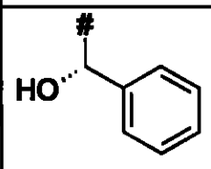
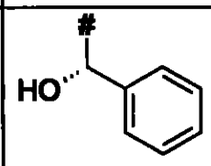
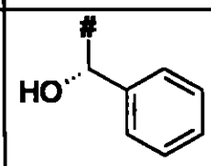
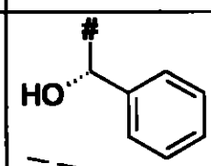
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1159	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1160	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1161	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1162	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1163	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	

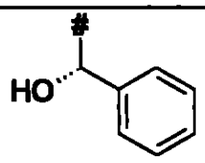
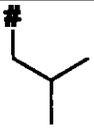
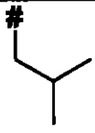
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	log(P^a)
1164	*n*-hexilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1165	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1166	*n*-hexilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1167	*n*-hexilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1168	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	

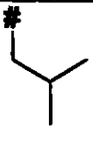
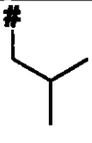
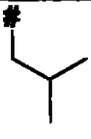
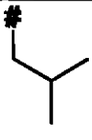
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
1169	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1170	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1171	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1172	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1173	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	

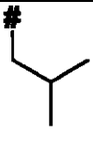
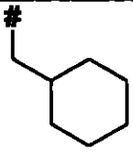
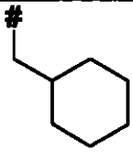
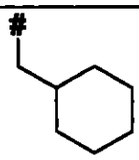
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^6	R^8	logP*)
1174	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1175	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1176	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1177	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1178	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	

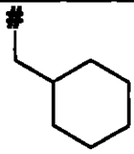
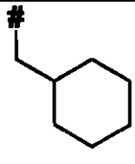
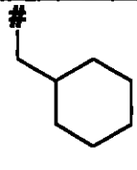
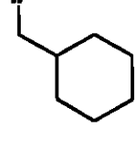
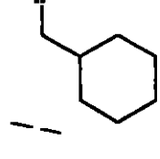
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP[a])
1179	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1180	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1181	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1182	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1183	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	

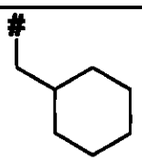
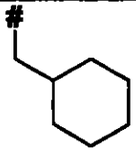
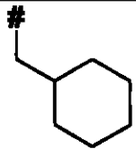
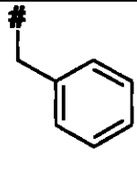
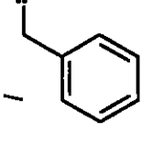
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1184	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1185	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1186	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1187	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1188	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	

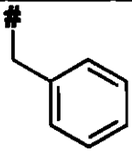
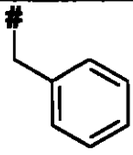
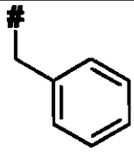
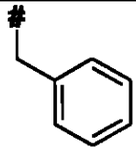
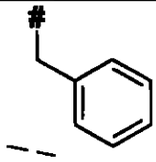
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
1189	*n*-hexilo / H (quiral) (+/-)	H (quiral) (+/-)	 (quiral) (+/-)	H	H	SCH_3	
1190	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1191	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1192	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1193	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	

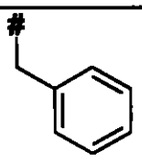
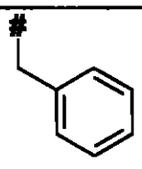
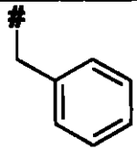
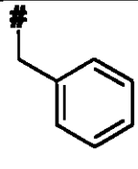
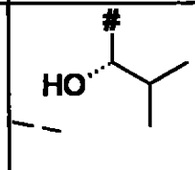
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
1194	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1195	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1196	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1197	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1198	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	SCH_3	

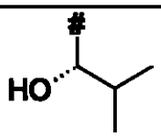
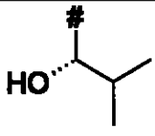
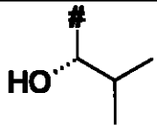
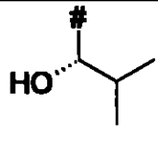
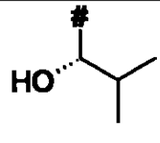
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1199	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1200	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1201	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1202	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1203	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	

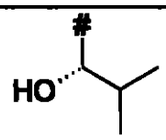
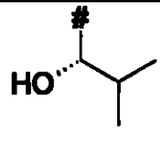
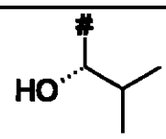
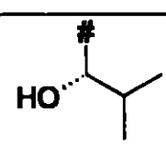
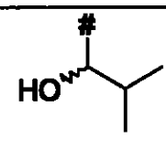
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[m]
1204	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1205	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1206	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1207	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1208	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	

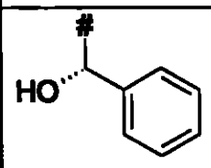
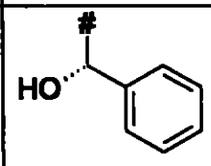
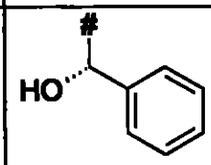
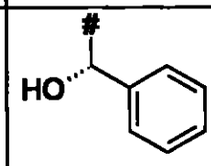
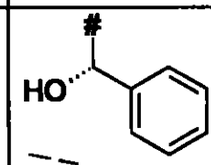
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
1209	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1210	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1211	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1212	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1213	*n*-hexilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	

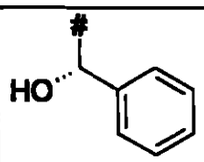
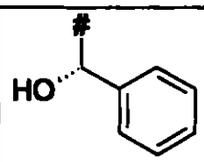
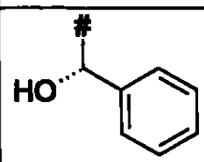
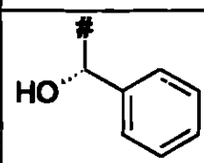
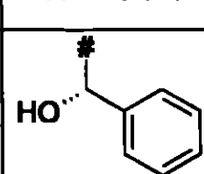
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1214	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1215	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1216	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1217	*n*-hexilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1218	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	

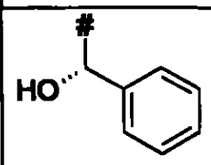
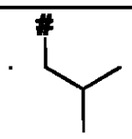
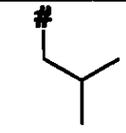
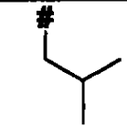
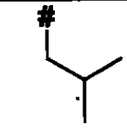
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
1219	*n*-hexilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1220	*n*-hexilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1221	*n*-hexilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1222	*n*-hexilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1223	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	

Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
1224	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1225	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1226	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1227	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1228	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	

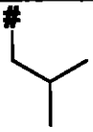
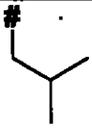
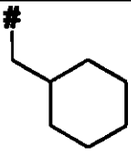
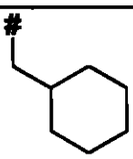
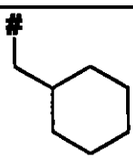
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
1229	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1230	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1231	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1232	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1233	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	

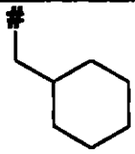
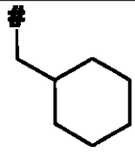
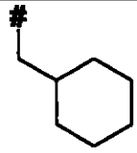
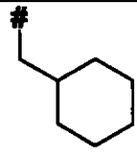
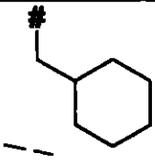
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
1234	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1235	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1236	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1237	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1238	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	

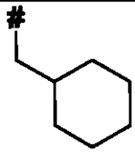
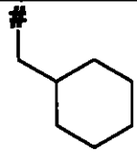
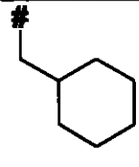
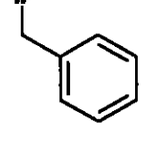
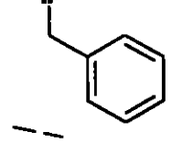
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1239	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1240	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1241	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1242	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1243	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	

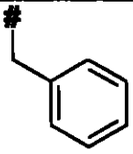
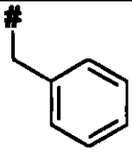
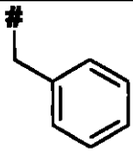
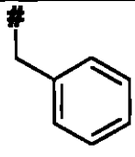
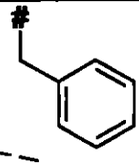
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^8	logP*)
1244	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1245	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1246	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1247	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1248	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	

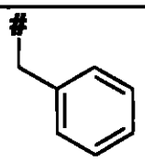
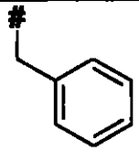
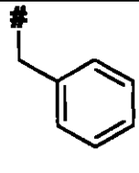
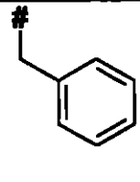
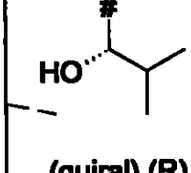
Ejemplo	R^1 / R^{1*}	R^2	R^3	R^{4**}	R^5	R^6	logP*)
1249	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	# (quiral) (R)	H	H	SCH_3	
1250	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	# (quiral) (S)	H	H	SCH_3	
1251	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	# (quiral) (R)	H	H	SCH_3	
1252	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	# (quiral) (S)	H	H	SCH_3	
1253	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	# (quiral) (+/-)	H	H	SCH_3	

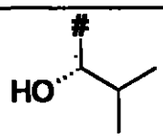
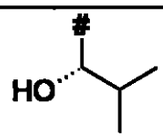
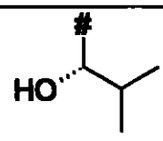
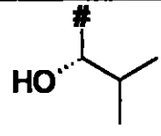
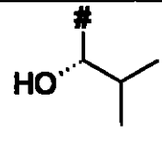
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	log(P^{**})
1254	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1255	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1256	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1257	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1258	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	

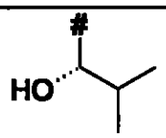
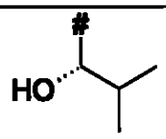
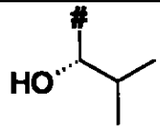
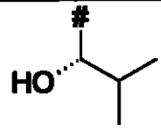
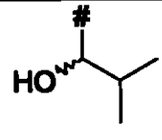
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
1259	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1260	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1261	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1262	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1263	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	

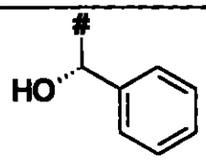
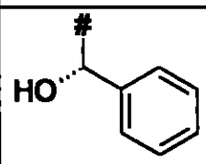
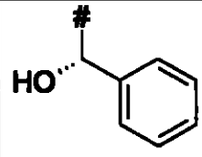
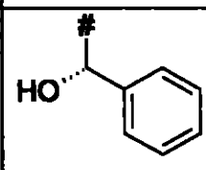
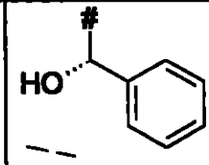
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1264	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1265	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1266	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1267	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1268	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (R)	 (quiral) (S)	H	H	SCH_3	

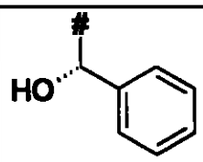
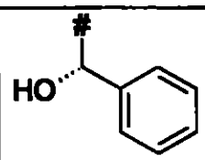
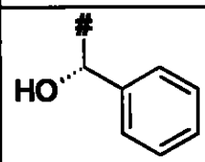
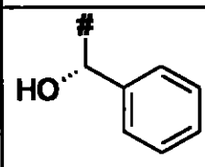
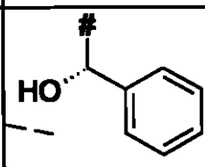
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
1269	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	#  (quiral) (R)	H	H	SCH_3	
1270	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	#  (quiral) (S)	H	H	SCH_3	
1271	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	#  (quiral) (R)	H	H	SCH_3	
1272	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (R)	#  (quiral) (S)	H	H	SCH_3	
1273	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	#  (quiral) (R)	H	H	SCH_3	

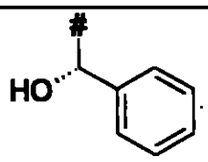
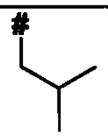
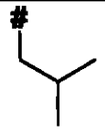
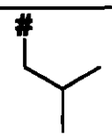
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1274	*n*-pentilo / H (quiral) (S)	CH_3 (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1275	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1276	*n*-pentilo / H (quiral) (R)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1277	*n*-pentilo / H (quiral) (±)	CH_3 (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1278	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	

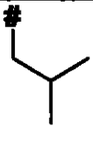
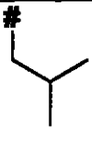
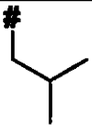
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4m}	R^5	R^6	logP[a])
1279	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1280	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1281	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1282	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1283	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	

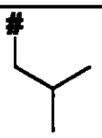
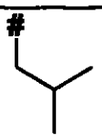
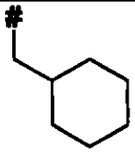
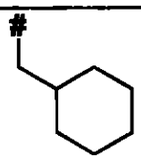
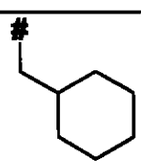
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
1284	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1285	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1286	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1287	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1288	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	

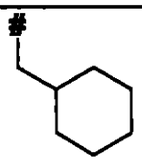
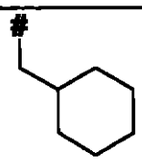
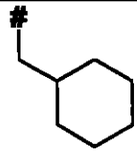
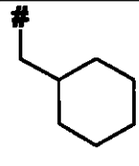
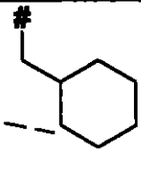
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP*)
1289	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1290	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1291	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1292	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1293	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	

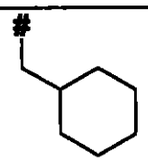
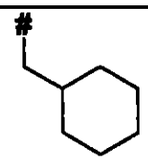
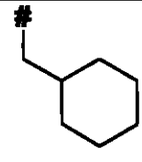
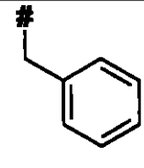
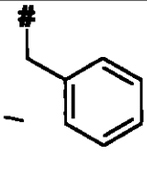
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1294	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1295	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1296	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1297	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1298	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	

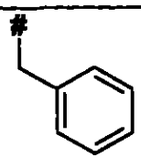
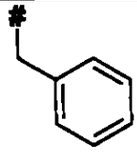
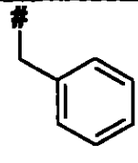
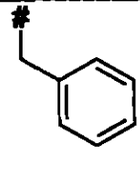
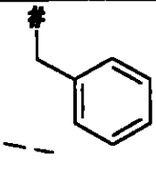
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
1299	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1300	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1301	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1302	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1303	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	

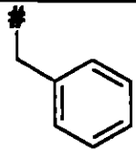
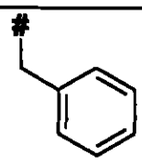
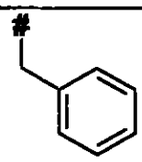
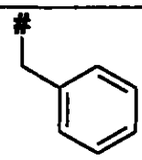
Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1304	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1305	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1306	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1307	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1308	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (+/-)	H	H	SCH_3	

Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^4	R^5	R^6	logP*)
1309	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1310	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1311	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1312	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1313	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	

Ejemplo	R^1 / $R^{1'}$	R^2	R^3	R^{4a}	R^5	R^6	logP[a])
1314	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1315	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1316	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1317	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1318	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	

Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^6	logP[a])
1319	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1320	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1321	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1322	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1323	*n*-pentilo / H (quiral) (R)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	

Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^8	logP*)
1324	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	
1325	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1326	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (R)	H	H	SCH_3	
1327	*n*-pentilo / H (quiral) (S)	H (quiral) (R)	 (quiral) (S)	H	H	SCH_3	
1328	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (R)	H	H	SCH_3	

Ejemplo	R^1 / $R^{1'}$	R^2	R^3	$R^{4''}$	R^5	R^8	logP*)
1329	*n*-pentilo / H (quiral) (S)	H (quiral) (S)	 (quiral) (S)	H	H	SCH_3	
1330	*n*-pentilo / H (quiral) (R)	H (quiral) (S)	 (quiral) (±)	H	H	SCH_3	
1331	*n*-pentilo / H (quiral) (R)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	
1332	*n*-pentilo / H (quiral) (±)	H (quiral) (±)	 (quiral) (±)	H	H	SCH_3	

La determinación de los valores de logP se realizó de acuerdo con EEC-Directive 79/831, Annex V: A8 por HPLC (procedimiento de gradiente, acetonitrilo/ ácido fosfórico acuoso al 0,1%).

* BnOCO = benciloxicarbonilo

** BOC = *terc*-butoxicarbonilo

B. **Ejemplos de Ensayo Biológico**

Ejemplo 1

Ensayo de Podosphaera (manzana) / protector

Disolvente: 24,5 partes en peso de acetona

24,5 partes en peso de dimetilacetamida

Emulsionante: 1 parte en peso de alquilaril poliglicol éter

Para producir una preparación adecuada de compuesto activo, se mezcla 1 parte en peso de compuesto activo con las cantidades indicadas de disolvente y emulsionante, y el concentrado se diluye con agua a la concentración deseada.

Para ensayar la actividad protectora, se pulverizan plantas jóvenes con la preparación de compuesto activo a la tasa de aplicación indicada. Después de que se haya secado el revestimiento de pulverización, se inoculan las plantas con una suspensión acuosa de esporas del agente causante del moho de la manzana (Podosphaera leucotricha). Las plantas después se colocan en un invernadero a aproximadamente 23°C y una humedad atmosférica relativa de aproximadamente el 70%.

El ensayo se evalúa 7 días después de la inoculación. 0% significa una eficacia que corresponde a la del control, mientras que una eficacia del 100% significa que no se observa enfermedad.

El compuesto del ejemplo 1 mostró una eficacia del 100% a una tasa de aplicación de 100 g/ha.

Ejemplo 2

Ensayo de Venturia (manzanas) / protector

Disolvente: 24,5 partes en peso de acetona

24,5 partes en peso de dimetilacetamida

Emulsionante: 1 parte en peso de alquilaril poliglicol éter

Para producir una preparación adecuada de compuesto activo, se mezcla 1 parte en peso de compuesto activo con las cantidades indicadas de disolvente y emulsionante, y el concentrado se diluye con agua a la concentración deseada.

Para ensayar la actividad protectora, se pulverizan plantas jóvenes con la preparación de compuesto activo a la tasa de aplicación indicada. Después de que se haya secado el revestimiento de pulverización, se inoculan las plantas con una suspensión acuosa de conidios del agente causante de la roña de la manzana (Venturia inaequalis) y después permanece durante 1 día en una cabina de incubación a aproximadamente 20°C y una humedad atmosférica relativa del 100%.

Las plantas después se colocan en un invernadero a aproximadamente 21°C y una humedad atmosférica relativa de aproximadamente el 90%.

El ensayo se evalúa 10 días después de la inoculación. 0% significa una eficacia que corresponde a la del control, mientras que una eficacia del 100% significa que no se observa enfermedad.

El compuesto del ejemplo 1 mostró una eficacia del 100% a una tasa de aplicación de 100 g/ha.

Ejemplo 3

Ensayo de Botrytis (alubias) / protector

Disolvente: 24,5 partes en peso de acetona

24,5 partes en peso de dimetilacetamida

Emulsionante: 1 parte en peso de alquilaril

poliglicol éter

Para producir una preparación adecuada de compuesto activo, se mezcla 1 parte en peso de compuesto activo con las cantidades indicadas de disolvente y emulsionante, y el concentrado se diluye con agua a la concentración deseada.

Para ensayar la actividad protectora, se pulverizan plantas jóvenes con la preparación de compuesto activo. Después de que se haya secado el revestimiento de pulverización, se colocan 2 pequeños trozos de agar cubiertos con cultivo de Botrytis cinerea en cada hoja. Las plantas inoculadas se colocan en una cámara oscura a 20°C y una humedad atmosférica relativa del 100%.

2 días después de la inoculación, se evalúa el tamaño de las lesiones en las hojas. 0% significa una eficacia que corresponde a la del control, mientras que una eficacia del 100% significa que no se observa enfermedad.

El compuesto del ejemplo 1 mostró una eficacia de más del 90% a una tasa de aplicación de 500 g/ha.

Ejemplo 4

Ensayo de Sphaerotheca (pepino)

Disolvente: 49 partes en peso de *N,N*-dimetilformamida

Emulsionante: 1 parte en peso de alquilaril poliglicol éter

Para producir una preparación adecuada de compuesto activo, se mezcla 1 parte en peso de compuesto activo con las cantidades indicadas de disolvente y emulsionante, y el concentrado se diluye con agua a la concentración deseada.

Para ensayar la actividad protectora, se pulverizan plantas jóvenes con la preparación de compuesto activo a la tasa de aplicación indicada. Un día después del tratamiento, se inoculan las plantas con una suspensión acuosa de

esporas del agente causante de sphaerotheca fuliginea. Las plantas después se colocan en un invernadero a aproximadamente 23°C y una humedad atmosférica relativa de aproximadamente el 70%.

El ensayo se evalúa 7 días después de la inoculación. 0% significa una eficacia que corresponde a la del control, mientras que una eficacia del 100% significa que no se observa enfermedad.

Los compuestos de los ejemplos 1, 8 y 10 mostraron una eficacia del 70% a una tasa de aplicación de 500 ppm.

Ejemplo 5

Ensayo in vitro para el cálculo del valor DE_{50} con Phytophthora infestans como organismo de ensayo.

Se cargaron pocillos de placas de microtitulación de 96 orificios con 10 µl de una solución del compuesto de ensayo en metanol junto con el emulsionante alquilaril poliglicol éter. Después de ello, el disolvente se evapora en una campana. En la siguiente etapa, se proporciona en cada pocillo 200□l de medio líquido de dextrosa de patata que se ha corregido con una concentración apropiada de suspensión de micelio o esporas de Phytophthora infestans.

Las concentraciones resultantes de los compuestos de ensayo en el pocillo de microtitulación son 50, 5, 0,5 y 0,05 ppm. La concentración resultante del emulsionante en todos los pocillos es constantemente 300 ppm.

Con la ayuda de un fotómetro se mide la extinción en todos los pocillos a la longitud de onda de 620 nm.

Las placas de microtitulación después se transfieren durante 3-5 días a un agitador a 20°C y 85% de humedad relativa.

Al final de periodo de incubación se mide el crecimiento del organismo de

ensayo de nuevo, fotométricamente a la longitud de onda de 620 nm. La diferencia entre los dos valores de extinción (tomados antes y después de la incubación) es proporcional al crecimiento del organismo de ensayo.

En base a los datos de Δ de extinción de las diferentes concentraciones de ensayo y del organismo de ensayo sin tratar (control) se calcula una curva de respuesta a dosis. Se define la concentración que es necesaria para dar una inhibición del crecimiento del 50% y se presenta como valor de DE_{50} (= Dosis Eficaz que causa una inhibición del crecimiento del 50%) en ppm (= mg / l).

Los compuestos de los ejemplos 1, 3 y 4 mostraron un valor de DE_{50} de menos de 0,05.

Ejemplo 6

Ensayo de Spodoptera frugiperda (cepa sensible)

Procedimiento: 1 mg de compuesto disuelto en 100 µl de acetona; diluido con 900 µl Triton X-100 acuoso al 0,02% (p/v)

Se tratan trozos de hojas de repollo (*Brassica oleracea*) sumergiéndolos en la preparación del compuesto activo de la concentración deseada y se infestan con larvas del gusano cogollero del maíz (*Spodoptera frugiperda*) siempre que las hojas aún estén húmedas.

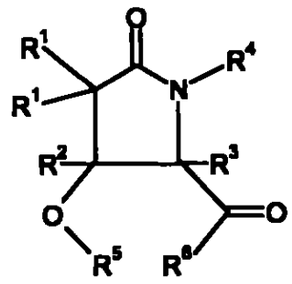
Después de seis días se determina la mortalidad en %. 100% significa que todas las orugas han muerto; 0% significa que ninguna de las orugas ha muerto.

En este ensayo, por ejemplo, el compuesto del ejemplo 1 mostró una eficacia del 100%.

Habiendo descrito la invención como antecede se declara como propiedad lo contenido en las siguientes

REIVINDICACIONES

1. El uso de un compuesto de fórmula (I) o una sal del mismo,



(I)

en la que los símbolos tienen los siguientes significados:

R^1 es en cada caso igual o diferente H, halógeno, alquilo (C_1-C_{20}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, O-R", $S(O)_nR"$, $SO_2NR_2"$, COOR", COSR', CSOR', -O-COR", -O-CSR', -CO-R" o $CONR_2"$, o los dos sustituyentes R^1 juntos forman un anillo de 3 a 8 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo;

R' es en cada caso igual o diferente alquilo (C_1-C_{12}), alquenilo (C_2-C_{12}), alquinilo (C_2-C_{12}), cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), arilo (C_6-C_{12}), o heterociclilo, estando todos ellos sin sustituir o sustituidos;

R" es en cada caso igual o diferente H o R';

n es 0, 1 ó 2;

R^2 es H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

R^3 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, COOR", CSOR", COSR", -CO-R" o $CONR_2$";

R^4 H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_{12}) sin sustituir o sustituido, alquinilo (C_3-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, $S(O)_nR'$, COOR', CSOR', COSR', -CO-R', $CONR_2$" o G;

R^5 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido, SO_2R', COR', COOR', COSR', CSOR', $CONR_2$" o G;

G es Si[alquil (C_1-C_6)]$_u$[$(CH_2)_r$-fenil-$(CH_3)_u$]$_y$[$(O)_v$-(alquileno (C_1-C_4))-

(O-alquileno (C_1-C_4))$_w$-H]$_z$,

en el que x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2;

R^6 es OR", SR" o NR_2"

o

R^5 y R^6 juntos forman un enlace,

para el control de microorganismos fitopatógenos o animales dañinos.

2. El uso de acuerdo con la reivindicación 1, en el que los símbolos de la fórmula (I) tienen los siguientes significados:

R^1 es en cada caso igual o diferente H, cloro, bromo, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{10}) sin sustituir o sustituido, alquinilo (C_2-C_{10}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, OR", COOR" o -CO-R" o los dos sustituyentes R^1 juntos forman un anillo de 3 a 8 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo.

R^2 es H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido.

R^3 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido,

heterociclilo sin sustituir o sustituido, COOR", -CO-R" o $CONR_2$".

R^4 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_{10}) sin sustituir o sustituido, alquinilo (C_3-C_{10}) sin sustituir o sustituido, SO_2R', COOR', -COR', $CONR_2$" o G.

R^5 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, SO_2R', COR', COOR', COSR', CSOR', $CONR_2$" o G.

G es $Si[alquil\ (C_1\text{-}C_6)]_x[(CH_2)_t\text{-}fenil\text{-}(CH_3)_u]_y[(O)_v\text{-}(alquileno\ (C_1\text{-}C_4))\text{-}(O\text{-}alquileno\ (C_1\text{-}C_4))_w\text{-}H]_z$,

en el que x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2.

R^6 es OR", SR" o NR_2"

o

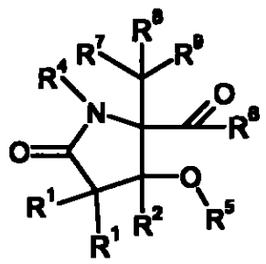
R^5 y R^6 juntos forman un enlace.

R' es en cada caso igual o diferente alquilo (C_1-C_{10}), alquenilo (C_2-C_{10}), alquinilo (C_2-C_{10}), cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), fenilo, o heterociclilo, estando todos ellos sin sustituir o sustituidos.

R" es en cada caso igual o diferente y es H o R'.

n es 0, 1 ó 2.

3. El uso de acuerdo con la reivindicación 1 ó 2 en el que los compuestos de fórmula (I) son compuestos de fórmula (II),



(II),

en la que los símbolos tienen los siguientes significados:

R^1 es en cada caso igual o diferente H, cloro, bromo, alquilo (C_1-C_{10}) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, COOR", OR" o -CO-R" o los dos sustituyentes R^1 juntos forman un anillo carbocíclico de 3 a 6 miembros;

R^2 H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_4) sin sustituir o sustituido, alquinilo (C_2-C_4) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

R^4 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_8) sin sustituir o sustituido, alquinilo (C_3-C_8) sin sustituir o sustituido, SO_2R', COOR', -COR' o G;

R^5 es H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, SO_2R', COOR', -COR', $CONR_2$", fenilo sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, o G;

G es Si[alquil (C_1-C_8)]$_x$[$(CH_2)_t$-fenil-$(CH_3)_u$]$_y$[$(O)_v$-(alquileno (C_1-C_4))-(O-alquileno (C_1-C_4))$_w$-H]$_z$,

en el que x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2;

R^6 es OR", SR" o NR_2";

o

R^5 y R^6 juntos forman un enlace;

R^7 es H, fluoro, cloro, O-R", SR", $NR"_2$, -O-COR', -S-COR', -O-CSR', $-O-SO_2R'$, -O-COOR', -O-CSOR', $-O-CONR_2"$, NO_2, o CN;

R^8 es H, alquilo (C_1-C_4) sin sustituir o sustituido, alquenilo (C_2-C_4) sin sustituir o sustituido, alquinilo (C_2-C_4) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

o

R^7 y R^8 juntos son =O o =S;

R^9 es H, halógeno, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{10}) sin sustituir o sustituido, alquinilo (C_2-C_{10}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, O-R', o SR';

o

R^8 y R^9 juntos forman un anillo de 3 a 8 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo,

R' es en cada caso igual o diferente alquilo (C_1-C_8), alquenilo (C_2-C_8), alquinilo (C_2-C_8), cicloalquilo (C_3-C_8), fenilo, o heterociclilo,

estando todos ellos sin sustituir o sustituidos; y

R" es en cada caso igual o diferente H o R";

G $SiMe_3$, $SiEt_3$, $SiMe_2$*t*-Bu, $SiMe(t\text{-}Bu)_2$, Si-*i*-Pr_3, Si-*t*-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ *i*-Pr, $SiMe_2$*i*-Pr, $SiMe_2$*i*-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-*i*-Pr), $SiPh_2$(O-*t*-Bu), Si*t*-BuPh(OMe), o $SiMe_2(O\text{-}C_2H_4\text{-}OMe)$;

n es 0, 1 ó 2.

4. El uso de acuerdo con la reivindicación 3, en el que los símbolos de la fórmula II tienen los siguientes significados:

R^1 es en cada caso igual o diferente H, cloro, bromo, alquilo (C_1-C_8), alquenilo (C_2-C_8), alquinilo (C_2-C_8), fenilo, donde los últimos cuatro grupos están sin sustituir o sustituidos con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2, y CN, heterociclilo, sin sustituir o sustituido con fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2, o CN, cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), los dos sin sustituir o sustituidos con uno a tres sustituyentes del grupo fluoro, cloro, metilo, trifluorometilo, metoxi, NO_2, y CN, o los dos sustituyentes R^1 juntos forman un anillo carbocíclico de 3 a 6 miembros.

R^2 es H, metilo, etilo, propilo, isopropilo, alilo, propargilo, ciclopropilo, ciclobutilo, ciclopentilo, ciclohexilo, fenilo, sin sustituir o sustituido

con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2, y CN, o heterociclilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, trifluorometilo, metoxi, NO_2, y CN.

R^4 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_3-C_8) sin sustituir o sustituido, alquinilo (C_3-C_8) sin sustituir o sustituido, SO_2R', COOR', -COR', $CONR_2''$ o G.

R^5 es H, alquilo (C_1-C_8), alquenilo (C_2-C_8), alquinilo (C_2-C_8), cicloalquilo (C_3-C_8) sin sustituir o sustituido, SO_2R', COOR', -COR', $CONR_2''$, o G.

R^6 es OR", SR" o NR_2",

o

R^5 y R^6 juntos forman un enlace.

R^7 es hidroxilo, mercapto, SCH_3, fluoro, cloro, bromo, metilo, etilo, metoxi, trifluorometoxi, etoxi, -O-SO_2R', -O-COOR', -O-$CONR_2''$, CN, NR" u O-G.

R^8 es H, alquilo (C_1-C_4) sin sustituir o sustituido, alquenilo (C_2-C_4) sin sustituir o sustituido, alquinilo (C_2-C_4) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, fenilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi, NO_2 y CN, heterociclilo, sin sustituir o sustituido con uno a tres sustituyentes del grupo fluoro, cloro, metilo, etilo, isopropilo, *terc*-butilo, trifluorometilo, trifluorometoxi, metoxi, etoxi,

NO_2 y CN;

o

R^7 y R^8 juntos son =O o =S.

R^9 es H, halógeno, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, propargilo, arilo (C_6-C_{10}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido;

o particular y preferiblemente

R^8 y R^9 juntos forman un anillo de 3 a 6 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo.

G es $SiMe_3$, $SiEt_3$, $SiMe_2t$-Bu, $SiMe(t\text{-Bu})_2$, Si-*i*-Pr_3, Si-*t*-$BuPh_2$, $SiMePh_2$, $SiPh_3$, $SiMe_2(C(CH_3)_2\text{-}CH(CH_3)_2)$, $SiEt_2$ *i*-Pr, $SiMe_2i$-Pr, $SiMe_2i$-Bu, $SiBz_3$, $Si(CH_2\text{-}C_6H_4\text{-}CH_3)_3$, $SiPh_2$(O-*i*-Pr), $SiPh_2$(O-*t*-Bu), Si*t*-BuPh(OMe), o $SiMe_2$(O-C_2H_4-OMe).

R' es en cada caso igual o diferente alquilo (C_1-C_8), alquenilo (C_2-C_4), alquinilo (C_2-C_4), cicloalquilo (C_3-C_6), fenilo, o heterociclilo, estando todos ellos sin sustituir o sustituidos.

R" es en cada caso igual o diferente H o R'.

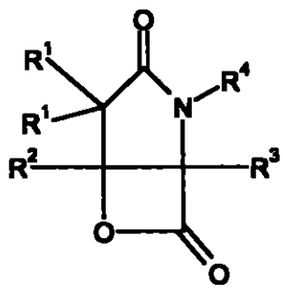
5. El uso de acuerdo con una o más de las reivindicaciones 1 a 4, en el que el compuesto de fórmula (I) se usa mezclado con uno o más compuestos agroquímicamente activos adicionales.

6. El uso de acuerdo con una o más de las reivindicaciones 1 a 5, en el que el compuesto de fórmula (II) se aplica en forma de un revestimiento de semilla.

7. El uso de acuerdo con una o más de las reivindicaciones 1 a 6, en el que el compuesto de fórmula (II) se aplica a cultivos de plantas transgénicas.

8. Un procedimiento para controlar microorganismos fitopatógenos y animales dañinos, que comprende aplicar un compuesto de fórmula (I) de acuerdo con la reivindicación 1 al microorganismo fitopatógeno o al animal dañino o a su hábitat.

9. Un compuesto de fórmula (Ia) o una sal del mismo,



(Ia)

en la que los símbolos tienen los siguientes significados:

R^1 es en cada caso igual o diferente H, halógeno, alquilo (C_1-C_{20}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sustituido o sin sustituir, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, O-R", $S(O)_nR$", COOR", CSOR', COSR', -O-COR', -O-CSR', -CO-R", $CONR_2$", SO_2NR_2", o los dos sustituyentes R^1 juntos forman un anillo de 3 a 8 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo;

n es 0, 1 ó 2;

R' es en cada caso igual o diferente alquilo (C_1-C_{12}), alquenilo (C_2-

C_{12}), alquinilo (C_2-C_{12}), cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), arilo (C_6-C_{12}), o heterociclilo, estando todos ellos sin sustituir o sustituidos;

R" es en cada caso igual o diferente H o R';

R^2 es alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_6) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

R^3 es H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_6) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido, COOR", CSOR', COSR', -CO-R' o $CONR_2$";

y

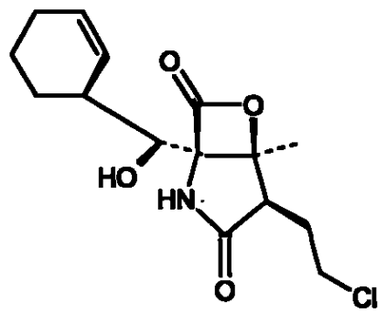
R^4 es H, alquilo (C_1-C_{20}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, $S(O)_nR'$, COOR', CSOR', COSR', -CO-R', $CONR_2$" o G; y

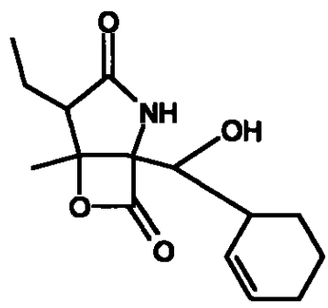
G es $Si[alquil\ (C_1\text{-}C_8)]_x[(CH_2)_t\text{-fenil-}(CH_3)_u]_y[(O)_v\text{-(alquileno }(C_1\text{-}C_4))\text{-(O-alquileno }(C_1\text{-}C_4))_w\text{-}H]_z$,

en el que x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w

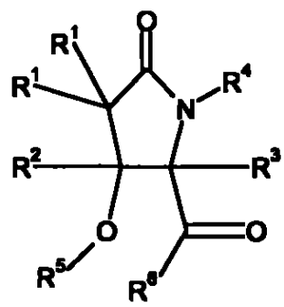
son 0 ó 1 y v + w es 1 ó 2;

con la condición de que se excluyan los siguientes compuestos:





10. Un compuesto de fórmula (Ib) o una sal del mismo,



(Ib)

en la que los símbolos tienen los siguientes significados

R^1 es en cada caso igual o diferente H, halógeno, alquilo (C_1-C_{20}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sustituido o sin sustituir, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, O-R", $S(O)_nR$", COOR", CSOR', COSR', -O-COR', -O-CSR', -CO-R" o $CONR_2$", o los dos sustituyentes R^1 juntos forman un anillo de 3 a 8 miembros que es un anillo

carbocíclico o contiene una o dos unidades heteroátomo;

n es 0, 1 ó 2;

R' es en cada caso igual o diferente alquilo (C_1-C_{12}), alquenilo (C_2-C_{12}), alquinilo (C_2-C_{12}), cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), arilo (C_6-C_{12}), o heterociclilo, estando todos ellos sin sustituir o sustituidos;

R" es en cada caso igual o diferente H o R';

R^2 es alquilo (C_1-C_5) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido;

R^3 es H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterociclilo sin sustituir o sustituido, CSOR', COSR', -CO-R" o $CONR_2$";

R^4 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, $S(O)_nR'$, COOR', CSOR', -CO-R', $CON'R_2$" o G;

R^5 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12})

sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterociclilo sin sustituir o sustituido, SO_2R', COR', COOR', COSR', CSOR', $CONR_2''$ o G.

G es $Si[alquil\ (C_1\text{-}C_6)]_x[(CH_2)_r\text{-}fenil\text{-}(CH_3)_u]_y[(O)_v\text{-}(alquileno\ (C_1\text{-}C_4))\text{-}(O\text{-}alquileno\ (C_1\text{-}C_4))_w\text{-}H]_z$,

en el que x, y, z son 0, 1, 2 ó 3 y x + y + z = 3, t, u son 0 ó 1, v, w son 0 ó 1 y v + w es 1 ó 2;

R^6 es OR'', SR'' o NR_2'';

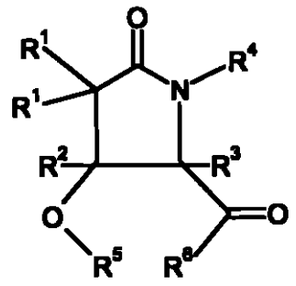
excluyendo los compuestos en los que

R^1=H, R^2=CH_3, R^3=H, R^4=H, C_6H_5, $CH_2C_6H_5$, C_2H_5, R^5=H y R^6=NH_2, NHC_6H_5, $NHCH_2C_6H_5$.

Resumen

Derivados de 2-pirrolidona sustituida como fungicidas e insecticidas

El uso de un compuesto de fórmula (I) o una sal del mismo,



(I)

en la que los símbolos tienen los significados dados en la descripción,

para el control de microorganismos fitopatógenos de animales dañinos.

S 19
S 3

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07D207/28 C07D493/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, BEILSTEIN Data, WPI Data, CHEM ABS Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FELING, R.H. ET AL.: "Salinosporamide A: A Highly Cytotoxic Proteasome Inhibitor from a Novel Microbial Source, a Marine Bacterium of the New Genus Salinospora" ANGEWANDTE CHEMIE INTERNATIONAL EDITION, vol. 42, no. 3, 2003, pages 355-357, XP002309550 * Scheme 1 *	9
X	KENDE, A.S. ET AL.: "Synthesis of the fusee Bicyclic Lactam-Lactone Terminus of Neooxazolomycin by a Novel Dianion Cyclocondensation" TETRAHEDRON LETTERS, vol. 29, no. 21, 1988, pages 2521-2524, XP002309551 page 2522; examples 3a,b	10

-/-

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
29 September 2005	17/10/2005

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Baston, E

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2005/007442

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KENDE, A.S. ET AL.: "Enantioselective Total Synthesis of Neooxazolomycin" J. AM. CHEM. SOC., vol. 112, 1990, pages 4070-4072, XP002309552 examples 29alpha,beta	10
X	KATO T ET AL: "STUDIES ON KETENE AND ITS DERIVATIVES. LI.1) REACTION OF ALPHA-AMINOAMIDE WITH DIKETENE" PHARMACEUTICAL SOCIETY OF JAPAN. JOURNAL - YAKUGAKU ZASSHI, PHARMACEUTICAL SOCIETY OF JAPAN, TOKYO, JP, vol. 92, no. 12, 1972, pages 1507-1514, XP001038688 ISSN: 0031-6903 page 1508; example vi	10
X	BE 891 687 A (RICHTER GEDEON VEGYESZET) 30 April 1982 (1982-04-30) example IIa	10
X	PATENT ABSTRACTS OF JAPAN vol. 0140, no. 43 (C-0681), 26 January 1990 (1990-01-26) & JP 01 277492 A (SANKYO CO LTD), 7 November 1989 (1989-11-07) abstract	10
P,A	WO 2004/071382 A (BAYER HEALTHCARE AG; STADLER, MARC; SEIP, STEPHAN; MUELLER, HARTWIG; M) 26 August 2004 (2004-08-26) cited in the application the whole document	1-10

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
BE 891687	A	30-04-1982	NONE	
JP 01277492	A	07-11-1989	NONE	
WO 2004071382	A	26-08-2004	NONE	

601

595

PCT/EP2006/007442

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92*bis*.1 and Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

BAYER CROPSCIENCE AG
Business Planning and Administration,
Law and Patents
Patents and Licensing
51368 Leverkusen
ALLEMAGNE

21 Dez. 2006

Date of mailing *(day/month/year)* 20 December 2006 (20.12.2006)	
Applicant's or agent's file reference BCS043038-WO	IMPORTANT NOTIFICATION
International application No. PCT/EP2005/007442	International filing date *(day/month/year)* 09 July 2005 (09.07.2005)

1. The following indications appeared on record concerning:

☒ the applicant ☒ the inventor ☐ the agent ☐ the common representative

Name and Address	State of Nationality	State of Residence
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☒ the person ☐ the name ☐ the address ☐ the nationality ☐ the residence

Name and Address	State of Nationality	State of Residence
ILG, Kerstin Isidor-Caro-Str. 52 51061 Köln Germany	DE	DE
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

3. Further observations, if necessary:
Additional inventor for all designated States and applicant for US only.

4. A copy of this notification has been sent to:

☒ the receiving Office
☐ the International Searching Authority
☐ the International Preliminary Examining Authority
☒ the designated Offices concerned
☐ the elected Offices concerned
☐ other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Wimmer Peter Facsimile No. +41 22 338 89 70 Telephone No. +41 22 338 98 96

PATENT COOPERATION TREATY

PCT/EP2005/007442

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92*bis*.1 and Administrative Instructions, Section 422)

To:

BAYER CROPSCIENCE AG
Business Planning and Administration
Law and Patents
Patents and Licensing
51368 Leverkusen
ALLEMAGNE

Bayer CropScience AG
Law and Patents
18. Juli 2006
Eingang

Date of mailing (day/month/year)	
11 July 2006 (11.07.2006)	
Applicant's or agent's file reference	IMPORTANT NOTIFICATION
BCS043038-WO	
International application No.	International filing date (day/month/year)
PCT/EP2005/007442	09 July 2005 (09.07.2005)

1. The following indications appeared on record concerning:

☒ the applicant ☒ the inventor ☐ the agent ☐ the common representative

Name and Address	State of Nationality	State of Residence
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☒ the person ☐ the name ☐ the address ☐ the nationality ☐ the residence

Name and Address	State of Nationality	State of Residence
DREWES, Mark, Wilhelm [illegible]ethestr. 38 40764 Langenfeld Germany	DE	DE
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

3. Further observations, if necessary:
Additional inventor for all designated States and applicant for US only.

4. A copy of this notification has been sent to:

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☐ the International Searching Authority
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☒ the designated Offices concerned
☐ the elected Offices concerned
☐ other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Wimmer Peter
Facsimile No. +41 22 338 82 70	Facsimile No. +41 22 338 89 70 Telephone No. +41 22 338 98 96

Form PCT/IB/306 (October 2005) CWV9E28R

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Industria y Comercio
SUPERINTENDENCIA

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISION DE NUEVAS CREACIONES
EXTRACTO PARA PUBLICACIÓN
SOLICITUD DE PATENTE DE INVENCIÓN PCTd3

(21) N° de solicitud: 07 2359

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(30) Prioridad (31) *No. Prioridad* (32) *Fecha* (33) *País*
04016320.6 12/07/04 EP

(51) Int Cl: C07D 207/028

(71)Solicitante(s) BAYER CROPSCIENCE AG

(72) Inventor(es) STEFAN HILLEBRAND
Y OTROS

(74) Apoderado: EMILIO FERRERO

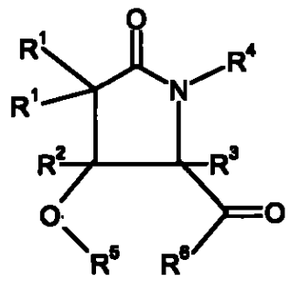
(85) Fecha límite inicio fase nacional: *12/02/2007*
(86) Datos relativos a la presentación de la solicitud PCT
Fecha de presentación de la solicitud: *09/07/2005*
No. de solicitud PCT/EP2005/007442

(87) Publicación internacional
Fecha: *19/01/2006*
N° publicación: *WO 2006/005551 A1*

(54) Título: **DERIVADOS DE 2-PIRROLIDONA SUSTITUIDA COMO FUNGICIDAS E INSECTICIDAS**

REIVINDICACIONES:

1. El uso de un compuesto de fórmula (I) o una sal del mismo,



(I)

en la que los símbolos tienen los siguientes significados:

R^1 es en cada caso igual o diferente H, halógeno, alquilo (C_1-C_{20}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterocicilo sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, O-R", S(O)$_n$R", SO_2NR_2", COOR", COSR', CSOR', -O-COR", -O-CSR', -CO-R" o $CONR_2$", o los dos sustituyentes R^1 juntos forman un anillo de 3 a 8 miembros que es un anillo carbocíclico o contiene una o dos unidades heteroátomo;

R' es en cada caso igual o diferente alquilo (C_1-C_{12}), alquenilo (C_2-C_{12}), alquinilo (C_2-C_{12}), cicloalquilo (C_3-C_8), cicloalquenilo (C_3-C_8), arilo (C_6-C_{12}), o heterocicilo, estando todos ellos sin sustituir o sustituidos;

R" es en cada caso igual o diferente H o R';

n es 0, 1 ó 2;

R^2 es H, alquilo (C_1-C_8) sin sustituir o sustituido, alquenilo (C_2-C_8) sin sustituir o sustituido, alquinilo (C_2-C_8) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, o heterocicilo sin sustituir o sustituido;

R^3 es H, alquilo (C_1-C_{12}) sin sustituir o sustituido, alquenilo (C_2-C_{12}) sin sustituir o sustituido, alquinilo (C_2-C_{12}) sin sustituir o sustituido, cicloalquilo (C_3-C_8) sin sustituir o sustituido, cicloalquenilo (C_3-C_8) sin sustituir o sustituido, arilo (C_6-C_{12}) sin sustituir o sustituido, heterocicilo sin sustituir o sustituido, COOR", CSOR", COSR", -CO-R" o $CONR_2$";

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FORMATO DE DIGITALIZACIO
RELACION DE ANEXOS

Royal Technologies S.A.

Item	Expediente No	No de unidades	No de Folio
1	CD		
2	DVD		
3	REVISTA		
4	LIBRO		
5	PERIODICO		
6	DISQUETES		
7	SOBRE DE MANILA		
8	SOBRE BLANCO TAMAÑO CARTA X	1	9
9	SOBRE BLANCO TAMAÑO OFICIO		
10	OTROS:		

Observaciones: Acta Final

605
599

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800176089-2

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
Rad: 07-002359- -00000-0000
Fec: 2007-01-11 16:58:57 Dep. 2000 RUECREACIONES
Tra. 11 PATENTEIYII
Ene: 375 FASENACIONALI
Act 411 PRESENTACION Folios: 605

RECIBO OFICIAL DE CAJA : 07 - 1,764
FECHA : ENERO 10 DE 2007

***** C O N S I G N A C I O N *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Vr. PAGO
CAVELIER ABOGADOS	CONSIGNACION	BANCO POPULAR	050-00110-6	49368288	10/01/2007	57,744,000.00

***** C O N C E P T O *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-01 SOLICITUDES	1 TRAMITES DE SOL. DE PATENTE DE IN	482,000.00
		TOTAL : $	482,000.00

SON: CUATROCIENTOS OCHENTA Y DOS MIL PESOS

RESPONSABLE : _____

RECIBO DE CAJA APLICADO AL EXPEDIENTE No._____

COLO 13549 841 092 1

600

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
Rad: 07-002359- -00000-0000
Fec: 2007-01-11 15:38:57 Dep: 2050 NUECREACIONES
Tra: 11 PATENTEYII
Eve: 378 FASENACIONALI
Act: 411 PRESENTACION Folios: 606

Industria y Comercio
SUPERINTENDENCIA

REQUISITOS MINIMOS PARA ADMISION A TRAMITE
PCT

PATENTE DE INVENCION [✓] MODELO DE UTILIDAD [ ]

- Indicación de que se solicita la concesión de una patente [✓]
- Datos de identificación del solicitante o de la persona que presenta la solicitud [✓]
- Descripción de la invención [✓]
- Dibujos de ser estos pertinentes [✓]
- Comprobante de pago de las tasas establecidas [✓]

COMPLETA [ ] INCOMPLETA [ ]

DISEÑO INDUSTRIAL [ ]

- Indicación de que se solicita el registro de Diseño Industrial [ ]
- Datos de identificación del solicitante o de la persona que presenta la solicitud [ ]
- Representación gráfica y fotográfica del Diseño Industrial o muestra del material que incorpora el diseño [ ]
- Comprobante de pago de las tasas establecidas [ ]

COMPLETA [ ] INCOMPLETA [ ]

ESQUEMA DE TRAZADO [ ]

- Indicación de que se solicita el registro de un Esquema de Trazado [ ]
- Datos de identificación del solicitante o de la persona que presenta la solicitud [ ]
- Representación gráfica del esquema trazado [ ]
- Comprobante de pago de las tasas establecidas [ ]

COMPLETA [ ] INCOMPLETA [ ]

Firma Responsable

Fecha 11 ENE. 2007

Carrera 13 No. 27-00 Piso 5, 7 y 10
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Bogotá, D.C., Colombia

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REPUBLICA DE COLOMBIA

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

Bogotá,
2020

Doctor(a)
FERRERO EMILIO
Apoderado(a) y/o Representante de
BAYER CROPSCIENCE AG.

REFERENCIA	Radicación No.	07 2359
	Solicitud internacional	PCT/EP2005/07442
	Fecha inicio fase nacional	12/02/2007
	Trámite	11
	Evento	378
	Actuación	430
	Oficio No.	2340

Como resultado del examen de forma, realizado con fundamento en el artículo 38 de la Decisión 486 de la Comisión de la Comunidad Andina, artículo 27 del Tratado de Cooperación en Materia de Patentes (PCT), regla 51 bis del Reglamento y Circular Única de la Superintendencia de Industria y Comercio, se le comunica que:

1. La solicitud no contiene la copia del documento en que consta la cesión del derecho a la patente del inventor al solicitante o a su causante. (Art. 26-k) Decisión 486.

En cumplimiento de lo dispuesto por el artículo 39 de la Decisión 486, se le requiere para que dentro del término de dos meses siguientes a la fecha de notificación del presente oficio, complete los requisitos anteriormente enunciados. En caso de no dar cumplimiento al presente requerimiento, la solicitud se considerará abandonada y perderá su prelación.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Unica No.10 de 2001.

ALIX CARMENZA CESPEDES DE VERGEL
Jefe de la división de Nuevas Creaciones

El anterior requerimiento fue notificado por fijación en lista de fecha 16 FEB. 2007
lerazo