

PETITORIO

Industria y Comercio
SUPERINTENDENCIA

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 07-123151- -00000-0000

Fecha: 2007-11-21 16:09:46 Dep. 2020 NUECREACION
Tra. 11 PATENTE/II Evt: 378 FASENACIONAL
Act. 411 PRESENTACION Folios: 85

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FORMULARIO ÚNICO DE SOLICITUD DE PATENTE PCT ENTRADA EN FASE NACIONAL

24 dic 2007

SOLICITUD DE :

1

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Patente de Invención

☐

Patente de Modelo de Utilidad

☒

Capítulo I.

☐

Capítulo II.

2

SOLICITANTE
(71)

Nombre: WYETH

Dirección: Five Giralda Farms, Madison, New Jersey 07940, Estados Unidos de América

Nacionalidad o Domicilio: Nueva Jersey, Estados Unidos de América

Lugar de Constitución: Delaware, Estados Unidos de América

Teléfono:

Fax:

E-Mail

IDENTIFICACION

C.C.

☐

NIT

☐

C.E.

☐

Otro

☐

Cual

Número

3

REPRESENTANTE
O APODERADO

Nombre: ALVARO CORREA ORDOÑEZ

Dirección: Avenida 82 No.10-62 Piso 6

Teléfono: 634 1500

Fax: 376 2211

E-Mail: office.bogota@bakernet.com

IDENTIFICACION

C.C.

☒

NIT

☐

C.E.

☐

Otro

☐

Cual

Número

79.143.366 de

Usaquén

TP 20.281

4

INVENTOR (ES)
(72)

Nombre: ALBRIGHT, Robert B., SABNIS, Shobhan y ZUPAN, Jacob, A.

Dirección: 213 Green Valley Way, Chalfont, Pennsylvania 18914, Estados Unidos de América; 4 Carey Street, Pennington, New Jersey 08534, Estados Unidos de América y 387 Robin Hood Drive, Yardley, Pennsylvania 19067, Estados Unidos de América, respectivamente

Nacionalidad o Domicilio: Estadounidense, Hindú y Estadounidense, respectivamente

5 PCT (85)

Solicitud Internacional No. PCT/US2006/019302

Fecha 19-MAY-06

Publicación Internacional No. WO/2006/127407

Fecha 30-NOV-06

6

Título (54) DISPOSITIVO Y MÉTODO PARA CONTROLAR INSECTOS

7

Clasificación Internacional (51) A01K 11/00, A01K 13/00, A01K 27/00

8

Prioridad

(33) País de Origen

(32) Fecha

(31) Número de Solicitud

US

24-MAY-05

60/684,201

SI

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NO

☐

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Comprobante de pago No. 07-86108

Fecha 19-OCT-07

9/2

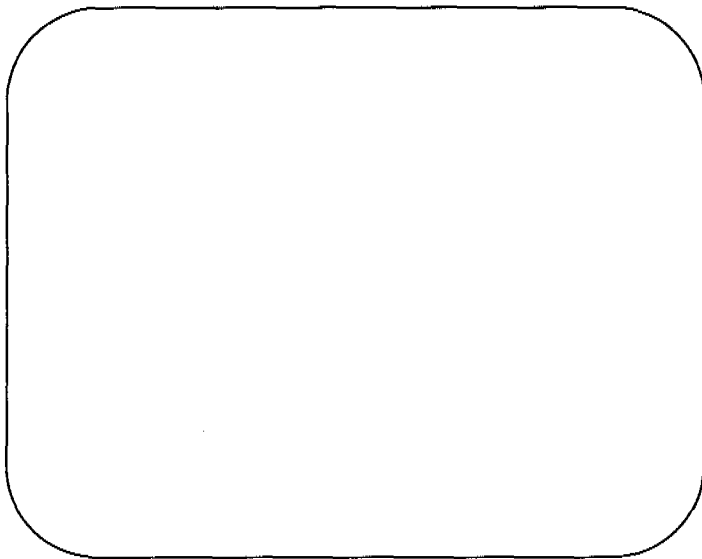
10

ANEXOS

- ☒ Comprobante de pago de la tasa de presentación de la solicitud
- ☒ 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 internacional efectuado por la Autoridad Internacional de Examen preliminar (IPEA)
- ☐ Traducción del examen preliminar internacional 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 12 x 12
- ☐ 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
- ☐ De ser el caso, modificaciones efectuadas a la solicitud internacional.
- ☒ Otros: Extractos, Reporte de Búsqueda Internacional y Opinión escrita y notificación de presentación de documento de prioridad.

11

FIGURA CARATERISTICA



12

Solicito la concesión de la patente.

NOMBRE: ALVARO CORREA ORDÓÑEZ

FIRMA:

C.C. 79.143.366 de Usaquén

T.P. 20.281

Instrucciones para la presentación de los anexos, ver reverso de esta página

000008

Recibo de Presentación de solicitud de patente de los Estados Unidos para el
invento "Dispositivo y método para controlar insectos" a nombre de WYETH.
Certificación notarial suscrita por Michelle L. McGowan, Notario Público del
estado de Nueva Jersey, y legalizaciones subsiguientes.

ESTADOS UNIDOS DE AMÉRICA)
)
 ESTADO DE NUEVA JERSEY) SS:
)
 CONDADO DE MORRIS)

La suscrita, Michelle L. McGowan, Notario Público en y para el Condado de Morris, Estado de Nueva Jersey, Estados Unidos de América, certifico por el presente que la copia adjunta es fiel copia certificada del Recibo de Presentación USSN 11/435,663 y que la citada copia es fiel copia del original.

Para uso en Colombia.

Dado a los 26 días del mes de octubre de 2007 en Madison, Nueva Jersey, Estados Unidos de América.

(Fdo.) Michelle L. McGowan
Notario Público

(Sello notarial
en relieve)

[Sello] MICHELLE L. McGOWAN
Notario Público, Estado de Nueva Jersey
No. 2108903
Habilitada en el Condado de Morris
La comisión expira el 9 de febrero de 2011

MARIA TERESA LARA R.
TRADUCTORA OFICIAL
RESOLUCION No. 0710
DE MINISTERIA

9
00009

OFICINA DE PATENTES Y MARCAS DE LOS ESTADOS UNIDOS

DEPARTAMENTO DE COMERCIO DE LOS ESTADOS UNIDOS
Oficina de Patentes y Marcas de los Estados Unidos
Dirección: COMISIONADO DE PATENTES
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

SOLICITUD NO.	FECHA DE PRESENT. O 371(c)	ART UNIT	DERECHOS DE PRESENT. RECIBIDOS	NO. DE EXPEDIENTE DEL ABOGADO	DIBUJOS	TOTAL REIVINDIC	REIVINDIC IND
11/435,663	05/17/2006	3611	1000	AM102069		17	1

CONFIRMACIÓN NO. 6128

RECIBO DE PRESENTACION

[Código de barras]

OC000000019168539

25291
WYETH
GRUPO DE DERECHO DE PATENTES
5 GIRALDA FARMS
MADISON, NJ 07940

Fecha de Envío: 06/08/2006

Se acusa recibo de esta Solicitud de Patente regular. Se la considerará en su orden de presentación y ustedes serán notificados de los resultados del examen. Asegúrense de suministrar el NÚMERO DE SOLICITUD DE LOS E.U., FECHA DE PRESENTACIÓN, NOMBRE DEL SOLICITANTE y TÍTULO DEL INVENTO al averiguar acerca de esta solicitud. Los derechos enviados mediante cheque o giro están sujetos a cobranza. Favor verificar la exactitud de los datos presentados en este recibo. **Si se observa un error en este Recibo de Presentación, favor enviar un mensaje por correo al Comisionado de Patentes P.O. Box 1450 Alexandria Va 22313-1450. Favor suministrar una copia de este Recibo de Presentación con los cambios anotados en el mismo. Si ustedes recibieron una "Notificación de Presentar Partes Faltantes" en relación con esta solicitud, favor presentar cualquier corrección a este Recibo de Presentación junto con su respuesta a la Notificación. Cuando la USPTO procese la respuesta a la Notificación, la**

MARIA TERESA LARA R.
TRADUCTORA OFICIAL
RESOLUCION No. 0706
DE MINJUEGA

USPTO generará otro Recibo de Presentación que incorpore las correcciones solicitadas (de ser apropiado).

Solicitante(s)

Robert B. Albright, Chalfont, PA;
Shobhan Sabnis, Pennington, NJ;
Jacob A. Zupan, Yardley, PA

Cesión de Solicitud de Patente Publicada

Wyeth, Madison, NJ

Poder: Los abogados de patentes asociados con el Número de Cliente **25291**.

Datos de prioridad interna reclamados por el solicitante

Esta solicitud reclama el beneficio de la 60/684,201 05/24/2005

Solicitudes en el Extranjero

Si se requiere, se otorga Licencia para Presentación en el Extranjero:

06/07/2006

El código de país y número de su solicitud prioritaria, para ser utilizado en la presentación en el exterior según el Convenio de París, es
US11/435,663

Fecha de Publicación Prevista: 11/30/2006

Solicitud de No Publicación: No

Solicitud de Publicación Temprana: No

Título

Dispositivo y método para controlar insectos

Clase Preliminar

040

MARIA TERESA LARA R.
TRADUCTORA OFICIAL
RESOLUCION NO. 01074
DE MINISTERIO

PROTECCIÓN DE SU INVENTO FUERA DE LOS ESTADOS UNIDOS

Dado que los derechos otorgados por una patente de los E.U. cubren únicamente el territorio de los Estados Unidos y no tienen efecto en ningún país extranjero, un inventor que desee obtener protección de patente en otro país deberá solicitar una patente en un país específico o en oficinas de patentes regionales. Los solicitantes quizás deseen considerar la presentación de una solicitud internacional conforme al Tratado de Cooperación para Patentes (TCP). Una solicitud internacional (TCP) generalmente tiene el mismo efecto de una solicitud de patente nacional regular en cada país miembro del TCP. El proceso del TCP **simplifica** la presentación de las solicitudes de patente para el mismo invento en países miembros, pero **no resulta** en un otorgamiento de "una patente internacional" y no elimina la necesidad de que los solicitantes presenten documentos y paguen derechos adicionales en los países en los cuales se desee la protección de patente.

Casi todos los países tienen sus propias leyes de patentes, y una persona que desee una patente en un determinado país deberá presentar una solicitud de patente en dicho país de conformidad con sus leyes específicas. Dado que las leyes de muchos países difieren en diversos sentidos de la ley de patentes de los Estados Unidos, se recomienda a los solicitantes obtener orientación de los países extranjeros específicos para asegurar que sus derechos de patente no se pierdan prematuramente.

También se informa a los solicitantes que en el caso de inventos efectuados en los Estados Unidos, el Director de la USPTO debe expedir una licencia antes de que los solicitantes puedan solicitar una patente en un país extranjero. La presentación de una solicitud de patente en los EE.UU. sirve como solicitud de licencia para presentaciones en el extranjero. El recibo de presentación del

solicitante contiene información y orientación adicionales acerca del estado de la licencia del solicitante para su presentación en el extranjero.

Es posible que los solicitantes deseen consultar el folleto de la USPTO, "Información general relativa a patentes" (específicamente la sección titulada "Tratados y patentes en el extranjero") para mayor información acerca de los plazos y fechas límite para la presentación de solicitudes de patente en el extranjero. La guía está disponible ya sea por intermedio del Centro de Contacto de la USPTO en el 800-786-9199, o puede consultarse en el sitio web de la USPTO en <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

Para información acerca de la prevención del robo de su propiedad intelectual (patentes, marcas y derechos de autor), quizás deseen consultar el sitio web del Gobierno de los E.U. <http://www.stopfakes.gov>. Este sitio web, que es parte de una iniciativa del Departamento de Comercio, incluye "cajas de herramientas" de autoayuda que ofrecen a los innovadores orientación acerca de cómo proteger la propiedad intelectual en países específicos tales como China, Corea y México. Para preguntas relativas a asuntos relacionados con cómo hacer valer las patentes, los solicitantes pueden llamar a la línea caliente del Gobierno de los E.U. en el 1-866-999-HALT (1-866-999-4158).

TERESA LARA R.
TRADUCTORA OFICIAL
SOLUCION DE PROBLEMAS
DE MINUTERIA

**LICENCIA PARA PRESENTACIÓN EN EL EXTRANJERO BAJO EL
Título 35, Código de los Estados Unidos, Sección 184
Título 37, Código de Normas Federales, 5.11 & 5.15**

OTORGADA

Se ha otorgado una licencia al solicitante en virtud de la norma 35 U.S.C. 184, si en este formulario aparece la frase "SI SE REQUIERE, SE OTORGA LICENCIA PARA PRESENTACIÓN EN EL EXTRANJERO" seguida por una fecha. Tales

licencias se expiden en toda las solicitudes en las cuales se han cumplido las condiciones para la expedición de una licencia, sin importar si se requiere o no una licencia según lo señalado en la norma 37 CFR 5.15. El alcance y las limitaciones de esta licencia se indican en la norma 37 CFR 5.15(a) a no ser que se haya expedido una licencia anterior conforme a la norma 37 CFR 5.15(b). La licencia está sujeta a revocación, previa notificación escrita. La fecha indicada es la fecha de vigencia de la licencia, a no ser que se haya otorgado una licencia anterior de alcance similar según la norma 37 CFR 5.13 ó 5.14.

Esta licencia debe ser conservada por el licenciatario y puede ser utilizada en cualquier momento en o después de la fecha de vigencia de la misma, a no ser que sea revocada. Esta licencia es automáticamente transferida a cualquier solicitud relacionada presentada conforme a la norma 37 CFR 5.53(d). Esta licencia no es retroactiva.

El otorgamiento de una licencia no disminuye en forma alguna la responsabilidad de un licenciatario por la seguridad del objeto de la misma, impuesta por cualquier contrato gubernamental o por las disposiciones de las leyes existentes relativas a espionaje y seguridad nacional o la exportación de datos técnicos. Los licenciatarios deben informarse acerca de las normas vigentes, en especial con respecto a ciertos países, de otras entidades, en particular de la Oficina de Controles del Comercio de Defensa, Departamento de Estado (con respecto a Armas, Municiones e Implementos de Guerra (22 CFR 121-128)); la Oficina de Industria y Seguridad, Departamento de Comercio (15 CFR partes 730-774); la Oficina de Control de Activos en el Extranjero, Departamento del Tesoro (31 CFR Partes 500+) y el Departamento de Energía.

NO OTORGADA

No se otorgado licencia alguna en este momento en virtud de la norma 35

MARIA TERESA LARA R.
TRADUCTORA OFICIAL
RESOLUCION No. 0171
DE MINUTERIA

U.S.C. 184, si la frase "SI SE REQUIERE, SE OTORGA LICENCIA PARA PRESENTACIÓN EN EL EXTRANJERO" NO aparece en este formulario. El solicitante aún puede solicitar una licencia conforme a la norma 37 CFR 5.12, si desea una licencia antes de que transcurran seis meses, contados a partir de la fecha de presentación de la solicitud. Si han transcurrido seis meses a partir de la fecha de presentación de esta solicitud y el Licenciatario no ha recibido ninguna indicación de una orden de confidencialidad en virtud de la norma 35 CFR 181, el Licenciatario puede presentar la solicitud en el extranjero de conformidad con la norma 37 CFR 5.15(b).

APOSTILLE

(Convention de La Haye du 5 octobre 1961)

MARIA TERESA LARA R.
TRADUCTORA OFICIAL
RESOLUCION No. 0182
DE 1997

- 1. País: Estados Unidos de América
- 2. Este documento público ha sido firmado por: Michelle L. McGowan
- 3. actuando en calidad de: Notario Público de Nueva Jersey
- 4. lleva el sello/timbre de: Michelle L. McGowan, Notario

CERTIFICADO

- 5. en Trenton, Nueva Jersey
- 6. el día 31 de octubre de 2007
- 7. por Michellene Davis, TESORERO DE NUEVA JERSEY
- 8. No. A307617
- 9. Sello/Timbre:
- 10. Firma

(Sello del Estado
de Nueva Jersey)

(Fdo.) Michellene Davis

2007/10/6

APOSTILLE

(CONVENTION DE LA HAYE DU 5 OCTOBRE 1961)

1. COUNTRY: UNITED STATES OF AMERICA
2. THIS PUBLIC DOCUMENT HAS BEEN SIGNED BY:
MICHELLE L MC GOWAN
3. ACTING IN THE CAPACITY OF:
NOTARY PUBLIC OF NEW JERSEY
4. BEARS THE SEAL/STAMP OF:
MICHELLE L MC GOWAN, NOTARY

CERTIFIED

5. AT TRENTON, NEW JERSEY
6. THE 31ST DAY OF OCTOBER 2007
7. BY: Michellene Davis, NEW JERSEY TREASURER
8. NO. A307617
9. SEAL/STAMP:
10. SIGNATURE



Michelle L. McGowan

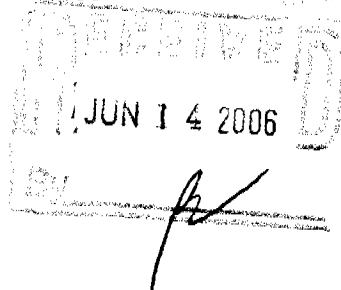


UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
11/435,663	05/17/2006	3611	1000	AM102069		17	1

25291
WYETH
PATENT LAW GROUP
5 GIRALDA FARMS
MADISON, NJ 07940



CONFIRMATION NO. 6128

FILING RECEIPT



OC000000019168539

Date Mailed: 06/08/2006

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Robert B. Albright, Chalfont, PA;
Shobhan Sabnis, Pennington, NJ;
Jacob A. Zupan, Yardley, PA;

Assignment For Published Patent Application

Wyeth, Madison, NJ

Power of Attorney: The patent practitioners associated with Customer Number 25291.

Domestic Priority data as claimed by applicant

This appln claims benefit of 60/684,201 05/24/2005

Foreign Applications

If Required, Foreign Filing License Granted: 06/07/2006

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US11/435,663**

Projected Publication Date: 11/30/2006

Non-Publication Request: No

Early Publication Request: No

DOCKETED
DUE DATE
STAT DATE
BY:

23 6/15/06

Title

Device and method for controlling insects

Preliminary Class

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PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER**Title 35, United States Code, Section 184****Title 37, Code of Federal Regulations, 5.11 & 5.15****GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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TRADUCCIÓN OFICIAL N° 2011075 al español de un documento escrito en inglés, efectuada por Jaime Armando Garavito Burgos, c.c. N° 19.130.702 de Bogotá, Traductor e Intérprete Oficial inglés-español-inglés según Resolución N° 034 de enero 11 de 1983 expedida por el Ministerio de Justicia de la República de Colombia

**DECLARACIÓN JURAMENTADA SOBRE CESIÓN A WYETH
DISPOSITIVO Y MÉTODO PARA CONTROLAR INSECTOS**

APOSTILLA

1. PAÍS: ESTADOS UNIDOS DE AMÉRICA
2. ESTE DOCUMENTO PÚBLICO HA SIDO FIRMADO POR:
BARBARA A. KIELY
3. QUIEN ACTÚA EN CALIDAD DE:
NOTARIO PÚBLICO DE NUEVA JERSEY
4. LLEVA EL SELLO DE:
BARBARA A. KIELY, NOTARIO

CERTIFICADO

5. EN TRENTON, NUEVA JERSEY
6. EL DÍA 26 DE ENERO DE 2007
7. POR: Bradley Abelow, TESORERO DE NUEVA JERSEY
8. N° A281601
9. SELLO (APARECE ADHERIDO SELLO DORADO)
10. FIRMA (Firma ilegible)

AM102069 L1

DECLARACIÓN JURAMENTADA

Yo, Michelle L. McGowan, Asociado de Legalizaciones de Wyeth, por medio del presente certifico que la copia anexa ha sido comparada con la Cesión original (para U.S.S.N. 60/684.201, y cualquier equivalente legal de la

ann22 22

TRADUCCIÓN OFICIAL N° 2011075 al español de un documento escrito en inglés, efectuada por Jaime Armando Garavito Burgos, c.c. N° 19.130.702 de Bogotá, Traductor e Intérprete Oficial inglés-español-inglés según Resolución N° 034 de enero 11 de 1983 expedida por el Ministerio de Justicia de la República de Colombia

misma en un país extranjero, para la invención titulada: "DISPOSITIVO Y MÉTODO PARA CONTROLAR INSECTOS") de fecha julio 21, 2005 de Robert B. Albright y Shobhan Sabnis a Wyeth y que la mencionada copia es una copia auténtica del original.

Fechada hoy 23 de enero de 2007 en Madison, Nueva Jersey, Estados Unidos de América.

Wyeth
(Firmado) Michelle L. McGowan
Asociado de Legalizaciones

PARA SER USADA EN COLOMBIA

RECONOCIMIENTO

Estado de Nueva Jersey)
)
Condado de Morris)

Hoy 23 de enero de 2007, compareció personalmente ante mí Michelle L. McGowan, Asociado de Legalizaciones de Wyeth, a quien conozco como la persona descrita en el anterior instrumento y quien suscribió el mismo y reconoció haberlo suscrito.

(Firmado) Barbara A. Kiely, Notario Público

[Sello en tinta que dice: "Barbara A. Kiely ID. 33893, Notario Público de Nueva Jersey. Mi comisión vence el 20 de junio de 2009"]

[De aquí en adelante aparece en el encabezamiento de cada página: "Archivo No.: AM102069 L1 Patentes" y en el pie de página: "Cesión de Invención; Solicitud Provisional"]

00023 23

TRADUCCIÓN OFICIAL N° 2011075 al español de un documento escrito en inglés, efectuada por Jaime Armando Garavito Burgos, c.c. N° 19.130.702 de Bogotá, Traductor e Intérprete Oficial inglés-español-inglés según Resolución N° 034 de enero 11 de 1983 expedida por el Ministerio de Justicia de la República de Colombia

Cesión de Invención

En consideración del pago por la CESIONARIA a la CEDENTE de una contraprestación válida y suficiente cuyo recibo se acusa por medio del presente, los CEDENTES:

- (1) Nombre Completo del Inventor: Robert B. Albright
Residencia: 213 Green Valley Way, Chalfont, Pennsylvania, 18914, USA
Ciudadanía: Estados Unidos de América
- (2) Nombre Completo del Inventor: Shobhan Sabnis
Residencia: 4 Carey Street, Pennington, New Jersey, 08534, USA
Ciudadanía: India

por medio del presente venden, ceden y transfieren a la CESIONARIA:

Wyeth
Five Giralda Farms
Madison, New Jersey 07940

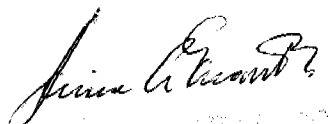
y a los sucesores, cesionarios y representantes legales de la CESIONARIA, la totalidad del derecho, título e intereses para los Estados Unidos y sus posesiones territoriales y en todos los países extranjeros, incluyendo todos los derechos a reivindicar prioridad con respecto a la invención titulada:

DISPOSITIVO Y MÉTODO PARA CONTROLAR INSECTOS

E inventada por los CEDENTES y cualesquier inventores adicionales, si los hubiere:

Y la cual se encuentra en la Solicitud Provisional de los Estados Unidos No. 60/684201 presentada el 24 de mayo de 2005.

[] Yo/nosotros los CEDENTES que abajo firmamos, por medio del presente autorizamos y solicitamos se inserte arriba el número de la solicitud y la fecha de presentación cuando se conozcan,


J. A. GARAVITO BURGOS
3
TRADUCTOR E INTÉRPRETE OFICIAL
INGLÉS-ESPAÑOL-INGLÉS
N° 19.130.702 DE BOGOTÁ
COLOMBIA

24

00024

TRADUCCIÓN OFICIAL N° 2011075 al español de un documento escrito en inglés, efectuada por Jaime Armando Garavito Burgos, c.c. N° 19.130.702 de Bogotá, Traductor e Intérprete Oficial inglés-español-inglés según Resolución N° 034 de enero 11 de 1983 expedida por el Ministerio de Justicia de la República de Colombia

[Verificar si también se está(n) cediendo solicitud(es) extranjera(s)]

[X] y cualquier equivalente legal de la misma en un país extranjero,

Incluyendo el derecho a invocar prioridad, incluyendo todas y cada una de las mejoras divulgadas en la misma y en todas las patentes que se obtengan para la mencionada invención a través de la anterior solicitud y cualquier solicitud provisional, no provisional, continuación, divisional, renovación o sustitución de la misma presentada posteriormente y en cuanto a la patente, cualquier re-expedición o nuevo examen de la misma.

Los CEDENTES por medio del presente acuerdan que no se ha hecho ni se hará o suscribirá ninguna cesión, venta, acuerdo o gravamen que pueda estar en conflicto con esta cesión.

Los CEDENTES autorizan a la CESIONARIA para que haga solicitudes y para que reciban patentes para la mencionada invención en cualquiera de los mencionados países en su propio nombre, o en el nombre de los CEDENTES o a su elección.

Los CEDENTES acuerdan suscribir u obtener cualquier seguridad adicional necesaria del título a dicha invención y cualquier patente que pueda ser expedida para la misma y a entregar en cualquier momento y a solicitud y expensas de la CESIONARIA cualquier testimonio en cualquier derecho preexistente que impida el patentamiento de la invención, litigio o procedimiento relacionado y a suscribir todos los documentos que puedan ser necesarios o convenientes para perfeccionar el título a dicho invento o cualquier patente que pueda ser otorgada para el mismo a la CESIONARIA, sus sucesores,

Jaime A. Garavito
00024 4
Jaime A. Garavito Burgos
C.C. 19.130.702
Bogotá, D.C. - Colombia

20A25

Julio 21, 2005
Fecha

James A. Grant

00026

Julio 21, 2005
Fecha

RECONOCIMIENTO

Estado de Nueva Jersey)
) Declaración juramentada
Condado de Mercer)

El día 21 de julio de 2005, Shobhan Sabnis, compareció personalmente ante mí, a quien conozco como la persona descrita en el anterior instrumento y quien suscribió el mismo y reconoció haberlo suscrito en forma libre y espontánea para los fines consignados en él.

[Firmado] Janice Capasso, Notario Público

[Sello que dice: "Janice Capasso, Notario Público de Nueva Jersey. Comisión vence el 29 de mayo de 2008"]

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

James A. Grant

Jaime Armando Garavito Burgos
c.c. N° 19.130.702 de Bogotá
Traductor e Intérprete Oficial según Resolución N° 034 de enero 11 de 1983
expedida por el Ministerio de Justicia

BOGDM5 # 95518

James A. Stewart

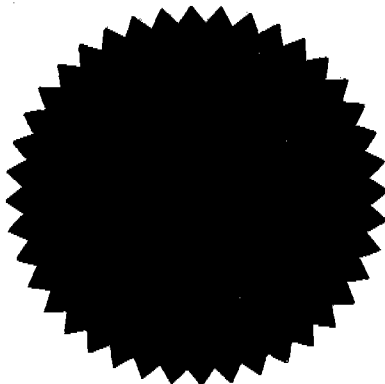
2007 76
APOSTILLE

(CONVENTION DE LA HAYE DU 5 OCTOBRE 1961)

1. COUNTRY: UNITED STATES OF AMERICA
2. THIS PUBLIC DOCUMENT HAS BEEN SIGNED BY:
BARBARA A KIELY
3. ACTING IN THE CAPACITY OF:
NOTARY PUBLIC OF NEW JERSEY
4. BEARS THE SEAL/STAMP OF:
BARBARA A KIELY, NOTARY

CERTIFIED

5. AT TRENTON, NEW JERSEY
6. THE 26TH DAY OF JANUARY 2007
7. BY: Bradley Abelow, NEW JERSEY TREASURER
8. NO. A281601
9. SEAL/STAMP:
10. SIGNATURE



Bradley Abelow

00028

17

AM102069 L1

AFFIDAVIT

I, Michelle L. McGowan, Legalization Associate of Wyeth, do hereby certify that the attached copy has been compared with the original Assignment (for U.S.S.N. 60/684,201, and any legal equivalent thereof in a foreign country, for the invention entitled: "DEVICE AND METHOD FOR CONTROLLING INSECTS") dated July 21, 2005 from Robert B. Albright and Shobhan Sabnis to Wyeth and that the said copy is a true copy of the original.

Dated this 23rd day of January, 2007, at Madison, New Jersey, United States of America.

Wyeth

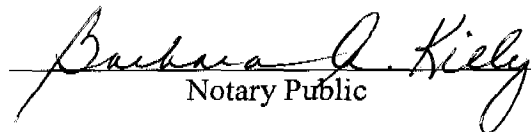

Michelle L. McGowan
Legalization Associate

TO BE USED IN COLOMBIA

ACKNOWLEDGMENT

State of New Jersey)
)
County of Morris)

On this 23rd day of January, 2007, before me personally appeared Michelle L. McGowan, Legalization Associate of Wyeth, to me known and known to me to be the individual described in and who executed the foregoing instrument, and she acknowledged to me that she executed the same.


Notary Public

Barbara A. Kiely ID. 33893
Notary Public of New Jersey
My Commission Expires June 20, 2009

29
00030

and the successors, assigns and legal representatives of the ASSIGNEE the entire right, title and interest for the United States and its territorial possessions and in all foreign countries, including all rights to claim priority, in and to the invention entitled:
DEVICE AND METHOD FOR CONTROLLING INSECTS

and invented by ASSIGNOR and the following additional inventors, if any:

and which is found in U.S. Provisional Application No. 60/684201 filed on: May 24, 2005

☐ I/we the ASSIGNOR signing below, hereby authorize and request insertion above of the application number and filing date, when they become known,

[also check if foreign application(s) is(are) also being assigned]

☒ and any legal equivalent thereof in a foreign country,

including the right to claim priority, including any and all improvements disclosed therein, and in and to all Letters Patent to be obtained for said invention by the above application or any subsequently filed provisional, nonprovisional, continuation, divisional, renewal, or substitute thereof, and as to Letters Patent any reissue or re-examination thereof.

ASSIGNOR hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

ASSIGNOR authorizes ASSIGNEE to make applications for and to receive Letters patent for said invention in any of said countries in its own name, or in ASSIGNOR's name, at its election.

ASSIGNOR covenants and agrees to execute or procure any further necessary assurance of the title to said invention and any Letters Patent which may issue therefore and to, at any time, upon the request and at the expense of ASSIGNEE deliver any testimony in any interference, litigation or proceeding related thereto and execute all papers that may be necessary or desirable to perfect the title to said invention or any Letters Patent which may be granted therefore in ASSIGNEE, its successors, assigns or other legal representatives, and that to, at any time, upon the request and at the expense of ASSIGNEE execute any continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to Letters Patent and reissue or re-examination thereof, or any other additional applications of Letters Patent for said invention or any part thereof, all of which applications and any Letters Patent issuing thereon are hereby assigned to ASSIGNEE, and will make all rightful oaths or declarations, and do all lawful acts requisite for procuring the same therein, without further compensation, but at the expense of ASSIGNEE, its successors, assigns or other legal representatives.

ASSIGNOR authorizes and requests the Commissioner of Patents to issue any and all Letters Patent of the United States for said invention, resulting from any of the aforesaid applications to its ASSIGNEE.

00031 30

Robert B. Albright
Robert B. Albright

21 July 2005
Date

ACKNOWLEDGMENT

State of New Jersey }
County of Morris } ss:

JANICE CAPASSO
NOTARY PUBLIC OF NEW JERSEY
Commission Expires 5/29/2008

On the 21st day of July 2005, Robert B. Albright personally appeared before me, known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he/she executed the same, of his/her own free will and for the purposes set forth.

Janice Capasso
Notary Public

Shobhan Sabnis
Shobhan Sabnis

July 21, 2005
Date

ACKNOWLEDGMENT

State of New Jersey }
County of Morris } ss:

JANICE CAPASSO
NOTARY PUBLIC OF NEW JERSEY
Commission Expires 5/29/2008

On the 21st day of July 2005, Shobhan Sabnis personally appeared before me, known by me to be the same person described in and who executed the foregoing instrument, and acknowledged that he/she executed the same, of his/her own free will and for the purposes set forth.

Janice Capasso
Notary Public

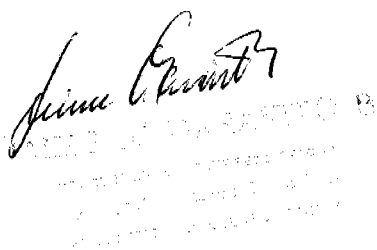
00032 31

TRADUCCIÓN OFICIAL N° 2011076 al español de un documento escrito en inglés, efectuada por Jaime Armando Garavito Burgos, c.c. N° 19.130.702 de Bogotá, Traductor e Intérprete Oficial inglés-español-inglés según Resolución N° 034 de enero 11 de 1983 expedida por el Ministerio de Justicia de la República de Colombia

**DECLARACIÓN JURAMENTADA SOBRE CESIÓN A WYETH
DISPOSITIVO Y MÉTODO PARA CONTROLAR INSECTOS**

APOSTILLA

- 1. PAÍS: ESTADOS UNIDOS DE AMÉRICA
- 2. ESTE DOCUMENTO PÚBLICO HA SIDO FIRMADO POR:
BARBARA A. KIELY
- 3. QUIEN ACTÚA EN CALIDAD DE:
NOTARIO PÚBLICO DE NUEVA JERSEY
- 4. LLEVA EL SELLO DE:
BARBARA A. KIELY, NOTARIO



CERTIFICADO

- 5. EN TRENTON, NUEVA JERSEY
- 6. EL DÍA 26 DE ENERO DE 2007
- 7. POR: Bradley Abelow, TESORERO DE NUEVA JERSEY
- 8. N° A281602
- 9. SELLO (APARECE ADHERIDO SELLO DORADO)
- 10. FIRMA (Firma ilegible)

AM102069 L1

DECLARACIÓN JURAMENTADA

Yo, Michelle L. McGowan, Asociado de Legalizaciones de Wyeth, por medio del presente certifico que la copia anexa ha sido comparada con la Cesión original (para U.S.S.N. 11/435.663, y cualquier equivalente legal de la

00023 32

Wyeth
(Firmado) Michelle L. McGowan
Asociado de Legalizaciones

RECONOCIMIENTO

Estado de Nueva Jersey)
)
Condado de Morris)

James A. ...
JAMES A. ...
JAMES A. ...
JAMES A. ...
JAMES A. ...

(Firmado) Barbara A. Kiely, Notario Público

[Sello en tinta que dice: "Barbara A. Kiely ID. 33893, Notario Público de Nueva Jersey. Mi comisión vence el 20 de junio de 2009"]

00024 43

TRADUCCIÓN OFICIAL N° 2011076 al español de un documento escrito en inglés, efectuada por Jaime Armando Garavito Burgos, c.c. N° 19.130.702 de Bogotá, Traductor e Intérprete Oficial inglés-español-inglés según Resolución N° 034 de enero 11 de 1983 expedida por el Ministerio de Justicia de la República de Colombia

Cesión de Invención

En consideración del pago por la CESIONARIA a la CEDENTE de una contraprestación válida y suficiente cuyo recibo se acusa por medio del presente, los CEDENTES:

- (1) Nombre Completo del Inventor: Robert B. Albright
Residencia: 213 Green Valley Way, Chalfont, Pennsylvania, 18914, USA
Ciudadanía: Estados Unidos de América
- (2) Nombre Completo del Inventor: Shobhan Sabnis
Residencia: 4 Carey Street, Pennington, New Jersey, 08534, USA
Ciudadanía: India
- (3) Nombre Completo del Inventor: Jacob A. ZUPAN
Residencia: 387 Robin Hood Drive, Yardley, Pennsylvania 19067
Ciudadanía: Estados Unidos de América

por medio del presente venden, ceden y transfieren a la CESIONARIA:

Wyeth
Five Giralda Farms
Madison, New Jersey 07940

y a los sucesores, cesionarios y representantes legales de la CESIONARIA, la totalidad del derecho, título e intereses para los Estados Unidos y sus posesiones territoriales y en todos los países extranjeros, incluyendo todos los derechos a reivindicar prioridad con respecto a la invención titulada:

DISPOSITIVO Y MÉTODO PARA CONTROLAR INSECTOS

E inventada por los CEDENTES y cualesquier inventores adicionales, si los hubiere:

Y la cual se encuentra en la Solicitud Provisional No. **11/435.663** presentada el **17 de mayo de 2006.**

Jaime Garavito
00024 43

[] Yo/nosotros los CEDENTES que abajo firmamos, por medio del presente autorizamos y solicitamos se inserte arriba el número de la solicitud y la fecha de presentación cuando se conozcan,

[Verificar si también se está(n) cediendo solicitud(es) extranjera(s)]

[X] y cualquier equivalente legal de la misma en un país extranjero,

Incluyendo el derecho a invocar prioridad, incluyendo todas y cada una de las mejoras divulgadas en la misma y en todas las patentes que se obtengan para la mencionada invención a través de la anterior solicitud y cualquier solicitud provisional, no provisional, continuación, divisional, renovación o sustitución de la misma presentada posteriormente y en cuanto a la patente, cualquier re-expedición o nuevo examen de la misma.

Los CEDENTES por medio del presente acuerdan que no se ha hecho ni se hará o suscribirá ninguna cesión, venta, acuerdo o gravamen que pueda estar en conflicto con esta cesión.

Los CEDENTES autorizan a la CESIONARIA para que haga solicitudes y para que reciban patentes para la mencionada invención en cualquiera de los mencionados países en su propio nombre, o en el nombre de los CEDENTES o a su elección.

Los CEDENTES acuerdan suscribir u obtener cualquier seguridad adicional necesaria del título a dicha invención y cualquier patente que pueda ser expedida para la misma y a entregar en cualquier momento y a solicitud y expensas de la CESIONARIA cualquier testimonio en cualquier derecho preexistente que impida el patentamiento de la invención, litigio o procedimiento

Jaime A. Garavito

relacionado y a suscribir todos los documentos que puedan ser necesarios o convenientes para perfeccionar el título a dicho invento o cualquier patente que pueda ser otorgada para el mismo a la CESIONARIA, sus sucesores, CESIONARIOS u otros representantes legales y a suscribir, en cualquier momento, a solicitud y expensas de la CESIONARIA, cualquier continuación, continuación parcial, divisional, renovación o sustitución de la misma y en cuanto a patentes a re-expedir o re-examinar las mismas, o cualesquier otras solicitudes adicionales de patentes para dicho invento o cualquier parte del mismo, todas las cuales y cualquier patente que se expida se ceden por medio del presente a la CESIONARIA y prestará todos los juramentos legales o declaraciones y hará todos los actos legales requeridos para adquirirlos, sin compensación adicional, pero a expensas de la CESIONARIA, sus sucesores, cesionarios u otros representantes legales.

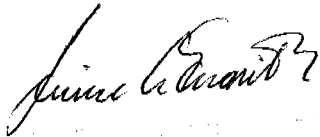
Los CEDENTES autorizan y solicitan al Comisionado de Patentes expedir todas y cada una de las patentes de los Estados Unidos para la mencionada invención, que resulte de cualquiera de las solicitudes a su CESIONARIA.

(Firmado)
Robert B. Albright

Junio 09, 2006
Fecha

RECONOCIMIENTO

Estado de Nueva Jersey	)	
	)	Declaración juramentada
Condado de Mercer	)	



El día 09 de junio de 2006, Robert B. Albright, compareció personalmente ante mí, a quien conozco como la persona descrita en el anterior instrumento y

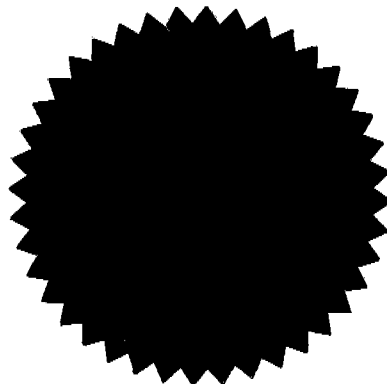
APOSTILLE

(CONVENTION DE LA HAYE DU 5 OCTOBRE 1961)

1. COUNTRY: UNITED STATES OF AMERICA
2. THIS PUBLIC DOCUMENT HAS BEEN SIGNED BY:
BARBARA A KIELY
3. ACTING IN THE CAPACITY OF:
NOTARY PUBLIC OF NEW JERSEY
4. BEARS THE SEAL/STAMP OF:
BARBARA A KIELY, NOTARY

CERTIFIED

5. AT TRENTON, NEW JERSEY
6. THE 26TH DAY OF JANUARY 2007
7. BY: Bradley Abelow, NEW JERSEY TREASURER
8. NO. A281602
9. SEAL/STAMP:
10. SIGNATURE



Bradley Abelow

non 40 39

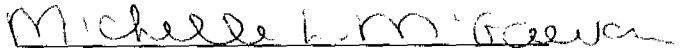
AM102069

AFFIDAVIT

I, Michelle L. McGowan, Legalization Associate of Wyeth, do hereby certify that the attached copy has been compared with the original Assignment (for U.S.S.N. 11/435,663, and any legal equivalent thereof in a foreign country, for the invention entitled: "DEVICE AND METHOD FOR CONTROLLING INSECTS") dated June 9, 2006 from Robert B. Albright, Shobhan Sabnis and Jacob A. Zupan to Wyeth and that the said copy is a true copy of the original.

Dated this 23rd day of January, 2007, at Madison, New Jersey, United States of America.

Wyeth

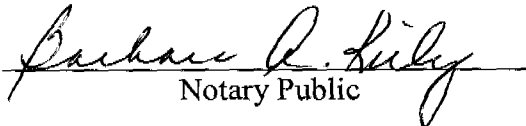

Michelle L. McGowan
Legalization Associate

TO BE USED IN COLOMBIA

ACKNOWLEDGMENT

State of New Jersey)
)
County of Morris)

On this 23rd day of January, 2007, before me personally appeared Michelle L. McGowan, Legalization Associate of Wyeth, to me known and known to me to be the individual described in and who executed the foregoing instrument, and she acknowledged to me that she executed the same.


Notary Public

Barbara A. Kiely ID. 33893
Notary Public of New Jersey
My Commission Expires June 20, 2009

41
00042

and the successors, assigns and legal representatives of the ASSIGNEE the entire right, title and interest for the United States and its territorial possessions and in all foreign countries, including all rights to claim priority, in and to the invention entitled:
DEVICE AND METHOD FOR CONTROLLING INSECTS

and invented by ASSIGNOR and the following additional inventors, if any:

and which is found in **U.S. Application No. 11/435,663** filed on **May 17, 2006**.

☐ I/we the ASSIGNOR signing below, hereby authorize and request insertion above of the application number and filing date, when they become known,

[also check if foreign application(s) is(are) also being assigned]

☒ and any legal equivalent thereof in a foreign country,

including the right to claim priority, including any and all improvements disclosed therein, and in and to all Letters Patent to be obtained for said invention by the above application or any subsequently filed provisional, nonprovisional, continuation, divisional, renewal, or substitute thereof, and as to Letters Patent any reissue or re-examination thereof.

ASSIGNOR hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

ASSIGNOR authorizes ASSIGNEE to make applications for and to receive Letters patent for said invention in any of said countries in its own name, or in ASSIGNOR's name, at its election.

ASSIGNOR covenants and agrees to execute or procure any further necessary assurance of the title to said invention and any Letters Patent which may issue therefore and to, at any time, upon the request and at the expense of ASSIGNEE deliver any testimony in any interference, litigation or proceeding related thereto and execute all papers that may be necessary or desirable to perfect the title to said invention or any Letters Patent which may be granted therefore in ASSIGNEE, its successors, assigns or other legal representatives, and that to, at any time, upon the request and at the expense of ASSIGNEE execute any continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to Letters Patent and reissue or re-examination thereof, or any other additional applications of Letters Patent for said invention or any part thereof, all of which applications and any Letters Patent issuing thereon are hereby assigned to ASSIGNEE, and will make all rightful oaths or declarations, and do all lawful acts requisite for procuring the same therein, without further compensation, but at the expense of ASSIGNEE, its successors, assigns or other legal representatives.

ASSIGNOR authorizes and requests the Commissioner of Patents to issue any and all Letters Patent of the United States for said invention, resulting from any of the aforesaid applications to its ASSIGNEE.

44

00025

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 November 2006 (30.11.2006)

PCT

(10) International Publication Number
WO 2006/127407 A1

- (51) International Patent Classification:
A01K 11/00 (2006.01) A01K 27/00 (2006.01)
A01K 13/00 (2006.01)
- (21) International Application Number:
PCT/US2006/019302
- (22) International Filing Date: 19 May 2006 (19.05.2006)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/684,201 24 May 2005 (24.05.2005) US
- (71) Applicant (for all designated States except US): WYETH
[US/US]; Five Giralda Farms, Madison, New Jersey 07940 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): ALBRIGHT, Robert B. [US/US]; 213 Green Valley Way, Chalfont, Pennsylvania 18914 (US). SABNIS, Shobhan [IN/US]; 4 Carey Street, Pennington, New Jersey 08534 (US). ZUPAN, Jacob, A. [US/US]; 387 Robin Hood Drive, Yardley, Pennsylvania 19067 (US).
- (74) Agents: RENDA, Barbara, L. et al.; Wyeth, Patent Law Department, Five Giralda Farms, Madison, New Jersey 07940 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2006/127407 A1

(54) Title: DEVICE AND METHOD FOR CONTROLLING INSECTS

(57) Abstract: The present invention provides novel insecticidal animal ear tags, neck collars or pendants, and a method for controlling insects in a homeothermic animal.

DEVICE AND METHOD FOR CONTROLLING INSECTS

BACKGROUND OF THE INVENTION

5 The present invention relates to a device and method for controlling insects. Many recently developed techniques used for the control of insects involve slow-release pesticide technology. The use of pest strips, collars, bands, and tags which have an insecticide contained throughout the substrate of the final device are described in U.S. Patent 3,318,679; U.S. Patent 3,944,662; U.S. Patent 3,756,200; 10 U.S. Patent 3,942,480 and U.S. Patent 4,195,075. The latter patent describes an insect control device containing an insecticidally active isomer of β -cyano-3-phenoxy-benzyl- α -isopropyl-4-chlorophenylacetate. U.S. Patent 5,104,569 describes coated devices that enable the incorporation of insecticidal agents that were not suitable for incorporation into devices prepared by extrusion and injection 15 molding.

 The increased popularity of devices such as insecticidal animal ear tags, neck-worn collars and pendants over the past few years has resulted in considerable effort to develop improved devices to overcome the problems that become apparent as their use increases. Improvements in design, compositions, 20 and manufacturing techniques are constantly being sought to overcome problems such as breakage and loss, and to improve efficacy and ease of application. Breakage and loss occur in ear tags such as those described in U.S. Pat. No. 3,731,414, due to their size, design and method of attachment which results in portions of the tag being subjected to flex and stress in the field for prolonged 25 periods of time. Additionally, breakage or weakness of a plastic tag can result from the incorporation of an active ingredient or mixture of active ingredients that may actually weaken the polymer matrix. Further, the particular characteristics of the active ingredient require attention to ensure that the active ingredient maintains its insecticidal activity in the polymer matrix.

30 Interference or degradation of an active component with or during the polymerization or manufacturing process, resulting in weakness and breakage of the resultant ear tag, is an area of great concern in the preparation of animal ear

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tags. An increase in the concentrations of active component is a limiting factor to the strength of the resulting plastic tag.

It is an object of this invention to provide compositions and devices that are not restricted by the above limitations.

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SUMMARY OF THE INVENTION

The present invention provides a composition that comprises an effective amount of metaflumizone in the form of an ear tag, neck collar or pendant for use with homothermic animals.

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The ear tag may be in either a one-component form, or the form of a two-component ear tag, that will withstand the flex and stress pressures present in the field over prolonged periods of time, thereby resulting in reduced ear tag breakage and loss. The ear tags, neck collars or pendants, advantageously, are capable of holding a high concentration of metaflumizone, thereby increasing their efficacy and spectrum of activity; especially for insects which plague cattle, dogs, cats and other homothermic animals that graze or otherwise spend time in open areas. An additional advantage of a two-part animal ear tag of this invention is that the second component may be replaced without having to repuncture the ear of the animal each time the insecticide needs replacing. In one embodiment, the present invention is an animal ear tag, neck collar or pendant comprising about: 40% to 90% of a thermoplastic resin; and 1% to 30% of metaflumizone. Optionally, 0.0% to 4.0% of a processing stabilizer; 0.2% to 10.0% of a lubricant; 0.3% to 0.5% of a chelating agent; 1% to 2.5% of a heat processing stabilizer; 0% to 5.0% of a flow agent; 0% to 35.0% of insecticidal synergists and migration accelerators; 5.0% to 25.0 % of a plasticizer or mixture of plasticizers; 0.5 to 2.0% colorant; and 0 to 30% of one or more additional insecticidal agents may also be added. In a further embodiment, the composition is impregnated or coated onto a mesh matrix component of a natural or synthetic cloth or fiber or wire or a solid dispersion of polyvinylchloride polymer or copolymer to form an ear tag, neck collar or hanging pendant device.

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DETAILED DESCRIPTION OF THE INVENTION

In a two-part ear tag device or a pendant, the first component constructed so as to be attached to the animal may be constructed of virtually any material of suitable size and strength. Preferably the first component is manufactured from thermoplastic resin materials, such as polyvinylchloride resins and polyurethane elastomers or impregnated cloth, fabric, or other material.

A suitable pin, clip or ring for the two part ear tag or pendant embodiment of the invention may be of any design including that of a bayonet type system, provided it holds the ear tag or pendant in place. A means for securing the pin may optionally be employed and it may be either an integral part of the design or an independent unit. U.S. Pat. No. 3,731,414, which is herein incorporated by reference, discloses a preferred means of attachment to the animal's ear which is suitable for the present invention.

The component carrying the metaflumizone is normally comprised on a weight basis of about 40% to 90% of a polyvinylchloride or other thermoplastic resin; and about 1% to 30% of metaflumizone. Depending upon the characteristics of the polyvinylchloride or other thermoplastic resin chosen, other optional components may include about 0.0% to 4.0% of a processing stabilizer such as epoxidized soybean oil; about 0.02% to 10.0% of a lubricant such as stearic acid; about 0.3% to 0.5% of a chelating agent such as trinonylphosphite; about 0.1% to 2.5% of a heat processing stabilizer such as calcium-zinc stearate; about 0% to 5.0% of a flow agent such as SiO₂; about 0% to 35.0% of insecticidal synergists and migration accelerators such as piperonyl butoxide; about 0% to 25.0% of a plasticizer or mixture of plasticizers such as dioctylphthalate, benzylbutylphthalate, dibutylphthalate, citrate esters, adipates or sebacates; and about 1% to 30% of additional insecticidal agents, such as amitraz, fipronil, imidachloprid, permethrin, pyrethrins, piperonyl butoxide, chlorfenapyr or fenothrin. If desired, a colorant, in the amount of about 0.5 to 2.0% can be added, especially to provide distinction of animals with the metaflumizone-bearing device.

Metaflumizone is a new insecticide, described in U. S. Patent 5,543,573, and U. S. Published Application 2004-0122075A1, both incorporated herein by reference.

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5 The metaflumizone-bearing component may be fabricated out of a material which is preferably different from the material of the first component. This metaflumizone-bearing component may be fabricated on a matrix such as a natural or synthetic cloth or fiber mesh for example, polyaramid or a polyester, wire mesh or a solid dispersion of polyvinylchloride polymer or copolymer matrix by coating, extruding, coextruding or impregnating the metaflumizone-resin composition onto the matrix.

10 The metaflumizone-bearing component may be fabricated by preparing a blend of the dry ingredients by admixing them in a blender, heating the mixture while blending it in a temperature range of 80 °C to 120 °C. and slowly adding a mixture of the liquid ingredients and mixing until a relatively dry blend is obtained. The resulting homogeneous blend is cooled while mixing and the optional SiO₂ added and blended in to obtain a homogeneous dry blend, which may then be molded, extruded or coextruded optionally onto a matrix or the dry blend may then be pelletized by extrusion and the pelletized dry blend then molded, extruded, or coextruded optionally onto a matrix as described above and punched or cut into the desired shape. Alternatively, the metaflumizone-bearing component may be prepared by coating or dipping a matrix with a vinyl dispersion containing the active ingredients, as disclosed herein by U.S. Patent 5,104,569 which is incorporated by reference. Additionally, this metaflumizone-bearing component may contain more than one section. Individual sections may be composed of the same or different ingredients and may also provide different release rates of active ingredients. Such a second component allows for the application of active ingredients which would not be compatible in a single section as well as an alternative method for delivering mixtures of active ingredients at the same or different rates.

25 For some applications, it has been found that the use of impregnated coated, extruded or co- extruded fabric matrix tags of a one piece design offers several advantages over conventional one piece molded tags. When a composition containing an insecticidally active ingredient or mixture of insecticidally active ingredients is fabricated on a matrix of natural or synthetic cloth or fiber mesh, or a wire mesh, the result is a stronger ear tag which is less prone to breakage and thus allows a greater range of compositions to be incorporated into the tag. Also, the one piece matrix animal ear tag, due to the strength of the matrix, is not as restricted in

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the means of attachment to the ear as a plastic molded ear tag. Such matrix materials are also suitably formed as neck collars or pendants.

The invention is further illustrated by the following non-limiting examples. The first or second components shown herein are intended to encompass all design
5 modifications including different shapes and sizes.

EXAMPLE 1

PREPARATION OF A SINGLE COMPONENT EAR TAG OR NECK COLLAR

10 A. Dry Blend

Dry blends of various compositions are prepared utilizing the ingredients listed in Table I below by blending the solid ingredients until a homogeneous mixture is obtained and then heating the mixture to 85 °C. A mixture of the liquid ingredients is then slowly added to the agitated mixture. When all of the liquid is
15 added to the mixture, the mixture is heated to 110 °C and agitated for 10 minutes. The agitated blend is cooled to 70 °C and sufficient SiO₂ is added to obtain a free-flowing dry blend. The dry blend is then cooled to ambient temperatures and collected.

TABLE I

20		<u>Wt (g)</u>	<u>% Wt of Dispersion</u>
	Polyvinylchloride resin	100	44.4-62.9
	Epoxidized Soybean Oil	10.88	4.8-6.8
	Stearic Acid	0.54	0.2-0.3
25	Trinonylphosphate	0.65	0.3-0.4
	Ca/Zn Stearate	1.96	0.9-1.2
	SiO ₂	0.71	0.3-0.4
	Hyp 212P	0.44	0.2-0.3
	Hyp 211P	0.76	0.3-0.4
30	HW 132P	1.09	0.5-0.7
	UV Stabilizer 5411	0.65	0.3-0.4
	Metaflumizone	17.74 to 40.00	7.9-25.2

- Plasticizers mixture18.9 to 46.08.4-29.5
- benzylbutylphthalate
- dibutylphthalate
- dioctylphthalate
- 5acetyltributyl citrate
- dioctyladipate

B. Pelletizing

The compositions prepared in A above may be pelletized using standard low shear extruders at elevated temperatures normally in the range of 300° F to 350 °F.

- 10The resulting extruded material is then cut to the desired size by air chopping and the resulting pellets are packaged.

C. Injection Molding

Pellets prepared as in B above are charged to a 350 ton press and the temperature and time profile is set to 325 °F for twenty seconds. The compositions are molded to the desired size by injection molding or extruded and the resulting components packaged.

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Another method of preparation of single phase ear tags would be to dry blend the following ingredients at room temperature:

	<u>Ingredient</u>	<u>Amount (parts)</u>
20	Modified PVC such as Superkleen® polyvinyl chloride resin (sold by AlphaGary)	69-89
	Metaflumizone	10 to 30
	Colorant (as needed)	0-1

These ingredients, after dry blending in an appropriate mixer such as a ribbon blender, are then transferred to a single or twin screw extruder which in turn feeds an injection molding device to mold to the desired form or configuration.

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EXAMPLE 2

PREPARATION OF CLOTH MATRIX METAFIUMIZONE COMPONENTS

5 Metaflumizone-bearing components are prepared using the dry blends prepared as described in Example 1A, containing 54 parts by weight of the metaflumizone, and 18 parts by weight of several plasticizers per 100 parts of PVC. These dry blends are pelletized and extruded onto a cloth matrix and punch and die cut to the desired shape giving an insecticidal component weighing approximately 8
10 grams.

EXAMPLE 3

PREPARATION OF METAFIUMIZONE COATING COMPOSITION

15 Acetyl tributyl citrate 180 g is added to a stirred mixture of 300 g of a vinyl resin having an inherent viscosity of 1.20 and average particle size of 0.95 microns and optionally 6 g of Ca/Zn stearate and 9 g of epoxidized soybean oil. To this stirred mixture is added 100 g of metaflumizone (90% pure). The resulting mixture is stirred until homogeneous and then deaerated at room temperature overnight at
20 686 mm/Hg.

EXAMPLE 4

25 PREPARATION OF METAFIUMIZONE-CONTAINING COMPONENT OF A
TWO-PIECE TAG CONTAINING METAFIUMIZONE

 A solid matrix is preheated to 100° C. and dipped into the insecticidal coating composition prepared in Example 2. The resulting coated components are cured in an oven at 90 °C to 135 °C for five to eight minutes, resulting in coated matrixes containing 1.7 g to 2.86 g of the metaflumizone coating composition.
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EXAMPLE 5

PREPARATION OF COATED MATRIX CONTAINING METAFIUMIZONE

5 (a) A vinyl dispersion is prepared utilizing the procedure of Example 3 and the materials listed in Table II below.

TABLE II

	Ingredient	Wt (g)	% Wt of Dispersion
	Resin (Inherent viscosity 1.20 average)	300	49.72
10	(particle Size 0.95 microns)		
	Butyl benzyl phthalate	180	29.82
	Epoxidized soybean oil	9	1.49
	Ca/Zn Stearate	6	0.99
	Benzophenone ultraviolet stabilizer	2	0.33

15 (b) Metaflumizone coating compositions may then be prepared by addition of the metaflumizone to the vinyl dispersion prepared in Example 5(a) and blending until homogeneous. The resulting mixture is then deaerated at reduced pressure 686 mm/Hg for 16 hours, giving a metaflumizone composition suitable for preparing coated ear tag devices.

20 (c) Ear tag insect control devices may then be prepared by coating and curing the resulting coated matrix at 90 °C. to 135 °C for 2-10 minutes.

EXAMPLE 6

25 CO-EXTRUDED BILAYER CATTLE EAR TAGS CONTAINING METAFIUMIZONE AND VARIOUS OTHER INSECTICIDES

Another method of preparation of bilayer ear tags would be prepare two dry blended compositions, one containing metaflumizone, and separately, a dry blend containing another insecticide, such as, but not limited to, amitraz, fipronil,
30 imidachlopid, permethrin, pyrethrins, piperonyl butoxide, chlorfenapyr, fenothrin.

Each of the layers would be prepared in an analogous manner:

LAYER 1

	Modified PVC Superkleen® polyvinyl chloride resin (sold by Alpha Gary)	100 parts
	Metaflumizone	10 to 40 parts
5	Colorant (as needed)	0-1 part

LAYER 2

	Modified PVC Superkleen® polyvinyl chloride resin (sold by Alpha Gary)	100 parts
	Acetyl tributyl citrate or another acceptable plasticizer	30 parts
10	Amitraz	10 to 30 parts
	Colorant (as needed)	1 part

Each of the layers is blended separately in a device such as a ribbon blender. Each composition is loaded into a dual-feed extruder where a single or twin screw extruder in turn feeds an injection molding device. The screw extruder works each phase separately. The resulting molten matrices can then be injected into the mold which is configured as an ear tag with appropriate dimensions for thickness and total ear tag weight, formed under vacuum and then expelled for cooling and curing at room temperature.

EXAMPLE 7

PREPARATION OF A ONE PIECE MATRIX ANIMAL EAR TAG BY EXTRUSION ONTO POLYESTER CLOTH

Two dry blends are prepared by the procedure of Example 1 containing, on a weight basis, 100 parts PVC, 18.88 parts epoxidized soybean oil, 0.54 parts stearic acid, 0.65 parts trinonylphosphate, 1.96 parts Ca/Zn stearate, 0.44 parts HYP212, 0.76 parts HYP211, 2.0 parts HW132, 0.65 parts UIV stabilizer, 30 parts metaflumizone ; one with 18 parts Benzylbutylphthalate (BBP), and the other with

WHAT IS CLAIMED IS:

1. An animal ear tag, neck collar or pendant comprising on a weight basis about: 40% to 90% of a thermoplastic resin; and 1% to 30% of metaflumizone.
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2. An ear tag, neck collar or pendant according to claim 1, wherein the ear tag is fabricated on a matrix of a natural or synthetic cloth or fiber mesh, wire mesh or a solid dispersion of polyvinylchloride polymer or copolymer.
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3. An animal ear tag, neck collar or pendant according to claim 1 or 2 additionally comprising on a weight basis about: 0.0% to 4.0% of a processing stabilizer; 0.2% to 10.0% of a lubricant; 0.3% to 0.5% of a chelating agent; 1% to 2.5% of a heat processing stabilizer;
15 0% to 5.0% of a flow agent;
0% to 35.0% of insecticidal synergists and migration accelerators;
5.0% to 25.0 % of a plasticizer or mixture of plasticizers;
0.5 to 2.0% colorant; and
0 to 30% of one or more additional insecticidal agents.
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4. An ear tag, neck collar or pendant according to claim 1, 2 or 3, wherein the composition is impregnated or coated onto a mesh matrix component of a natural or synthetic cloth or fiber or wire or a solid dispersion of polyvinylchloride polymer or copolymer
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5. An ear tag, neck collar or pendant according to claim 1, wherein the component is fabricated by extrusion or coextrusion.
6. An ear tag, neck collar or pendant according to claim 1, 2 or 3
30 wherein the thermoplastic resin is a polyvinyl chloride resin.
7. An ear tag, neck collar or pendant according to claim 3 which additionally includes amitraz.

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DISPOSITIVO Y MÉTODO PARA CONTROLAR INSECTOS

ANTECEDENTES DE LA INVENCION

5 La presente invención se relaciona con un dispositivo y método para controlar insectos. Muchas técnicas recientemente desarrolladas utilizadas para controlar insectos involucran tecnología pesticida de liberación lenta. El uso de tiras para plagas, collares, bandas, y etiquetas que tienen un contenido insecticida a lo largo del sustrato del dispositivo final se describen en la patente U.S. 3,318,679; la Patente U.S. 3,944,622, la
10 Patente U.S. 3,756,200; LA Patente U.S. 3,942,480 y la Patente U.S. 4,195,075. La última patente describe un dispositivo para control de insectos que contiene un isómero insecticidamente activo de 1-ciano-3-fenoxi-bencil- α -isopropil-4-cloro fenilacetato. La Patente U.S. 5,104,569 describe dispositivos recubiertos que posibilitan la incorporación de los agentes insecticidas que no fueron adecuados para incorporación en los
15 dispositivos preparados mediante extrusión y moldeo por inyección.

La popularidad creciente de los dispositivos tales como las etiquetas insecticidas para oreja de animales, los collares para portar en el cuello y los pendientes, durante los últimos pocos años han resultado en un esfuerzo considerable para desarrollar
20 dispositivos mejorados para solucionar los problemas que se vuelven evidentes en la medida en que se incrementa su uso. Las mejoras en el diseño, composiciones, y técnicas de elaboración son constantemente buscadas para solucionar los problemas tales como la ruptura y pérdida, y para mejorar la eficacia y facilidad de aplicación. La ruptura y pérdida puede ocurrir en las etiquetas de oreja tales como aquellas descritas
25 en la Patente U.S. No. 3,731,414 debido a su tamaño, diseño y método de adhesión que resulta en porciones de la etiqueta que son sometidas a flexión y atención en el campo durante periodos prolongados de tiempo. Adicionalmente, la ruptura o debilitamiento de la etiqueta plástica puede dar como resultado la incorporación de un ingrediente activo o mezcla de ingredientes activos que puedan debilitar de hecho la matriz de polímero.
30 Además, las características particulares del ingrediente activo requieren la atención para asegurar que el ingrediente activo mantiene su actividad insecticida en la matriz de polímero.

La interferencia o degradación de un componente activo con o durante la
35 polimerización en el proceso de manufactura, dan como resultado el debilitamiento y la ruptura de la etiqueta de oreja resultante, es un área de mayor preocupación en la preparación de etiquetas de oreja para animal. Un incremento en las concentraciones de los componentes activos en un factor limitante a la resistencia de la etiqueta plástica resultante.

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Es un objeto de esta invención suministrar composiciones y dispositivos que no están restringidos a las anteriores limitaciones.

RESUMEN DE LA INVENCION

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La presente invención suministra una composición que comprende una cantidad efectiva de metaflumizona en la forma de una etiqueta de oreja, collar de cuello o pendiente para uso con animales homotérmicos.

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La etiqueta de oreja puede estar en forma de un componente, o la forma de una etiqueta de oreja de dos componentes, que soportará la flexión y las presiones de tensión presentes en el campo durante periodos prolongados de tiempo, dando como resultado una ruptura y pérdida reducidas de las etiquetas de oreja. Las etiquetas de oreja, los collares de cuello y los pendientes, ventajosamente, son capaces de mantener

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una alta concentración de metaflumizona, incrementando de esta manera su eficacia y el espectro de actividad; especialmente para insectos que plagan el ganado, los perros, los gatos y otros animales homotérmicos que pastan o gastan tiempo de otra forma en áreas abiertas. Una ventaja adicional de una etiqueta de oreja de dos partes para animal de esta invención es que el segundo componente se puede reemplazar sin tener que

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repunzar la oreja del animal cada vez que se necesita reemplazar el insecticida. En una modalidad, la presente invención es una etiqueta de oreja para animal, un collar de cuello o un pendiente que comprende aproximadamente: 40% a 90% de una resina termoplástica; y una porción de 30% de metaflumizona. Opcional, 0.0% a 4.0% de un estabilizador de procesamiento; 0.2% a 10% de lubricante; 0.3% a 5% de un agente quelante; 1% a 2.5% de un estabilizador de procesamiento de calor; 0% a 5.0% de un

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agente de flujo; 0% a 35.0% de sinérgicos insecticidas y aceleradores de migración; 5.0% a 25% de un plastificador o una mezcla de plastificadores; 0.5 a 2% de colorante; y 0 a 30% de uno o más agentes insecticidas adicionales también se pueden agregar. En una modalidad adicional, la composición se impregna o se recubre sobre un componente

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de matriz de malla de una tela o fibra o alambre o una dispersión sólida natural o sintética de polímero o copolímero de polivinil cloruro para formar una etiqueta de oreja, un collar de cuello o un dispositivo pendiente que cuelga.

DESCRIPCIÓN DETALLADA DE LA INVENCION

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En un dispositivo de etiqueta de oreja o un pendiente de dos partes, el primer componente construido con el fin de ser adherido al animal se puede construir de virtualmente cualquier material de tamaño de resistencia adecuados. Preferiblemente, el primer componente se elabora de material es de resina termoplásticos, tales como resinas de polivinil fluoruro, y elastómeros de poliuretano o géneros, telas, u otro material impregnado.

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Un pasador, gancho o anillo adecuado para la modalidad de etiqueta de oreja o pendiente de dos partes de la invención puede ser de cualquier diseño que incluye aquel del sistema tipo balloneta; siempre y cuando este soporte la etiqueta de oreja o el pendiente en su lugar. Unos medios para asegurar el pasador se pueden emplear opcionalmente y este puede ser una parte integral del diseño o una unidad independiente. La Patente U.S. No. 3,731,414, que se incorpora aquí como referencia, describe unos medios preferidos de adhesión de la oreja de los animales que es adecuada para la presente invención.

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El componente que lleva la metaflumizona está normalmente comprendido de un peso base de aproximadamente 40% a 90% de polivinil cloruro u otra resina termoplástico; y aproximadamente 1% a 30% de metaflumizona. Dependiendo de las características del polivinil cloruro u otra resina plástica escogida, otros componentes opcionales pueden incluir aproximadamente 0.0% a 4.0% de un estabilizador de procesamiento tal como un aceite de soya epoxidizado; aproximadamente 0.02% a 10.0% de un lubricante tal como ácido esteárico; aproximadamente 0.3% a 0.5% de un agente quelante tal como tritonilfosfite; aproximadamente 0.1% a 2.5% de un estabilizador de procesamiento de calor tal como estearato de calcio-zinc, aproximadamente 0% a 5.0% de un agente de flujo tal como SiO_2 ; aproximadamente 0% a 35% de sinérgicos insecticidas y aceleradores de migración tales como piperonil butóxido; aproximadamente 0% a 25% de una mezcla de un plastificador, o una mezcla de plastificadores tales como dioctilftalato, bencilbutilftalato, dibutilftalato, ésteres de citrato, adipatos o sebacatos; y aproximadamente 1% a 30% de agentes insecticidas adicionales, tales como amitraz, fipronilo, imidacloprid, permetrina, piretrinas, piperonil butóxido, clorfenapir o fenotrin. Si se desea, un colorante, en la cantidad de aproximadamente 0.5 a 2.0% se puede agregar, especialmente para suministrar distinción de los animales con el dispositivo que lleva la metaflumizona.

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La metaflumizona es un nuevo insecticida, descrito en la Patente U.S. 5,543,573, y la Solicitud Publicada U.S. 2004-0122075A1, ambos incorporados aquí como referencia.

El componente que lleva metaflumizona se puede fabricar de un material que es preferiblemente diferente del material del primer componente. Este componente que lleva metaflumizona se puede fabricar sobre una matriz tal como un género o malla de fibra natural o sintético por ejemplo, poliaramida o un poliéster, una malla de alambre o una dispersión sólida de una matriz de polímero o copolímero de polivinil cloruro al recubrir, extruir, coextruir o impregnar la composición de resina de metaflumizona sobre la matriz.

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El componente que lleva la metaflumizona se puede fabricar al preparar una combinación de ingredientes secos al mezclarlos en un mezclador, calentando la mezcla aunque combinándolo en un rango de temperatura de 80°C a 120°C y agregando lentamente una mezcla de los ingredientes líquidos y mezclando hasta que se obtiene una combinación relativamente seca. Las combinaciones homogéneas resultantes se enfrían aunque mezclando y el SiO₂ opcional se agrega y se combina para obtener una combinación seca homogénea, que puede ser entonces moldeada, extruida o coextruida, opcionalmente sobre una matriz o la combinación seca se puede entonces peletizar mediante extrusión y la combinación seca peletizada se moldea entonces, se extruye, o se coestruye, opcionalmente sobre una matriz como se describió anteriormente y se punza o corta en la forma deseada. Alternativamente, el componente que lleva metaflumizona se puede preparar al recubrir o sumergir una matriz con una dispersión de vinilo que contiene los ingredientes activos, como se describieron aquí en la Patente U.S. 5,104,569 que se incorpora mediante referencia. Adicionalmente, este componente que lleva metaflumizona puede contener más de una sección. Las secciones individuales se pueden componer de los mismos o diferentes ingredientes y también se pueden suministrar diferentes tasas de liberación de los ingredientes activos. Tal segundo componente permite la aplicación de ingredientes activos que no serían compatibles en una sección simple así como también un método alternativo para suministrar mezclas de ingredientes activos en las mismas o diferentes tasas.

Para algunas aplicaciones, se ha encontrado que el uso de etiquetas de matriz de telas recubiertas, extruidas o coextruidas, impregnadas de un diseño de una pieza ofrece varias ventajas sobre las etiquetas moldeadas de una pieza convencional. Cuando una composición que contiene un ingrediente o una mezcla insecticidamente activa de los ingredientes insecticidamente activos se fabrica sobre una matriz de un género o malla de fibra natural o sintético, o una malla de alambre, el resultado es una etiqueta de oreja más fuerte que es menos propensa a la ruptura y así permite que un mayor rango de composiciones se incorporen en la etiqueta. También, la etiqueta de oreja del animal de matriz de una pieza, debido a la resistencia de la matriz, no está tan restringida a los medios de adhesión a la oreja como la etiqueta de oreja moldeada plástica. Tales materiales de matriz son también adecuadamente formados como collares de cuello o pendientes.

La invención se ilustra adicionalmente en los siguientes ejemplos no limitantes.

El primero o segundo componentes mostrados aquí pretenden comprender toda las modificaciones de diseño que incluyen diferentes formas y tamaños.

PREPARACIÓN DE UNA ETIQUETA DE OREJA O COLLAR DE CUELLO DE COMPONENTE SIMPLE.

A. Combinaciones Secas

5 Las combinaciones secas de varias composiciones se preparan utilizando los ingredientes listados en la Tabla 1 de adelante al combinar los ingredientes sólidos hasta que se obtiene una mezcla homogénea y luego calentando la mezcla 85°C. Una mezcla de los ingredientes líquidos es luego agregada lentamente a la mezcla agitada. Cuando todos los líquidos se agregan a la mezcla, la mezcla se calienta a 110°C y se agita 10 durante 10 minutos. La mezcla agitada se enfría a 70°C y se agrega suficiente SiO₂ para obtener una mezcla seca de flujo libre. La mezcla seca es luego enfriada a temperatura ambiente y recolectada.

TABLA 1

	Peso (g)	% peso de Dispersión
15 Resina de polivinil cloruro	100	44.4-62.9
Aceite de soya epoxidizado	10.88	4.8-6.8
Acido esteárico	0.54	0.2-0.3
20 Trinonilfosfato	0.65	0.3-0.4
Estearato de Ca/Zn	1.96	0.9-1.2
SiO ₂	0.71	0.3-0.4
25 { Hyp 212P Hyp 211P hw 132P	0.44	0.2-0.3
	0.76	0.3-0.4
	1.09	0.5-0.7
Estabilizador UV 5411	0.65	0.3-0.4
Metaflumizona	17.74 a 40.00	7.9-25.2
Mezcla de plastificadores	18.9 a 46.0	8.4-29.5
Bencilbutilftalato		
30 Dibutilftalato		
Diocilftalato		
Acetilbutil citrato		
Diociladipato		

35 B. Peletizante

Las composiciones preparadas en A anteriores se pueden peletizar utilizando extrusores de corte bajo estándar a temperaturas elevadas normalmente en el rango de 300°F a 350°F. El material extruido resultante es luego cortado al tamaño deseado por cortaduras de aire y los pelmazos resultantes se empacan.

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C. Moldeo por Inyección

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5 Los pelmazos preparados como en B arriba son cargados a presas de 350 ton y la temperatura y el perfil de tiempo se ajusta a 325°F durante 20 segundos. Las composiciones son moldeadas al tamaño deseado mediante moldeo por inyección extruidas y los componentes resultantes empacados.

Otro método de preparación de etiquetas de oreja de fase simple serían combinar en seco los siguientes ingredientes a temperatura ambiente:

10	<u>Ingrediente</u>	<u>Cantidad (partes)</u>
	PVC modificado tal como Superkleen®	
	Resina de polivinil cloruro (vendido por AlfaGary)	69-89
	Metaflumizona	10 a 30
	Colorante (según se necesite)	0-1

15 Estos ingredientes, después de combinarse en seco en un mezclador apropiado, tal como un mezclador de caucho, son entonces transferidos a un extrusor de tornillo simple o gemelo, que a su vez alimenta un dispositivo de moldeo por inyección para moldear la forma o configuración deseadas.

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EJEMPLO 2

PREPARACIÓN DE COMPONENTES DE METAFIUMIZONA EN MATRIZ DE GÉNERO

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Los componentes que llevan metaflumizona se preparan utilizando las combinaciones secas preparadas como se describió en el Ejemplo 1A, que contienen 54 partes en peso de la metaflumizona, 18 partes en peso de varios plastificadores por 100 partes de PVC. Estas combinaciones secas se paletizan y se extruyen sobre una matriz de género y se punzan y se cortan con troquel a la forma deseada dando un componente insecticida que pesa aproximadamente 8 gramos.

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EJEMPLO 3

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PREPARACIÓN DE LA COMPOSICIÓN DE RECUBRIMIENTO DE METAFIUMIZONA

180 g de acetil tributil citrato se agregan a una mezcla agitada de 300 g de una resina de vinilo que tiene una viscosidad inherente de 1.20 y un tamaño de partícula promedio de 0.95 micrómetros y opcionalmente 6 g de estearato de Ca/Zn y 9 g de aceite de frijol de soya epoxidizado. A esta mezcla agitada se agregan 100 g de

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metaflumizona, (90% puro). La mezcla resultante se agita hasta que se homogeniza y luego se desairea a temperatura ambiente durante toda la noche a 686 mm/Hg.

EJEMPLO 4

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PREPARACIÓN DEL COMPONENTE QUE CONTIENE MET AFLUMIZONA DE UNA ETIQUETA DE DOS PIEZAS QUE CONTIENEN MET AFLUMIZONA

Una matriz sólida se precalienta a 100°C y se sumerge en la composición de recubrimiento insecticida preparada en el Ejemplo 2. Los componentes recubiertos resultantes son curados en un horno a 90°C a 135°C durante 5 a 8 minutos, dando como resultado unas matrices recubiertas que contienen 1.7 g a 2.86 g de la composición de recubrimiento de metaflumizona.

EJEMPLO 5

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PREPARACIÓN DE LA MATRIZ RECUBIERTA QUE CONTIENE MET AFLUMIZONA

(a) Una dispersión de vinilo se prepara utilizando el procedimiento del Ejemplo 3 y los materiales listados en la TABLA II adelante.

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TABLA II

	Ingrediente	Peso (g)	Porcentaje de peso de
	Dispersión		
25	Resina (viscosidad inherente) 1.20 promedio (tamaño de partícula 0.95 micrómetros)	300	49.72
	Butil bencil ftalato	180	29.82
	Aceite de frijol de soya epoxidizado	9	1.49
	Estearato de Ca/Zn	6	0.99
30	Estabilizador ultravioleta de benzofenona	2	0.33

(b) Las composiciones de recubrimiento de metaflumizona se pueden entonces preparar mediante la adición de metaflumizona a la dispersión de vinilo preparada en el Ejemplo 5 (a) y combinar hasta homogenización. La mezcla resultante es luego desaireada a presión reducida 686 mm/Hg durante 16 horas, dando una composición de metaflumizona adecuada para preparar los dispositivos de etiqueta de oreja recubiertos.

(c) Los dispositivos de control de insecto de etiqueta de oreja se pueden entonces preparar al recubrir y curar la matriz recubierta resultante a de 90°C a 135°C durante 2-10 minutos.

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EJEMPLO 6

ETIQUETAS DE OREJA DE GANADO BICAPA COEXTRUIDA QUE CONTIENE
METAFLUMIZONA Y OTROS VARIOS INSECTICIDAS.

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Otro método de preparación de etiquetas de oreja bicapa sería preparar dos composiciones combinadas secas, una que contiene metaflumizona, y separadamente, una combinación seca que contiene otro insecticida, tal como, pero no limitado a, amitraz, fipronilo, imidacloprid, permetrina, piretrinas, piperonil butoxido, clorfenapir, fenotrina.

10

Cada una de las capas sería preparada de manera análoga.

CAPA 1

15

Superkleen® de PVC modificado	
Resina de polivinil cloruro (vendido por Alfa Gary)	100 partes
Metaflumizona	10 a 40 partes
Colorante (según sea necesario)	0-1 partes

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CAPA 2

Superkleen® de PVC modificado	
Resina de polivinil cloruro (vendido por Alfa Gary)	100 partes
25 Acetil tributil citrato y otro plastificador aceptable	30 partes
Amitraz	10 o 30 partes
Colorante (según sea necesario)	1 parte

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Cada una de las capas se combina separadamente en un dispositivo tal como un mezclador de caucho. Cada composición es cargada en un extrusor de alimentación doble donde el extrusor de tornillo simple o gemelo a su vez alimenta un dispositivo de moldeo por inyección. El extrusor de tornillo trabaja cada fase separadamente. Las matrices fundidas resultantes se pueden entonces inyectar en el molde que se configura como una etiqueta de oreja con dimensiones apropiadas para el grosor y el peso de la etiqueta de oreja total, formadas bajo vacío y luego expelidos para enfriamiento y cura a temperatura ambiente.

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EJEMPLO 7

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PREPARACIÓN DE UNA ETIQUETA DE OREJA DE ANIMAL CON MATRIZ DE UNA
PIEZA MEDIANTE EXTRUSIÓN SOBRE GÉNERO DE POLIÉSTER.

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Dos combinaciones secas se preparan mediante el procedimiento del Ejemplo 1 que contiene, sobre una base en peso, 100 partes de PVC, 18.88 partes de aceite de fríjol de soya epoxidizado, 0.54 partes de ácido esteárico, 0.65 partes de tritonil fosfato, 1.96 partes de estearato de Ca/Zn, 0.44 partes de HYP212, 0.76 partes de HYP211, 2.0 partes de HW 132, 0.65 partes de estabilizador UIV, 30 partes de metaflumizona; una con 18 partes de bencilbutilftalato (BBP), y otra con 18 partes de acetiltributil citrato,(ATBC). Cada una de estas combinaciones secas son recubiertas sobre una matriz de malla de tela al coextruir el fundido a través de una boquilla de perfil sobre la matriz. La matriz impregnada resultante se corta en la forma de una etiqueta de oreja de animal de una pieza estándar que pesa aproximadamente 8.5 gramos.

Estas etiquetas de oreja insecticida son colgadas en una cámara cubiertas con un género de malla para mantener las moscas confinadas en el espacio de 12 x 17" x 9". Cada cámara contiene una copa de agua y un suministro de azúcar y leche en polvo.

Al inicio de la prueba, aproximadamente 100 moscas caseras de 3 a 5 días de edad son colocadas en cada cámara. Las cámaras son mantenidas a temperatura ambiente con la temperatura a 82°F. Las mezclas se observan diariamente (excepto el sábado y el domingo) y se registra la mortalidad. Al terminar el estudio, las cámaras son colocadas en un congelador durante toda la noche para matar las moscas restantes, que son contadas. El porcentaje de mortalidad se calcula con base en el número de moscas que mueve durante la observación y el número de moscas contado al final del estudio.

REIVINDICACIONES

1. Una etiqueta de oreja de animal, collar de cuello o pendiente que comprende sobre una base en peso ~~aproximadamente~~ 40% a 90% de una resina termoplástica; y
5 1% a 30% de metaflumizona.

2. Una etiqueta de oreja, collar de cuello o pendiente de acuerdo a la reivindicación 1, en donde la etiqueta de oreja se fabrica sobre una matriz de un género natural o sintético o malla de fibra, malla de alambre o dispersión sólida de un polímero o
10 copolímero de polivinil cloruro.

3. Una etiqueta de oreja de animal, collar de cuello o pendiente de acuerdo a la reivindicación 1 o 2 que comprende adicionalmente sobre una base en peso aproximadamente: 0.0% a 4.0% de un estabilizador de procesamiento; 0.2% a 10.0% de
15 un lubricante; 0.3% a 0.5% de un agente quelante;

1% a 2.5% de un estabilizador de procesamiento al calor;

0% a 5% de un agente de flujo;

0% a 35.0% de sinérgicos insecticidas y aceleradores de migración;

5.0% a 25.0% de un plastificador o una mezcla de plastificadores;

20 0.5 a 2.0% de colorante; y

0 a 30% de uno o más agentes insecticidas adicionales.

4. Una etiqueta de oreja, un collar de cuello o un pendiente de acuerdo a la reivindicación 1, 2 o 3, en donde la composición se impregna o se recubre sobre un
25 componente de matriz de malla de un género o fibra natural o sintético o alambre o una dispersión sólida de un polímero o copolímero de polivinil cloruro.

5. Una etiqueta de oreja, un collar de cuello o un pendiente de acuerdo a la reivindicación 1, en donde el componente se fabrica mediante extrusión o coextrusión. *→ método*
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6. Una etiqueta de oreja, un collar de cuello o un pendiente de acuerdo a la reivindicación 1, 2 o 3 en donde la resina termoplástica es una resina de polivinil cloruro.

7. Una etiqueta de oreja, un collar de cuello o un pendiente de acuerdo a la
35 reivindicación 3 que incluye adicionalmente amitraz.

8. Un método para controlar insectos en un ambiente localizado, dicho método comprende: poner en contacto un animal con una etiqueta de oreja, un collar de cuello o un pendiente que comprende la composición de la reivindicación 1, 2 o 3.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To:
WYETH
Attn: Renda, Barbara L.
Patent Law Department
Five Giralda Farms
Madison, New Jersey 07940
ETATS-UNIS D'AMERIQUE

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

AUG 23 2006

(PCT Rule 44.1)

Date of mailing (day/month/year) 21/08/2006	
Applicant's or agent's file reference AM102069	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US2006/019302	International filing date (day/month/year) 19/05/2006
Applicant WYETH	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally two months from the date of transmittal of the International Search Report.

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 338.82.70

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the International Searching Authority  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	Authorized officer Sabina Maretto
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SEP 01 2006

SHEILA McBRIDE

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NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*, Volume I/A, Annexes B1 and B2).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, Volume I/A, paragraph 296).

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference AM102069	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2006/019302	International filing date (day/month/year) 19/05/2006	(Earliest) Priority Date (day/month/year) 24/05/2005
Applicant WYETH		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☒ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. _____
☐ as suggested by the applicant
☐ as selected by this Authority, because the applicant failed to suggest a figure
☐ as selected by this Authority, because this figure better characterizes the invention
b. ☐ none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/019302

A. CLASSIFICATION OF SUBJECT MATTER

INV. A01K11/00 A01K13/00 A01K27/00

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)

A01K

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, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/122075 A1 (CHIARELLO) 24 June 2004 (2004-06-24) cited in the application	1,8
Y	column 5, paragraph 71	2,3,6,7
Y	US 4 195 075 A (MILLER) 25 March 1980 (1980-03-25) cited in the application	2,3,6
A	column 3, line 5 - column 4, line 41	1,8
Y	GB 2 114 442 A (CRB VIBRAC SA) 24 August 1983 (1983-08-24)	7
A	the whole document	1-3,6
A	US 5 194 265 A (BOETTCHER) 16 March 1993 (1993-03-16)	

☐ Further documents are listed in the continuation of Box C.☒ See patent family 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

14 August 2006

Date of mailing of the international search report

21/08/2006

Name and mailing address of the ISA/

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

Authorized officer

von Arx, V.

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International Application No. PCT/US2006 /019302

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 4, 5

The application does not meet the requirements of Article 6 PCT because claims 4 and 5 are not clear:

Claim 4, dependent on claim 1, 2 or 3, refers to "the composition". However no composition has been defined in anyone of said claims 1, 2 or 3.

Claim 5, dependent on claim 1, refers to "the component". However no component has been defined in claim 1.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/019302

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 4, 5
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims: it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/019302

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004122075 A1	24-06-2004	US 2006154923 A1	13-07-2006
US 4195075 A	25-03-1980	AR 222495 A1	29-05-1981
		AU 526894 B2	03-02-1983
		AU 5093179 A	27-03-1980
		BE 878708 A2	11-03-1980
		BG 47948 A3	15-10-1990
		BR 7905950 A	15-07-1980
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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**
(PCT Rule 43bis.1)

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2006/019302

International filing date (day/month/year)
19.05.2006

Priority date (day/month/year)
24.05.2005

International Patent Classification (IPC) or both national classification and IPC
INV. A01K11/00 A01K13/00 A01K27/00

Applicant
WYETH

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2006/019302

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ on paper
 - ☐ in electronic form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2006/019302

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of

- ☐ the entire international application
- ☒ claims Nos. 4, 5

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international search (*specify*):
- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 4, 5 are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed (*specify*):
- ☒ no international search report has been established for the whole application or for said claims Nos. 4, 5
- ☐ a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:
 - ☐ furnish a sequence listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it.
 - ☐ furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it.
 - ☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rules 13*ter*.1(a) or (b).
- ☐ a meaningful opinion could not be formed without the tables related to the sequence listings; the applicant did not, within the prescribed time limit, furnish such tables in electronic form complying with the technical requirements provided for in Annex C-bis of the Administrative Instructions, and such tables were not available to the International Searching Authority in a form and manner acceptable to it.
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in electronic form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See Supplemental Box for further details

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/US2006/019302

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The application does not meet the requirements of Article 6 PCT because claims 4 and 5 are not clear:

Claim 4, dependent on claim 1, 2 or 3, refers to "the composition". However no composition has been defined in anyone of said claims 1, 2 or 3.

Claim 5, dependent on claim 1, refers to "the component". However no component has been defined in claim 1.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement.

1. Claim 8 is directed to a method for controlling insects using an ear tag, neck collar or pendant comprising "the composition" of claim 1, 2 or 3. However no composition has been defined in anyone of said claims 1, 2 or 3, contrary to the requirements of Article 6 PCT. For the purpose of the present written opinion claim 8 was construed as follows:
"8. A method for controlling insects in a localized environment, said method comprising contacting an animal with an ear tag, neck collar or pendant according to claim 1, 2 or 3."
2. The present application does not satisfy the criterion set forth in Article 33(2) PCT because the subject-matter of independent claims 1 and 8 is not new in respect of the prior art as defined in the regulations (Rule 64(1)-(3) PCT).
Document US-A1-2004/0122075 (D1) discloses, see paragraph [0071], the application of metaflumizone to an animal for controlling insects by means of *inter alia* an ear tag, collar or medallion.
Ear tags and collars are known to be manufactured normally from a thermoplastic resin (see e.g. document US-A-4195075 (D2)) and to combine such ear tags or collars with an effective amount of metaflumizone, i.e. in an amount of at least 1 %, be it by impregnation, by coating or by incorporating a reservoir, for controlling insects, is

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/US2006/019302

therefore known from D1.

From the above it appears that all the features of claims 1 and 8 are known from this one document D1 at least by implication and the subject matter of said claims can therefore not be regarded as new.

3. Dependent claims 2, 3, 6 and 7 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step:

Claim 2: Document D2 discloses an ear tag fabricated from/on a matrix of a solid dispersion of polyvinyl chloride polymer containing an insecticide. Using metaflumizone in such an ear tag instead of a chlorophenil acetate isomer is merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem of incorporating metaflumizone in an ear tag.

Claim 3: Claim 3 is directed to an apparently standard composition for insecticide impregnated plastic ear tags which are partly revealed in the prior art quoted in the description and in the search report, see e.g. D2 and GB-A-2114442 (**D3**) or which forms part of the normal consideration of the person skilled in the art, i.e. it is the result of routine engineering and does not constitute an inspired design. Therefore the dependent claim 3 does not appear to contain any additional features which involve an inventive step when combined with the subject matter of any claim to which it refers.

Claim 6: Ear tags and collars are known to be manufactured from a thermoplastic resin like polyvinyl chloride resin, see e.g. D2.

Claim 7: The inclusion of amitraz in collars, ear tags or the like is already known from documents D3 or US-A-5194265 (**D4**).

PATENT COOPERATION TREATY

PCT/US2006/019302

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
SUBMISSION OR TRANSMITTAL
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

RENDA, Barbara, L.
Wyeth
Patent Law Department
Five Giralda Farms
Madison, New Jersey 07940
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year) 28 July 2006 (28.07.2006)	
Applicant's or agent's file reference AM102069	IMPORTANT NOTIFICATION
International application No. PCT/US2006/019302	International filing date (day/month/year) 19 May 2006 (19.05.2006)
International publication date (day/month/year) Not yet published	Priority date (day/month/year) 24 May 2005 (24.05.2005)
Applicant WYETH et al	

- By means of this Form, which replaces any previously issued notification concerning submission or transmittal of priority documents, the applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to all earlier application(s) whose priority is claimed. Unless otherwise indicated by the letters "NR", in the right-hand column or by an asterisk appearing next to a date of receipt, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- (If applicable) The letters "NR" appearing in the right-hand column denote a priority document which, on the date of mailing of this Form, had not yet been received by the International Bureau under Rule 17.1(a) or (b). Where, under Rule 17.1(a), the priority document must be submitted by the applicant to the receiving Office or the International Bureau, but the applicant fails to submit the priority document within the applicable time limit under that Rule, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- (If applicable) An asterisk (*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b) (the priority document was received after the time limit prescribed in Rule 17.1(a) or the request to prepare and transmit the priority document was submitted to the receiving Office after the applicable time limit under Rule 17.1(b)). Even though the priority document was not furnished in compliance with Rule 17.1(a) or (b), the International Bureau will nevertheless transmit a copy of the document to the designated Offices, for their consideration. In case such a copy is not accepted by the designated Office as the priority document, Rule 17.1(c) provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

Priority date	Priority application No.	Country or regional Office or PCT receiving Office	Date of receipt of priority document
24 May 2005 (24.05.2005)	60/684,201	US	17 July 2006 (17.07.2006)

The International Bureau of WIPO
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