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Industria y Comercio
SUPERINTENDENCIA

Delegatura de Propiedad Industrial
Division de Nuevas Creaciones

PCT
SOLICITUD

PATENTE DE INVENCION

21 EXPEDIENTE No

04-43905

54 TITULO FORMULACIONES DE PESTICIDAS

51 CLASIFICACION INTERNACIONAL ADIN 25/02

71 SOLICITANTE SYNGENTA LIMITED

DOMICILIO GUILDFORD SURREY RE NO NIDO

74 APODERADO J MENA ESCOBAR URIBE

22 BOGOTA D C MAY 2

FORMULARIO ÚNICO DE SOLICITUD DE PATENTE
PCT
ENTRADA EN FASE NACIONAL

SOLICITUD DE:

1

☒

Patente de Invención

☐

Patente de Modelo de Utilidad

☐

Capítulo I.

☒

Capítulo II.

2

SOLICITANTE
(71)

Nombre: **Syngenta Limited**
Dirección: **Priestley Road, Surrey Research
Park, Surrey GU2 7YH,**
Nacionalidad ó Domicilio: **Guildford, Surrey,
Reino Unido**
Lugar de Constitución : **Reino Unido**
Teléfono: Fax:
E-mail

IDENTIFICACIÓN

C.C. ☐

NIT ☐

C.E. ☐

Otro ☐

Número

3

REPRESENTANTE
AP DERADO
(74)

Nombre: **JIMENA ESCOBAR URIBE**
Dirección: **Cra. 11A No. 94-76 (Of. 305)**
Teléfono: **6 162051/61** Fax: **6 161889**
E-mail: **tm-patent@escobaruribe.com**

IDENTIFICACIÓN

C.C. ☒

NIT ☐

C.E. ☐

Otro ☐

Número **39.779.452 T.P.68.228**

4

INVENTOR (ES)
(72)

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Dirección: **Jealott's Hill International Research Centre, Bracknell,
Berkshire RG42 6YA**
Nacionalidad o domicilio: **Reino Unido.**

5

PCT (86)

Solicitud Internacional No. **PCT/GB02/04656** Fecha **Octubre 15, 2002**

Publicación Internacional No. **WO 03/037084 A1** Fecha **Mayo 8, 2003**

6 **TÍTULO (54)**

FORMULACIONES DE PESTICIDAS.

7 **Clasificación Internacional (51)**

A01N 25/02

8 **Prioridad**

SI ☒ NO ☐

(33) País de Origen
REINO UNIDO

(32) Fecha
Octubre 31, 2001

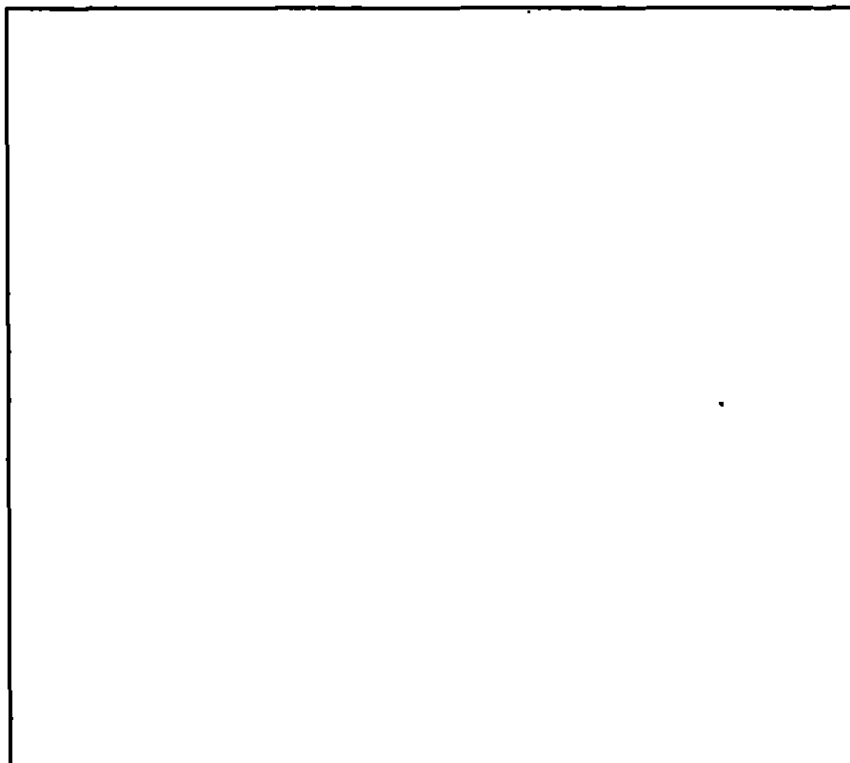
(31) Número de Solicitud
0126144.5

9 **Comprobante de pago No.** **04 - 33.952**

Fecha **Abril 28, 2004**

- ☐ 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 de 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

11 FIGURA CARACTERÍSTICA



12 Solicito la concesión de la patente

NOMBRE: JIMENA ESCOBAR URIBE

FIRMA:

C.C. 39.779,452 de Usaquén T.P. 68.228

2666/PCT

2668

SUPERINDUSTRIA Y COMERCIO
Radicecion : 04043905 00000000 Folios: 43
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RECIBO OFICIAL DE CAJA : 04 - 33,952
FECHA : ABRIL 28 DE 2004

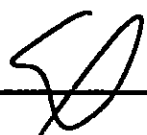
***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Vr. PAGO
ESCOBAR URIBE ASOCIADOS	CONSIGNACION	BANCO POPULAR	050-00110-6	4992970	27/04/2004	8,251,000.00

***** CONCEPTO *****

CANT. RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1 50005-01-01 SOLICITUDES	1 TRAMITES DE SOL. DE PATENTE DE IN	422,000.
	TOTAL :	422,000.

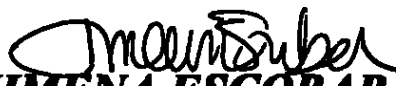
SON: CUATROCIENTOS VEINTIDOS MIL PESOS

RESPONSABLE : 

RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

Solicito expresamente a nombre de la sociedad **SYNGENTA LIMITED**, sociedad constituida de conformidad con las leyes de Reino Unido, domiciliada en Priestley Road, Surrey Research Park, Guildford, Surrey GU2 7YH, Reino Unido, el otorgamiento de Patente para la invención titulada **"FORMULACIONES DE PESTICIDAS"**.

Clase: A01N 25/02


JIMENA ESCOBAR URIBE
C.C. 39.779.452 de Usaquen.
T.P. 68.228

C. J. Ap. 3 Elinger
POWER OF ATTORNEY
DOCUMENTO DE PODER

POA
AMISTAR (S)

4

The undersigned

acting on behalf of and representing
SYNGENTA LIMITED

domiciled at
GUILDFORD, SURREY, UNITED KINGDOM

hereby appoints

JIMENA ESCOBAR-URIBE and/or
IGNACIO ESCOBAR-URIBE

domiciled at Bogota, Colombia
CARRERA 11 A No. 94-76 OF. 305-306

as our true and legal attorneys with the necessary powers: 1. to apply to the administrative, judicial and police authorities of the Republic of Colombia, in any instance or appeal, for obtaining registration of patents, utility models, industrial designs, commercial ensigns and names, trademarks, domain names, copyrights and neighbouring rights, plant varieties, health licenses as well as their assignments, extensions, renewals, changes of name and domicile; 2. to prepare, apply for, obtain, execute and register contracts, licenses, authorizations and registrations of any kind; 3. to intervene as plaintiffs or defendants, in any instance or appeal, before any judge, court, tribunal, corporation, public officer or authority in any judicial, administrative or police action, such as: actions dealing with commercial ensigns and names; oppositions against trademark registrations; caducity and nullity actions; recovery actions, actions arising from obtainment and working of license agreements; actions dealing with unfair competition; criminal actions; actions claiming indemnity for damages, complaints or remarks on all sort of industrial property matters; the performance of precautionary measures, and in any other similar action, measure or appeal related to industrial property matters, copyrights and neighbouring rights and obtention of plant varieties' rights. To this effect, we hereby authorize them to file applications, make descriptions, amendments, protests, declarations, oppositions, cancellations, appeals and claims; to pay taxes, quotas and liens as provided by law; to waive or abandon granted rights or rights in process of being granted, to receive all kind of documents and securities; to issue the respective releases and, in general to take, before said authorities, pertinent steps to the above-mentioned purposes and take all measures they may deem advisable to protect our interests, with all other necessary legal facilities, and we hereby declare as good and valid whatever the attorneys should do to our benefit.

This power comprises the authority to ratify or confirm on our behalf any action, as well as the faculty of receiving, desisting, transacting, compromising, conciliating, substituting and revoking substitutions, taking notifications and appointing judicial or extra-judicial attorneys.

Signed at Basel, Switzerland
on September 3, 2002

El suscrito

obrando en nombre y representación de
SYNGENTA LIMITED
con domicilio en
GUILDFORD, SURREY, REINO UNIDO
nombra a

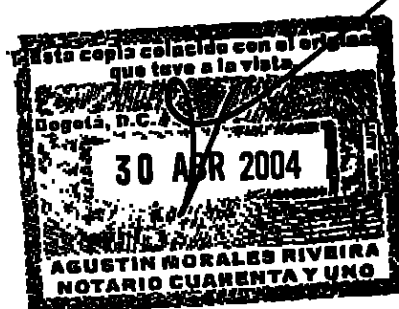
JIMENA ESCOBAR-URIBE y/o IGNACIO ESCOBAR-URIBE

domiciliados en Bogotá, Colombia
CARRERA 11 A No. 94-76 OF. 305-306

apoderados verdaderos y legales con poder especial, amplio y suficiente: 1. para recabar de las oficinas y autoridades colombianas administrativas, judiciales y de policía en cualquier instancia o recurso, la obtención de patentes de invención, modelos de utilidad, diseños industriales, registro de marcas, nombres de dominio, registro de derechos de autor y derechos conexos, registro de variedades vegetales, depósito de nombres comerciales y enseñas, registros sanitarios, así como sus traspaños, prórrogas, renovaciones, cambios de nombre y de domicilio; 2. elaborar, tramitar, solicitar, obtener, realizar, ejecutar y registrar contratos, licencias, autorizaciones y registros de cualesquiera clase; 3. intervenir como demandante o como demandado en cualquier instancia y recurso, y ante cualquier juez, entidad, corporación, funcionario público o autoridad en acciones judiciales, administrativas y de policía, tales como acciones derivadas del nombre o enseña comerciales; observaciones u oposición al registro de marcas, acciones de caducidad y nulidad; acciones reivindicatorias, acciones derivadas de la obtención o explotación de licencias; acciones de competencia dealeal; demandas penales y civiles; acciones de indemnización de perjuicios, reclamos u observaciones a cualquier asunto sobre propiedad industrial; el ejercicio de medidas cautelares y cualesquiera otras acciones, medidas o recursos similares relacionados con la propiedad industrial, los derechos de autor y derechos conexos y los derechos de obtentor de variedades vegetales. A este efecto, los facultamos para elevar solicitudes, formular descripciones, enmiendas, protestas, declaraciones, oposiciones, cancelaciones, apelaciones y reclamos; pagar impuestos, cuotas y gravámenes prescritos por la ley; renunciar o desistir a derechos concedidos o en curso de concesión; recibir toda clase de documentos y valores dando el descargo respectivo, y, en general, para dar ante dichas autoridades todos los pasos necesarios al efecto indicado y tomar todas las medidas que creyeran conducentes al resguardo de nuestros intereses, con todas las demás facultades necesarias y por este documento desde ahora declaramos válido y bueno todo cuanto los apoderados hicieren en nuestro beneficio.

Este poder comprende la facultad de ratificar o confirmar en nuestro nombre lo actuado, así como la facultad de desistir, transigir, comprometer, conciliar, sustituir y revocar sustituciones, recibir notificaciones y nombrar apoderados judiciales o extrajudiciales.

Firmado en
el



LEGALIZATION

I, the undersigned Notary Public, residing in Basle (Switzerland), certify as true and authentic the signatures applied hereto by Messrs. Mike Dammann, residing in Elmödingen (Germany), and Joachim Hofmann, residing in Lörrach (Germany), both German citizens.

These two gentlemen are authorized - according to a special power of attorney - to represent the Syngenta Limited, a company existing under the laws of Great Britain and having its domicile at Guildford, Surrey GU2 7 YH (Great Britain), with their joint signature by two.

I know the named and their signatures personally.

Basle, this 4th (fourth) day of September 2002 (two thousand-two).

20.09.02
8/2002

[Handwritten signatures]

Dr. C. Haab
Advokat & Notar

APOSTILLE
(Convention de la Haye du 5 octobre 1961)

1. Land: Schweiz (Suisse)
Diese öffentliche Urkunde

2. Ist unterschrieben von C. Haab

3. In seiner Eigenschaft als Advokat & Notar

4. sie ist versehen mit dem Siegel (Stempel) des (der) Genannten

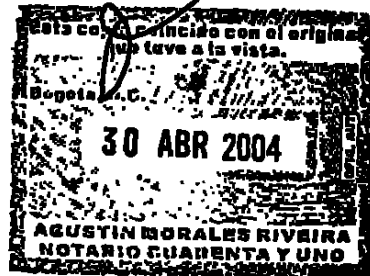
Besätigt - 5. Sep. 2002

5. In Basel (Bâle) 6. am

7. durch die Staatskanzlei des Kantons Basel-Stadt

8. unter Nr. 7'165/18'9PS

Siegel/Stempel: 10. Unterschrift: Heidi Fischer



TRADUCCION OFICIAL DEL INGLES de la Legalización de firmas adjunta al Poder que Syngenta Limited con domicilio en Guildford, Surrey, Reino Unido, otorga a Jimena Escobar-Uribe y/o Ignacio Escobar-Uribe.

LEGALIZACION

Yo, el suscrito Notario Público domiciliado en Basilea, Suiza, certifico que las firmas que aparecen al dorso de este documento son las firmas genuinas y auténticas ejecutadas por los Señores Mike Dammann, domiciliado en Eimeldingen (Alemania), y Joachim Hoffmann, domiciliado en Lörrach (Alemania), ciudadanos alemanes ambos.

Estos dos caballeros se encuentran autorizados -de acuerdo con un poder especial- para representar mediante su firma conjunta de a dos a *Syngenta Limited*, una compañía existente de conformidad con las leyes de Gran Bretaña y está domiciliada en Guildford, Surrey GU2 7YH (Gran Bretaña).

Basilea, 4 de Septiembre del 2002

Dr. iur. Conrad Haab, Abogado & Notario en Basilea
(Firma y Sello Oficial)

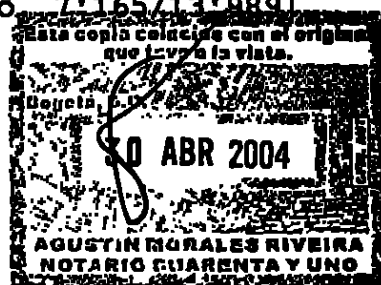
Prot. de Leg. No. 3038/2002

[Apostilla en idioma Alemán fechada el 5 de Septiembre del 2002 que legaliza la firma del Notario Dr. iur. Conrad Haab bajo el No. 7'165/13'989]

M. Méndez S.
JOSE MIGUEL MENDEZ

Traductor Oficial

Res. 911 de Mayo 1988 MINJUSTICIA



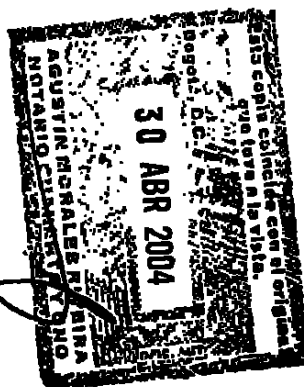
MINISTERIO DE
RELACIONES EXTERIORES

254312
J. H. Mendez
Cuya firma aparece en el
documento desempeña
las funciones indicadas

NO SE Asume
RESPONSABILIDAD DEL TEXTO

2002 SET 18 P 12:20

JEFE DE LEGACIONES
BOGOTA D.C.



7

Traducción oficial del alemán de la apostilla adjunta al DOCUMENTO DE PODER que la compañía SYNGENTA LIMITED domiciliada en Guildford, Surrey, Reino Unido, otorga a Ximeña Escobar-Uribe y/o Ignacio Escobar-Uribe

APOSTILLA

(Convención de La Haya del 5 de Octubre de 1961)

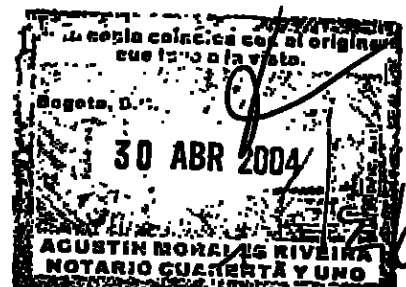
1. País: Suiza

Este documento público

2. Ha sido firmado por: El Dr. iur. Conrad Haab
3. Actuando en calidad de: Notario Público
4. Y lleva el sello: Del mencionado Notario

Confirmado

5. En: Basilea
6. El día: 5 de Septiembre del 2002
7. Por: La Cancillería de Estado del Cantón de la Ciudad de Basilea
8. Bajo el No.: 7'165/13'989
9. Sello: CANCELLERIA DE ESTADO DEL CANTON DE LA CIUDAD DE BASILEA
10. Firma: Heidi Fischer



ADOLFO WATZKE
Traductor Oficial
Reg. 8433 Minjusticia

RESUMEN

La presente invención provee una solución pesticida que comprende uno o mas pesticidas insolubles en agua (usualmente 0.5-50% peso/volumen) y lignina (preferiblemente en una relación de peso de 1:10 a 1:1 de lignina a pesticida) disuelta en agua miscible, en un solvente polar preferiblemente N-metil pirrolidona. Las soluciones son particularmente útiles en proveer un almacenamiento de concentrados solubles estables de fungicidas de la estrobilurina.

F RMULACI NES DE PESTICIDAS

Esta invención se relaciona con formulaciones de pesticidas y más particularmente con soluciones concentradas de pesticidas insolubles en agua. También se relaciona con la preparación de estas soluciones concentradas y sus usos en forma de diluciones acuosas.

Los pesticidas que tienen una baja solubilidad en agua y que son químicamente estables en agua se mercadean comúnmente en la forma de concentrados de las suspensiones acuosas (SCs) y se diluyen para el uso en el campo. El ingrediente activo suspendido del pesticida necesita tener un tamaño de partícula pequeño para mantenerlo suspendido mientras se almacena como un concentrado y cuando se diluye en agua. Esto normalmente requiere que el ingrediente activo este molido, lo cual puede ser desperdiciador de tiempo y costoso. Por lo tanto a menudo se encuentran problemas con concentrados de suspensiones como resultado de mantenerlos durante un almacenamiento prolongado, resistencia de las partículas agregadas a la resuspensión y algunas veces un incremento en el tamaño de partícula del ingrediente activo, durante el almacenamiento.

Una alternativa es disolver el ingrediente activo insoluble en agua en un solvente inmisible con el agua, tal como un hidrocarburo aromático, para formar un concentrado emulsificable (EC). Este se puede almacenar como una solución estable y diluirse con agua cuando se vaya a usar en la forma operacional de una

emulsión lechosa de pequeño tamaño de partícula. Los pesticidas insolubles en agua que no se solubilizan fácilmente en los solventes insolubles en agua normales, se pueden disolver en un solvente miscible con el agua para formar un concentrado soluble estable al almacenamiento (SL). El pesticida forma una suspensión en la dilución con agua. Concentrados solubles de esta clase se describen en, por ejemplo, WO 92/10937. Estos SLs son formulaciones de tres componentes, en los cuales un pesticida sólido insoluble en agua y un dispersante se solubilizan en un solvente miscible con el agua. Se menciona una gama de dispersantes que incluye: polímeros alquilados de la vinilpirrolidona, condensados de óxido de etileno óxido de propileno / propilen glicol, aducciones de óxido de etileno nonilfenol y varios etoxilados. Los solventes incluyen acetonitrilo, -butirolactona, dimetil cetona, dimetilfurano, dimetil sulfóxido, metanol y N-metil pirrolidona.

La desventaja de usar solventes solubles en agua para disolver los ingredientes activos de baja solubilidad en agua, es su pobre propiedad de dilución en agua. El ingrediente activo, a menudo se precipita rápidamente como cristales gruesos que dan ambos problemas de aplicación: tanto como bloqueo del filtro del rociador o del inyector, y pobre bioeficacia. Para prevenir, o más usualmente para retrasar la precipitación, es necesario incorporar un exceso de agente emulsificante o dispersante, típicamente en una relación 1:1 con el ingrediente activo, a estas concentraciones los surfactantes pueden aumentar los problemas de fitotoxicidad en si mismos.

De acuerdo con la presente invención, se proporciona una solución concentrada del pesticida, la cual comprende uno o más pesticidas insolubles en agua y lignina disueltos en un solvente polar miscible con agua. El pesticida o pesticidas usados en la solución concentrada de la invención son insolubles en agua y pueden ser sólidos o líquidos, pero la invención es de particular valor para los pesticidas que son sólidos a temperatura ambiente. Normalmente ellos tendrán una solubilidad en agua de no más de 0.2% peso/volumen. Ellos también deben ser solubles en los solventes polares miscibles con agua, elegidos.

La cantidad de pesticida o pesticidas usados estará usualmente entre 0.5 y 50% Peso/volumen, más usualmente entre 1 y 30% peso/volumen y típicamente entre 5 y 20% peso/volumen, de la solución total.

Los pesticidas incluyen herbicidas, insecticidas y fungicidas. La invención es particularmente adecuada para cualquier pesticida o mezcla de pesticidas que tienen una solubilidad en agua de no más de 0.2% peso/volumen. Ejemplos de pesticidas para uso en esta invención son: napropamida, haloxifop, clodinafop-propargilo, mesotriona, cipermetrina, alfa-cipermetrina, beta.cipermetrina, ciproconazol, difenoconazol, hexaconazol, penaconazol, tebuconazol, azoxitrobina, picoxiestrobina, cresoxima-meilo, metominoestrobina, picoxiestrobina, piraclostrobina, trifloxiestriobina, ciprodinil, metalaxil, mefenoxam, fluazinam, fludioxonil , paclobutrazol, tiabendazol y quinoxifeno. Sin embargo la

invención es particularmente útil para fungicidas, especialmente para los fungicidas del triazol y los fungicidas de la estrobilurina, y para mezclas de fungicidas, especialmente mezclas de un fungicida de la estrobilurina, por ejemplo picoxiestrobina con un fungicida del triazol tal como hexaconazol o ciproconazol. Son de particular interés las soluciones concentradas hechas de un fungicida seleccionado del grupo que consiste de azoxiestrobina, picoxiestrobina, tebuconazol, ciproconazol, y picoxiestrobina en adición con ciproconazol.

Por lignina se entiende una lignina en su estado ácido libre y no como una sal de metal alcalino, tal como la sal de sodio, o un lignosulfonato. La lignina, la cual es un polímero del fenil-propeno de peso molecular variable, se puede obtener de los licores gastados de los procesos con sulfato y soda usados en la industria para reducir la madera a pulpa. La lignina también se puede obtener como se sabe, como una lignina alcalina y luego se puede designar como un sulfato (o Kraft) de lignina o una lignina de soda. Para uso en la presente invención es particularmente adecuada la Indulina AT (Indulina AT es el nombre de marca), la cual es lignina altamente purificada hecha del licor negro del sulfato de la madera de pino y producida en la forma de un polvo carmelito de fluido libre.

La cantidad de lignina usada en la solución concentrada de la presente invención en relación con la cantidad usada de pesticida, esta convenientemente en una relación en peso entre 1:10 a 1:1, usualmente entre 1:8 a 1:2, preferiblemente entre 1:6 a 1:4 y típicamente 1:5 de lignina al pesticida total.

Cualquier solvente polar miscible con el agua que pueda disolver ambos, al pesticida y a la lignina, se puede usar en la presente invención. Solventes adecuados incluyen: -butirolactona, alcohol tetrahidrofurfurílico, N-metil pirrolidona, dimetil sulfoxido, N.N-dimetilformamida y lactato de etilo. Los solventes preferidos son: -butirolactona y alcohol tetrahidrofurfurílico, y el solvente particularmente preferido es la N-metil pirrolidona. También se pueden usar mezclas de solventes polares, por ejemplo, una mezcla 50:50 de N-metil pirrolidona y poli-etilenglicol 200. La cantidad de solvente usada es suficiente para llevar la solución total a 100% peso/volumen.

Aunque no es esencial, la solución concentrada puede incluir otros aditivos, por ejemplo, estabilizadores de polímeros o agentes anti-aglomerantes para mejorar la dilución. Ejemplos de estabilizadores y agentes anti-aglomerantes adecuados incluyen polímeros solubles e insolubles en agua, tales como etil-celulosa, caseína, hidroxipropil-celulosa, *Avicel*™ CL-611 (a base de celulosa microcristalina), *Agrimer*™ VEMA AN-216 (un co-polímero del anhídrido maléico vinil éter, PM 55.000 a 80.000), NU-FILM™ (poli-1-mentano) y *Kelzam*™ (una goma del xantano). Tales aditivos se usan convenientemente en cantidades de hasta del 0.5% peso/volumen, por ejemplo, de 0.1 a 0.4% peso/volumen, típicamente 0.25% peso/volumen, del total de la formulación, dependiendo de sus solubilidades en el solvente polar que se usen. Por ejemplo, la cantidad máxima de *Avicel*™ CL-611 y *Kelzam*™ que se pueden disolver en un concentrado base de N-metil pirrolidona es de cerca del 0.1% peso/volumen.

En una incorporación la invención proporciona una solución concentrada de pesticida la cual comprende:

- (a) de 1 a 30% peso/volumen, usualmente de 5 a 30% peso/volumen y típicamente de 10 a 20 % peso/volumen de uno o más pesticidas insolubles en agua.
- (b) Lignina en una relación en peso de entre 1:10 a 1:1, usualmente entre 1:8 a 1:2 y preferiblemente de 1:6 a 1:4, típicamente 1:5, del componente (a), estando ambos (a) y (b) disueltos en:
- (c) Un solvente polar miscible con agua, tal como: -butirolactona, alcohol tetrahidrofurfúrico, N-metil pirrolidona, N.N-dimetilformamida y lactato de etilo y preferiblemente N-metil pirrolidona.

En esta incorporación, la solución concentrada contiene opcionalmente hasta 0.5% peso/volumen de otros aditivos, tales como estabilizadores o agentes anti-aglomerantes como etil-celulosa.

La solución concentrada de la invención se prepara disolviendo el pesticida o pesticidas, la lignina, y opcionalmente un estabilizador u otro aditivo en el solvente polar.

Los ingredientes se pueden agregar al solvente en cualquier orden. Usualmente esto se hace a temperatura ambiente con agitación o mezclado adecuados. Para ayudar a la disolución, el solvente se puede calentar a temperaturas hasta de ejemplo 50 °C.

Cuando se va a usar, la solución concentrada se diluye con agua, usualmente adicionando la solución a un volumen de agua de mezclado para dar una dispersión acuosa del pesticida o pesticidas que contiene por ejemplo, de 0.0001 a 1% peso/volumen del pesticida o pesticidas. La solución acuosa del pesticida entonces se aplica por rociado o por cualquier otra técnica conocida, al sitio que requiere el tratamiento.

Así, en otra incorporación de la presente invención, se proporciona un método para combatir o controlar una peste agrícola, el cual comprende la aplicación a la peste o al *locus* de la peste, de una cantidad efectiva de una dispersión acuosa preparada por dispersión en agua de una solución concentrada del pesticida de acuerdo con la invención.

La ventaja de las soluciones concertadas de pesticida de la presente invención es que ellas puede producir partículas sub-micrónicas (ca. 0.4 μ m) esencialmente mono-dispersas por dilución en el agua, las cuales son estables al crecimiento subsecuente por al menos 24 horas.

La invención se ilustra con referencia a los siguientes ejemplos. En los ejemplos se usan las siguientes abreviaturas:

a i	= ingrediente activo
ppm	= partes por millón
w/w	= peso/peso
NMP	= N-metil-pirrolidona
DMSO	= Dimetilsulfóxido
PEG 200	= Poli-etilenglicol, peso molecular promedio 200
EL	= Lactato de estilo
SL	= concentrado soluble
w/v	= peso/volumen
INIT	= inicial
GBL	= -butirolactona
THFA	= alcohol tetrahidrofurfurlico

EJEMPLO 1

Este ejemplo muestra como el tamaño de partícula es determinante cuando varias soluciones concentradas de pesticida, preparadas de acuerdo con la presente invención, se diluyen en agua.

Los resultados se dan para un número de soluciones de la invención.

Método de Prueba de la Dispersión.

Se probaron las propiedades de dispersión en agua de las formulaciones, adicionando 2,5 mL de la solución concentrada mediante una pipeta, a un receptor de cuervo tapado que contenía 97,5 mL de una agua dura estándar CIPAC. La "floración" inicial se notó cuando las primeras gotas se adicionaron al agua, luego el receptor se invirtió tres veces y se observó homogenización de la dispersión. El sistema se revisó en intervalos de tiempo durante un periodo de 24 horas para observar cualquier sedimentación o cristalización.

Las revisiones del tamaño de partícula sobre las diluciones iniciales y después de 24 horas, fueron llevadas a cabo usando un Malvern Mastersizer S. Los parámetros del instrumento fueron los siguientes:

Modelo Polidisperso

Oscurecimiento 2-4%

Velocidad de la bomba 40%

Velocidad de agitación 20%

Ultrasónicos – nada

Valores de tamaño de Partícula citados:

Diámetro del volumen mediano D (v, 0.5)

Diámetro del volumen medio D [4,3]

% menor que 1 μ m

Los tipos de agua dura estándar usados fueron CIPAC A y CIPAC G.

Estos tienen las siguientes características:

CIPAC A: dureza 20 ppm, pH 5.0-6.0; Ca^{+2} : $\text{Mg}^{+2} = 1:1$

CIPAC C: dureza 500 ppm, pH 7.0-8.0; Ca^{+2} : $\text{Mg}^{+2} = 4:1$

(a) Concentrados solubles de azoxiestrobina

Se preparan las formulaciones SL que contienen 10% w/v de azoxiestrobina en NMP variando los niveles de lignina y se probaron las propiedades de las diluciones. Las tablas 1 y 2 de abajo muestran los resultados.

Tabla 1: Diluciones de Aazoxiestrobina en agua CIPAC A

Indulina AT %w/v	Inicial CIPAC A			24 horas CIPAC A		
	Medio	Mediano	%<1 m	Medio	Mediano	%<1 m
1	9.71	0.44	85.69	0.39	0.37	100.00
2	3.46	0.38	90.56	1.25	0.39	95.68
3	0.40	0.38	100.00	0.39	0.37	100.00
5	0.39	0.37	100.00	0.38	0.36	100.00
10	2.77	0.38	76.31	4.51	0.41	70.43

Tabla 2: Diluciones de Aazoxiestrobina en agua CIPAC C

Indulina AT %w/v	Inicial CIPAC C			24 horas CIPAC C		
	Medio	Mediano	%<1 m	Medio	Mediano	%<1 m
1	-	-	-	0.88	0.378	94.11
2	1.39	0.37	88.05	0.53	0.39	96.58
3	0.74	0.38	93.62	1.96	0.41	83.11
5	1.33	0.40	87.76	85.44	0.61	64.38
10	5.14	0.90	51.93	7.15	1.90	39.38

Estos resultados indican que hay un nivel óptimo de Indulina AT alrededor del 2% al 3% para mantener el tamaño de partícula fina.

Con el 5% al 10% hay evidencia de floculación después de 24 horas, especialmente en CIPAC C, mostrada por el incremento en los valores medios de tamaño de partícula y una reducción en el porcentaje con tamaño menor que 1 m.

(b) Concentrados solubles de picoxiestrobina.

Se prepararon las formulaciones SL al 10% (w/w?) w/v en NMP que contiene 1, 2 y 5% w/v de lignina y las diluciones se analizaron para tamaño de partícula después de 24 horas. Los resultados se muestran en la tabla 3.

Tabla 3: Diluciones de Picoxiestrobina

Indulina AT %w/v	CIPAC A			CIPAC C		
	Medio	Mediano	%<1 m	Medio	Mediano	%<1 m
1	14.01	0.56	76.32	23.81	0.68	65.22
2	1.69	0.51	84.29	1.11	0.52	81.21
5	1.78	0.46	86.54	1.16	0.57	73.57

(c) Concentrado soluble de tebuconazol

Se preparó una formulación SL al 10% w/v en NMP que contenía 5% de lignina, Las diluciones después de 24 horas dieron los resultados que se muestran en la tabla 4.

Tabla 4: Diluciones de tebuconazol

Indulina AT %w/v	CIPAC A			CIPAC C		
	Medio	Mediano	%<1 m	Medio	Mediano	%<1 m
5	0.36	0.35	100.00	0.37	0.36	100.00

(d) Concentrado soluble de ciproconazol

Se preparó una formulación SL al 10% w/v en NMP que contenía 5% de lignina.
Los resultados obtenidos se muestran en la tabla 5

Tabla 5: Diluciones de ciproconazol

Indulina AT %w/v	CIPAC A			CIPAC C		
	Medio	Mediano	%<1 m	Medio	Mediano	%<1 m
5	14.41	0.35	78.90	14.22	0.33	82.39

(e) mezcla soluble de picoxiestrobina / ciproconazol

Se preparó una formulación SL al 12.5% w/v de picoxiestrobina y al 5.0% de ciproconazol que contiene 8% w/v de lignina. La dilución después de 24 horas dio los resultados que se muestran en la Tabla 6:

Tabla 6: Dilución de picoxiestrobina / ciproconazol

Indulina AT %w/v	CIPAC A		
	Medio	Mediano	%<1 m
8	3.50	0.46	80.33

EJEMPLO 2

Este ejemplo ilustra el uso de solventes polares alternativos para preparar las soluciones concentradas de la invención y el uso de otros pesticidas.

Se prepararon formulaciones SL que contienen el 10% w/v del ingrediente activo y 4% w/v de Indulina AT, usando los ingredientes activos: azoxiestrobina, hexaconazol, cipermetrina y mesotriona con NMP como solvente. Adicionalmente, se prepararon formulaciones similares de azoxiestrobina con los siguientes solventes: GBL, DMSO, THFA, acetato de etilo y 50% NMP / 50% PEG 200.

Las diluciones de estas formulaciones (2500 ppm del ingrediente activo en agua CIPAC C) se analizaron por el método descrito en el ejemplo 1, con los resultados mostrados en la tabla 7.

Tabla 7: Solventes alternativos

Solvente	Calidad de la dilución después del tiempo (horas)							Retencion en tamiz (75 m)
	Init	0.5	1.0	2.0	3.0	6.0	24.0	
NMP	*	*	*	*	*	*	*	nada
GBL	*	*	*	*	*	*	*	nada
DMSO	*	*	*	*	*	*	*	nada
THFA	*	*	*	*	*	*	*	nada
EL	*	*	*	*	*	*	*	nada
NMP/PEG	*	*	*	*	*	*	*	nada

* Suspensión de partículas sub-micrónicas finas

Estos resultados muestran que todas las combinaciones de ingredientes activos y solventes dieron diluciones satisfactorias después de 24 horas, pasando cualquier suspensión fina por tamiz de 75 μ m.

REIVINDICACIONES

1. Una solución concentrada de pesticida la cual comprende uno o más pesticidas insolubles en agua y lignina disueltos en un solvente polar miscible con agua.
2. Una solución concentrada de pesticida de acuerdo con la reivindicación 1, en la cual la cantidad usada de pesticida o pesticidas es de 0.5 a 50% w/v.
3. Una solución concentrada de pesticida de acuerdo con la reivindicación 1 o 2, en la cual el pesticida es un fungicida de estrobilurina o un fungicida triazol o una mezcla de los mismos.
4. Una solución concentrada de pesticida de acuerdo con la reivindicación 1 o 2, en la cual el pesticida es un fungicida seleccionado del grupo que consiste de azoxiestrobina, picoxiestrobina, tebuconazol, ciproconazol, y picoxiestrobina en adición con ciproconazol.
5. Una solución concentrada de pesticida de acuerdo con cualquiera de las reivindicaciones precedentes, en la cual la cantidad de lignina usada esta en la relación en peso de entre 1:10 a 1:1 de lignina a pesticida.

6. Una solución concentrada de pesticida de acuerdo con cualquiera de las reivindicaciones precedentes, en la cual el solvente polar se selecciona del grupo que consiste de γ -butirolactona, alcohol tetrahidrofurfurílico, lactato de etilo y N-metil pirrolidona.
7. Una solución concentrada de pesticida de acuerdo con cualquiera de las reivindicaciones precedentes, la cual incluye un estabilizador de polímero o un agente anti-aglomerante.
8. Una solución concentrada de acuerdo con la reivindicación 7, en la cual el estabilizador de polímero o agente anti-aglomerante es etil celulosa.
9. Una solución concentrada de pesticida la cual incluye:
 - (a) de 1 a 30% w/v de uno o más pesticidas insolubles en agua y
 - (b) Lignina en la relación de peso de entre 1:10 a 1:1 del componente (a), estando ambos (a) y (b) disueltos en un solvente polar miscible con agua.
10. una solución concentrada de pesticida de acuerdo con la reivindicación 9, la cual contiene hasta 0.5% w/v de otro aditivo.
11. Un método para combatir o controlar una peste agrícola el cual comprende la aplicación a la peste o al *locus* de la misma de una cantidad efectiva de pesticida de una dispersión acuosa preparada dispersando en agua una solución concentrada de pesticida de acuerdo con la invención.

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only	
International Application No.	
International Filing Date	
Name of receiving Office and "PCT International Application"	
Applicant's or agent's file reference (if desired) (12 characters maximum) PPD 50676/WO	

Box No. I TITLE OF INVENTION PESTICIDAL FORMULATIONS	
Box No. II APPLICANT ☐ This person is also inventor	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this box is the applicant's State (that is, country) of residence (if no State of residence is indicated below.)	
SYNGENTA Limited European Regional Centre, Priestley Road, Surrey Research Park, Guildford, Surrey GU2 7YH, GB	Telephone No. 01344 414456 Facsimile No. 01344 481112 Teleprinter No. Applicant's registration No. with the Office
State (that is, country) of nationality: GB	State (that is, country) of residence: GB
This person is applicant for the purposes of: ☐ all designated States ☒ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box	
Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this box is the applicant's State (that is, country) of residence (if no State of residence is indicated below.)	
Roger Paul WARRINGTON Jealott's Hill International Research Centre Bracknell, Berkshire, RG42 6YA GB	This person is: ☐ applicant only ☒ applicant and inventor ☐ inventor only (if this check-box is marked, do not fill in below.) Applicant's registration No. with the Office
State (that is, country) of nationality: GB	State (that is, country) of residence: GB
This person is applicant for the purposes of: ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box	
☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.	
Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE	
The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: ☒ agent ☐ common representative	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)	
HOUGHTON Malcolm John Intellectual Property Department Syngenta Limited PO Box 3538 Jealott's Hill Research Centre Bracknell, RG42 6YA, GB	Telephone No. 01344 414456 Facsimile No. 01344 481112 Teleprinter No. Agent's registration No. with the Office
☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.	

Box No. V DESIGNATION OF STATES

Mark the applicable check-boxes below; at least one must be marked.

The following designations are hereby made under Rule 4.9(a):

Regional Patent

- ☐ **AP** ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, MZ Mozambique, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☐ **EA** Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☐ **EP** European Patent: AT Austria, BE Belgium, CH & LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, TR Turkey, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☐ **OA** OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (If other kind of protection or treatment desired, specify on dotted line)

National Patent (If other kind of protection or treatment desired, specify on dotted line):

- | | | |
|--|---|---|
| ☐ AE United Arab Emirates | ☐ GH Ghana | ☐ MX Mexico |
| ☐ AG Antigua and Barbuda | ☐ GM Gambia | ☐ MZ Mozambique |
| ☐ AL Albania | ☐ HR Croatia | ☐ NO Norway |
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| ☐ CZ Czech Republic | ☐ LT Lithuania | |
| ☐ DE Germany | ☐ LU Luxembourg | ☐ TZ United Republic of Tanzania |
| ☐ DK Denmark | ☐ LV Latvia | ☐ UA Ukraine |
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| ☐ DZ Algeria | ☐ MD Republic of Moldova | ☐ US United States of America |
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| ☐ GE Georgia | | |

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| ☐ TN Tunisia | ☐ GQ Equatorial Guinea | ☐ |

Provisionary Designation Statement: In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)

Supplemental Box *If the Supplemental Box is not used, this sheet should not be included in the request.*

1. *If, in any of the Boxes, except Boxes Nos. VIII(i) to (v) for which a special continuation box is provided, the space is insufficient to furnish all the information: in such case, write "Continuation of Box No." (indicate the number of the Box) and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient, in particular:*
 - (i) *If more than two persons are to be indicated as applicants and/or inventors and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;*
 - (ii) *If, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States indicated in the Supplemental Box" is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;*
 - (iii) *If, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;*
 - (iv) *If, in addition to the agent(s) indicated in Box No. IV, there are further agents: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;*
 - (v) *If, in Box No. V, the name of any State (or OAPI) is accompanied by the indication "patent of addition," or "certificate of addition," or if, in Box No. V, the name of the United States of America is accompanied by an indication "continuation" or "continuation-in-part": in such case, write "Continuation of Box No. V" and the name of each State involved (or OAPI), and after the name of each such State (or OAPI), the number of the parent title or parent application and the date of grant of the parent title or filing of the parent application;*
 - (vi) *If, in Box No. VI, there are more than five earlier applications whose priority is claimed: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI.*
2. *If, with regard to the precautionary designation statement contained in Box No. V, the applicant wishes to exclude any State(s) from the scope of that statement: in such case, write "Designation(s) excluded from precautionary designation statement" and indicate the name or two-letter code of each State so excluded.*

Continuation of Box IV:
 HOUGHTON, Malcolm John
 RICKS, Michael James
 WATERMAN, John Richard
 WARD, Steven Paul
 GAAL, Jozsef Christopher
 SMITH, Jane EB
 HUSKISSON, Frank Mackle

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 Facsimile: 01344 481112

All at:
 Intellectual Property Dept
 Syngenta Limited
 Jealott's Hill International Research Centre
 PO Box 3638, Brecknell, Berkshire
 RG42 6YA

Box No. VI PRIORITY CLAIM

The priority of the following earlier application(s) is hereby claimed:

Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: ^a regional Office	international application: receiving Office
item (1) 31-October-2001 31-10-2001	0126144.5	GB		
item (2)				
item (3)				
item (4)				
item (5)				

☐ Further priority claims are indicated in the Supplemental Box.

The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of this international application is the receiving Office) identified above as:

☐ all items ☐ item (1) ☐ item (2) ☐ item (3) ☐ item (4) ☐ item (5) ☐ other, see Supplemental Box

^a Where the earlier application is an ARIPO application, indicate at least one country party to the Paris Convention for the Protection of Industrial Property or one Member of the World Trade Organization for which that earlier application was filed (Rule 4.10(b)(10)):

Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA /

Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):

Date (day/month/year)

Number

Country (or regional Office)

Box No. VIII DECLARATIONS

The following declarations are contained in Boxes Nos. VIII (i) to (v) (mark the applicable check-boxes below and indicate in the right column the number of each type of declaration):

Number of declarations

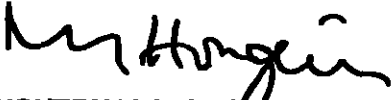
- | | | |
|---|--|---|
| ☐ Box No. VIII (i) | Declaration as to the identity of the inventor | : |
| ☐ Box No. VIII (ii) | Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent | : |
| ☐ Box No. VIII (iii) | Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application | : |
| ☐ Box No. VIII (iv) | Declaration of inventorship (only for the purposes of the designation of the United States of America) | : |
| ☐ Box No. VIII (v) | Declaration as to non-prejudicial disclosures or exceptions to lack of novelty | : |

Box No. IX CHECK LIST; LANGUAGE OF FILING

This international application contains: (a) the following number of sheets in paper form: <table><tr><td>request (including declaration sheets)</td><td>:</td><td>5</td></tr><tr><td>description (excluding sequence listing part)</td><td>:</td><td>9</td></tr><tr><td>claims</td><td>:</td><td>1</td></tr><tr><td>abstract</td><td>:</td><td>1</td></tr><tr><td>drawings</td><td>:</td><td></td></tr><tr><td>Sub-total number of sheets</td><td>:</td><td>16</td></tr><tr><td>sequence listing part of description (actual number of sheets if filed in paper form, whether or not also filed in computer readable form; see (b) below)</td><td>:</td><td></td></tr><tr><td>Total number of sheets</td><td>:</td><td>21</td></tr></table> (b) sequence listing part of description filed in computer readable form (i) ☐ only (under Section 801(a)(i)) (ii) ☐ in addition to being filed in paper form (under Section 801(a)(ii)) Type and number of carriers (diskette, CD-ROM, CD-R or other) on which the sequence listing part is contained (additional copies to be indicated under item 9(ii), in right column): 	request (including declaration sheets)	:	5	description (excluding sequence listing part)	:	9	claims	:	1	abstract	:	1	drawings	:		Sub-total number of sheets	:	16	sequence listing part of description (actual number of sheets if filed in paper form, whether or not also filed in computer readable form; see (b) below)	:		Total number of sheets	:	21	This international application is accompanied by the following item(s) (mark the applicable check-boxes below and indicate in right column the number of each item): <table><tr><td>1. ☒ fee calculation sheet</td><td>:</td><td></td></tr><tr><td>2. ☒ original separate power of attorney</td><td>:</td><td></td></tr><tr><td>3. ☐ original general power of attorney</td><td>:</td><td></td></tr><tr><td>4. ☐ copy of general power of attorney; reference number, if any:</td><td>:</td><td></td></tr><tr><td>5. ☐ statement explaining lack of signature</td><td>:</td><td></td></tr><tr><td>6. ☐ priority document(s) identified in Box No. VI as item(s):</td><td>:</td><td></td></tr><tr><td>7. ☐ translation of international application into (language):</td><td>:</td><td></td></tr><tr><td>8. ☐ separate indications concerning deposited microorganism or other biological material</td><td>:</td><td></td></tr><tr><td>9. ☐ sequence listing in computer readable form (indicate also type and number of carriers (diskette, CD-ROM, CD-R or other))</td><td>:</td><td></td></tr><tr><td> (i) ☐ copy submitted for the purposes of international search under Rule 134ter only (and not as part of the international application)</td><td>:</td><td></td></tr><tr><td> (ii) ☐ (only where check-box (b)(i) or (b)(ii) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Rule 134ter</td><td>:</td><td></td></tr><tr><td> (iii) ☐ together with relevant statement as to the identity of the copy or copies with the sequence listing part mentioned in left column</td><td>:</td><td></td></tr><tr><td>10. ☐ other (specify):</td><td>:</td><td></td></tr></table>	1. ☒ fee calculation sheet	:		2. ☒ original separate power of attorney	:		3. ☐ original general power of attorney	:		4. ☐ copy of general power of attorney; reference number, if any:	:		5. ☐ statement explaining lack of signature	:		6. ☐ priority document(s) identified in Box No. VI as item(s):	:		7. ☐ translation of international application into (language):	:		8. ☐ separate indications concerning deposited microorganism or other biological material	:		9. ☐ sequence listing in computer readable form (indicate also type and number of carriers (diskette, CD-ROM, CD-R or other))	:		(i) ☐ copy submitted for the purposes of international search under Rule 134ter only (and not as part of the international application)	:		(ii) ☐ (only where check-box (b)(i) or (b)(ii) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Rule 134ter	:		(iii) ☐ together with relevant statement as to the identity of the copy or copies with the sequence listing part mentioned in left column	:		10. ☐ other (specify):	:		Number of items
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Figure of the drawings which should accompany the abstract:	Language of filing of the international application: ENGLISH																																																																

Box No. X SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).


HOUGHTON Malcolm John

For receiving Office use only	
1. Date of actual receipt of the purported international application:	2. Drawings: ☐ received: ☐ not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	
4. Date of timely receipt of the required corrections under PCT Article 11(2):	
5. International Searching Authority (if two or more are competent): ISA /	6. ☐ Transmittal of search copy delayed until search fee is paid

For International Bureau use only	
Date of receipt of the record copy by the International Bureau:	

31

This sheet is not part of and does not count as a sheet of the international application.

PCT

FEE CALCULATION SHEET

Annex to the Request

For receiving Office use only

International Application No.

Applicant's or agent's
file reference

PPD 50678/WO

Date stamp of the receiving Office

Applicant

SYNGENTA Limited

CALCULATION OF PRESCRIBED FEES

1. TRANSMITTAL FEE £55.00 **T**

2. SEARCH FEE £592.00 **S**

International search to be carried out by EPO
(If two or more International Searching Authorities are competent to carry out the international search, indicate the name of the Authority which is chosen to carry out the international search.)

3. INTERNATIONAL FEE

Basic Fee

Where item (b) of Box No. IX applies, enter Sub-total number of sheets } 18
Where item (b) of Box No. IX does not apply, enter Total number of sheets }

b1 first 30 sheets £278.00 **b1**

b2 x £6.00 = **b2**
number of sheets in excess of 30 fee per sheet

b3 additional component (only if sequence listing part of description is filed in computer readable form under Section 801(a)(i), or both in that form and on paper, under Section 801(a)(ii)):

400 x = £0.00 **b3**
fee per sheet

Add amounts entered at b1, b2 and b3 and enter total at B **B**

Designation Fee

The international application contains ALL designations.

5 x £60.00 = £300.00 **D**
number of designation fees payable (maximum 6) amount of designation fee

Add amounts entered at B and D and enter total at I £578.00 **I**

(Applicants from certain States are entitled to a reduction of 75% of the international fee. Where the applicant is (or all applicants are) so entitled, the total to be entered at I is 25% of the sum of the amounts entered at B and D.)

4. FEE FOR PRIORITY DOCUMENT (if applicable) **P**

5. TOTAL FEES PAYABLE £1225.00

Add amounts entered at T, S, I and P, and enter total in the TOTAL box

TOTAL

☐ The designation fees are not paid at this time.

MODE OF PAYMENT

☒ authorization to charge deposit account (see below) ☐ postal money order ☐ cash ☐ coupons
☐ cheque ☐ bank draft ☐ revenue stamps ☐ other (specify):

AUTHORIZATION TO CHARGE (OR CREDIT) DEPOSIT ACCOUNT

(This mode of payment may not be available at all receiving Offices)

☒ Authorization to charge the total fees indicated above.
☒ (This check-box may be marked only if the conditions for deposit accounts of the receiving Office so permit) Authorization to charge any deficiency or credit any overpayment in the total fees indicated above.
☐ Authorization to charge the fee for priority document.

Receiving Office: ROV UK

Deposit Account No.: D02083

Date: 14 October 2002

Name: Joanna Carmen CHANDLER

Signature: Joanna Chandler

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
8 May 2003 (08.05.2003)

PCT

(10) International Publication Number
WO 03/037084 A1

(51) International Patent Classification⁷: A01N 25/02, 43/53, 43/54, 43/40

(21) International Application Number: PCT/GB02/04656

(22) International Filing Date: 15 October 2002 (15.10.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 0126144.5 31 October 2001 (31.10.2001) GB

(71) Applicant (for all designated States except US): SYNGENTA LIMITED [GB/GB]; European Regional Centre, Priestley Road, Surrey Research Park, Guildford, Surrey GU2 7YH (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventor; and
(75) Inventor/Applicant (for US only): WARRINGTON, Roger, Paul [GB/GB]; Jealott's Hill International Research Centre, Bracknell, Berkshire RG42 6YA (GB).

(74) Agents: HOUGHTON, Malcolm, John et al.; Intellectual Property Department, Syngenta Limited, P.O. Box 3538, Jealott's Hill Research Centre, Bracknell RG42 6YA (GB).

Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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.

(54) Title: PESTICIDAL FORMULATIONS

(57) Abstract: A concentrated pesticidal solution is provided which comprises one or more water-insoluble pesticides (usually 0.5-50% w/v) and lignin (suitably in the weight ratio of 1:10 to 1:1 of lignin to pesticide) dissolved in a water miscible, polar solvent, preferably *N*-methyl pyrrolidone. The solutions are particularly useful in providing storage stable soluble concentrates of certain strobilurin fungicides.

WO 03/037084 A1

File

IPD AGROCHEMICAL PATENT COOPERATION TREATY

ATTORNEY INITIALS

- 4 JUL 2003

MH

INFORMATION CONCERNING ELECTED OFFICES NOTIFIED OF THEIR ELECTION

PAGES

(PCT Rule 61.3)

From the INTERNATIONAL BUREAU

To:

HOUGHTON, Malcolm, John
Intellectual Property Department
Syngenta Limited
P.O. Box 3538
Jealott's Hill Research Centre
Bracknell RG42 6YA
United Kingdom

VERIFY

Date of mailing (day/month/year)

19 June 2003 (19.06.03)

Applicant's or agent's file reference

PPD50676/WO

IMPORTANT INFORMATION

International application No.

PCT/GB02/04856

International filing date (day/month/year)

15 October 2002 (15.10.02)

Priority date (day/month/year)

31 October 2001 (31.10.01)

Applicant

SYNGENTA LIMITED et al

1. The applicant is hereby informed that the International Bureau has, according to Article 31(7), notified each of the following Offices of its election:

EP : AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR

National : AU, BG, CA, CN, DE, GB, IL, JP, KP, KR, MN, NO, PL, RO, RU, SK, US

2. The following Offices have waived the requirement for the notification of their election; the notification will be sent to them by the International Bureau only upon their request:

AP : GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW

EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

OA : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

National : AE, AG, AL, AM, AT, AZ, BA, BB, BR, BY, BZ, CH, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, ES, FI, GD, GE, GH, GM, HR, HU, ID, IN, IS, KE, KG, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MW, MX, MZ, NZ, OM, PH, PT, SD, SE, SG, SI, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW

3. The applicant is reminded that he must enter the "national phase" before the expiration of 30 months from the priority date before each of the Offices listed above. This must be done by paying the national fee(s) and furnishing, if prescribed, a translation of the international application (Article 38(1)(a)), as well as, where applicable, by furnishing a translation of any annexes of the international preliminary examination report (Article 38(3)(b) and Rule 74.1).

Some offices have fixed time limits expiring later than the above-mentioned time limit. For detailed information about the applicable time limits and the acts to be performed upon entry into the national phase before a particular Office, see Volume II of the PCT Applicant's Guide.

The entry into the European regional phase is postponed until 31 months from the priority date for all States designated for the purposes of obtaining a European patent.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 338.89.85

Authorized officer:

PETRESKA Gorica

Telephone No. (41-22) 338 8988

Form PCT/IB/332 (September 1997)

6701482

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

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IPD AGROCHEMICALS
ATTORNEY INITIALS
PCT
NOTICE INFORMING THE APPLICANT OF THE
COMMUNICATION OF THE INTERNATIONAL
APPLICATION TO THE DESIGNATED OFFICES
SCANNED ALL
PAGES PCT Rule 47.1(c), first sentence)

To:

HOUGHTON, Malcolm, John
Intellectual Property Department
Syngenta Limited
P.O. Box 3538
Jealott's Hill Research Centre
Bracknell RG42 6YA
ROYAUME-UNI



PUB DETAILS ENTERED

Date of mailing(day/month/year) 08 May 2003 (08.05.03)		
Applicant's or agent's file reference PPD50676/WO		IMPORTANT NOTICE
International application No. PCT/GB02/04656	International filing date(day/month/year) 15 October 2002 (15.10.02)	Priority date(day/month/year) 31 October 2001 (31.10.01)
Applicant SYNGENTA LIMITED		

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this notice:

KP, KR, US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OA, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this notice is a copy of the international application as published by the International Bureau on 08 May 2003 (08.05.03) under No. 03/037084

4. TIME LIMITS for filing a demand for international preliminary examination and for entry into the national phase

The applicable time limit for entering the national phase will, subject to what is said in the following paragraph, be 30 MONTHS from the priority date, not only in respect of any elected Office if a demand for international preliminary examination is filed before the expiration of 19 months from the priority date, but also in respect of any designated Office, in the absence of filing of such demand, where Article 22(1) as modified with effect from 1 April 2002 applies in respect of that designated Office. For further details, see *PCT Gazette* No. 44/2001 of 1 November 2001, pages 19926, 19932 and 19934, as well as the *PCT Newsletter*, October and November 2001 and February 2002 issues.

In practice, time limits other than the 30-month time limit will continue to apply, for various periods of time, in respect of certain designated or elected Offices. For regular updates on the applicable time limits (20, 21, 30 or 31 months, or other time limit), Office by Office, refer to the *PCT Gazette*, the *PCT Newsletter* and the *PCT Applicant's Guide*, Volume II, National Chapters, all available from WIPO's Internet site, at <http://www.wipo.int/pct/en/index.html>.

For filing a demand for international preliminary examination, see the *PCT Applicant's Guide*, Volume I/A, Chapter IX. Only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination (at present, all PCT Contracting States are bound by Chapter II).

It is the applicant's sole responsibility to monitor all these time limits.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Judith Zahra
Facsimile No.(41-22) 740.14.35	Telephone No.(41-22) 338.91.11

INTERNATIONAL SEARCH REPORT

PCT/GB 02/04656

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A01N25/02 A01N43/653 A01N43/54 A01N43/40 /(A01N43/653,25:02),(A01N43/54,43:653,25:02),(A01N43/40,43:653,25:02) According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 A01N 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) WPI Data, PAJ, EPO-Internal, CHEM ABS Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 92 10937 A (DOWELANCO) 9 July 1992 (1992-07-09) cited in the application page 1, line 3 - line 16 page 2, line 16 -page 3, line 10 page 3, line 31 -page 4, line 32 page 5, line 22 -page 10, line 26	1-11
Y	EP 0 052 313 A (MOBAY CHEMICAL CORP) 26 May 1982 (1982-05-26) page 7, line 1 -page 8, line 1 page 12, line 32 -page 13, line 26	1-11
Y	EP 0 300 691 A (CHINOIN GYOGYSZER ES VEGYESZET) 25 January 1989 (1989-01-25) page 4, line 11 - line 15 page 4, line 22 - line 31 page 5, line 46 - line 48 -/-	3,4
☒ Further documents are listed in the continuation of box C. ☒ Patent family members are listed in annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubt 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 "Z" document member of the same patent family		
Date of the actual completion of the international search 13 February 2003		Date of mailing of the international search report 28/02/2003
Name and mailing address of the ISA European Patent Office, P.O. 5818 Patentkanal 2 NL - 2280 HV Rijswijk Tel (+31-70) 340-2040, Tx 31 651 epo nl, Fax (+31-70) 340-3018		Authorized officer Laners, W

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATI NAL SEARCH REPORT

PCT/GB 02/04656

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 2 252 499 A (ALBRIGHT & WILSON) 12 August 1992 (1992-08-12) page 15, paragraph 2	1-11
A	DATABASE REGISTRY 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; retrieved from STN-INTERNATIONAL XP002231057 registry number 8068-05-1 chemical names	1-11
A	"BIOCHEMIKALIEN ORGANISCHE VERBINDUNGEN für die Forschung und DIAGNOSTIKA" 1991, SIGMA CHEMIE GMBH XP002231056 page 566, entry I 6384 "INDULIN AT"	1-11
A	WO 98 23350 A (GEORGE NEIL ;DAWSON STEPHEN (GB); ZENECA LTD (GB); WOOD WILLIAM MA) 4 June 1998 (1998-06-04) page 4, line 25 -page 5, line 2	1-11
A	EP 1 139 756 A (NOVARTIS ERFIND VERWALT GMBH ;SYNGENTA PARTICIPATIONS AG (CH)) 10 October 2001 (2001-10-10) page 1 page 4, paragraph 2 -page 5, paragraph 1	1-11

INTERNATI NAL SEARCH REPORT

PCT/GB 02/04656

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9210937	A	09-07-1992	AU 1415092 A BR 9106407 A CA 2075920 A1 EP 0515679 A1 JP 5504362 T WO 9210937 A1	22-07-1992 18-05-1993 19-06-1992 02-12-1992 08-07-1993 09-07-1992
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GB 2252499	A	12-08-1992	AT 152318 T AU 661835 B2 AU 1077492 A BG 61496 B1 BR 9200395 A CA 2060476 A1 CS 9200354 A3 CU 22361 B1 DE 69219373 D1 DE 69219373 T2 DK 498231 T3 EG 19577 A EP 0498231 A1 ES 2103836 T3 FI 920530 A GR 3024218 T3 HU 61432 A2 IE 920411 A1	15-05-1997 10-08-1995 13-08-1992 31-10-1997 13-10-1992 09-08-1992 16-09-1992 07-03-1995 05-06-1997 25-09-1997 03-11-1997 30-09-1995 12-08-1992 01-10-1997 09-08-1992 31-10-1997 28-01-1993 12-08-1992

Form PCT/ISA210 (patent family annex) (July 1992)

INTERNATI NAL SEARCH REPORT

PCT/GB 02/04656

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PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

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To:

Houghton, Malcom J.
SYNGENTA LIMITED
Intellectual Property Dept.
P.O. Box 3538
Jealott's Hill Research Centre
Bracknell RG42 8YA
GRANDE BRETAGNE

VERIFY

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

Date of mailing
(day/month/year) 04.08.2003

Applicant's or agent's file reference

PPD 50876WO

IMPORTANT NOTIFICATION

International application No.
PCT/GB02/04656

International filing date (day/month/year)
15.10.2002

Priority date (day/month/year)
31.10.2001

Applicant
SYNGENTA LIMITED et al

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:



European Patent Office - P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl
Fax: +31 70 340 - 3016

Authorized Officer

Janzing, M

Tel. +31 70 340-4140



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PPD 50676WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEAA16)	
International application No. PCT/GB02/04656	International filing date (day/month/year) 15.10.2002	Priority date (day/month/year) 31.10.2001
International Patent Classification (IPC) or both national classification and IPC A01N25/02		
Applicant SYGENTA LIMITED et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.18 and Section 807 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 68.2(a)(II) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 28.03.2003	Date of completion of this report 04.08.2003
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3018	Authorized Officer Lamers, W Telephone No. +31 70 340-3713 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB02/04656

I. Basis of the report

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-9 as originally filed

Claims, Numbers

1-11 as originally filed

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB02/04656**

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-11
	No: Claims	
Inventive step (IS)	Yes: Claims	1-11
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-11
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB02/04656

The following documents (D1) - (D4) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

- D1: WO 92 10937 A (DOWELANCO) 9 July 1992 (1992-07-09) cited in the application
D2: EP-A-0 052 313 (MOBAY CHEMICAL CORP) 26 May 1982 (1982-05-26)
D3: GB-A-2 252 499 (ALBRIGHT & WILSON) 12 August 1992 (1992-08-12)
D4: EP-A-0 300 691 (CHINOIN GYOGYSZER ES VEGYESZET) 25 January 1989 (1989-01-25)

CLARITY:

The application does not meet the requirements of Article 6 PCT, because claim 11 is not clear:

The term "according to the invention" used in claim 11 is vague and unclear and leaves the reader in doubt as to the meaning of the technical features to which it refers, thereby rendering the definition of the subject-matter of said claim unclear (Article 6 PCT). It has been interpreted for the examination as if reading "according to claim 1".

NOVELTY:

The independent claims 1, 9 and 11 relate to concentrated pesticidal solutions of water-insoluble pesticides in water miscible, polar solvents containing lignin. The term lignin is further characterised in the description as alkali lignin, sulphate or kraft lignin. These terms are terms of art, which refer to lignins obtained by acid precipitation from the spent liquors of the sulphate or soda processes and, although still termed "alkali lignin" are not alkali metal salts of lignin but water insoluble lignins in the free acid state. Because the prior art does not disclose concentrated pesticidal solutions of water-insoluble pesticides in water miscible, polar solvents containing these water insoluble lignins, the subject matter of

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB02/04656

claims 1-11 seems to be novel.

INVENTIVE STEP:

Document (D1), which is considered to represent the most relevant state of the art, discloses concentrated solutions of water insoluble pesticides in water miscible solvents which upon dilution with water result by controlled precipitation into suspensions having submicron sized particles, which are stable and essentially resistant to crystal growth for more than 24 hours (page 3, line 31 - page 4, line 32; page 7, lines 35 - 36; page 10, lines 12 - 26; examples), from which the subject-matter of claims 1-11 of the present application differs in that water insoluble lignin is used in place of the broad variety of water soluble dispersants mentioned in (D1), (page 8, line 22 - page 10, line 10). The technical problem to be solved by the present invention may therefore be regarded as providing an alternative dispersing agent for these concentrated solutions of (D1) which are to be used as agrochemicals in water diluted form.

Document (D2) discloses the stabilization of pesticidal suspensions against crystal growth by water soluble lignosulphonate dispersants and emphasizes their suitability for aqueous suspensions which also comprise water miscible, polar solvents (page 4, line 23 - page 5, line 5; page 11, line 21 - page 12, line 12; page 12, line 32 - page 13, line 26).

Document (D3) mentions i.a. water soluble lignin sulphonates as dispersants suitable to stabilize suspended crystallites against agglomeration, aggregation or similar interactions (page 15, paragraph 2).

Document (D4) discloses the addition of macromolecules as additives to solution concentrates of pesticides in water miscible solvents which upon dilution result into suspensions. (page 4, lines 11 - 15 and 40 - 41).

Because none of the documents D1-D4 gives a pointer to the use of water insoluble lignin to solve the problem underlying the solution as proposed by the present application, the subject matter of claims 1-11 seems to involve an inventive step in the sense of Article 33 (3) PCT.

INTERNATIONAL PRELIMINARY

International application No. PCT/GB02/04656

EXAMINATION REPORT - SEPARATE SHEET

INDUSTRIAL APPLICABILITY:

The subject matter of claims 1-11 seems to be industrially applicable.

REQUISITOS NECESARIOS PARA PRESENTACION Y AGILIZACION DEL TRAMITE

		USUARIO	RADICADOR
PATENTE DE INVENCION	MODELO DE UTILIDAD	()	()
- Indicación de que se solicita la concesión de una patente.		()	()
- Datos de identificación del solicitante o de la persona que se presenta la solicitud.		()	()
- Descripción de la invención.		()	()
- Dibujos de ser estos pertinentes.		()	()
- Comprobante de Pago de las tasas establecidas.		()	()
COMPLETA ()	INCOMPLETA ()	()	()
DISEÑO INDUSTRIAL ()			
- Indicación de que se solicita el registro de Diseño Industrial		()	()
- Datos de identificación del solicitante o de la persona que presenta la solicitud.		()	()
- Representación gráfica o fotográfica del Diseño Industrial o muestra del Material que incorpora el diseño.		()	()
- Comprobante de pago de las tasas establecidas		()	()
COMPLETA ()	INCOMPLETA ()	()	()
ESQUEMA DE TRAZADO ()			
- Indicación de que solicita el registro de un Esquema de trazado.		()	()
- Datos de identificación del solicitante o de la persona que presenta La solicitud.		()	()
- Representación gráfica del esquema de trazado		()	()
- Comprobante de pago de las tasas establecidas.		()	()
COMPLETA ()	INCOMPLETA ()	()	()

Firma Responsable:

Edixon Navarro

Fecha: 12.05-2004

45

2020
Bogotá D C

Doctor(a)
JIMENA ESCOBAR URIBE.
Apoderado(a)

Oficio N°
05572.

ASUNTO:	Radicación N°	04-43905
	Solicitud internacional	PCT/GB02/04656
	Fecha inicio fase nacional	31/05/2004
	Trámite	011
	Evento	379
	Actuación	416
	Folios	001

Como resultado del examen de forma, realizado con fundamento en el artículo 38 de la Decisión 486 de la Comisión de la Comunidad Andina, artículo 27 del Tratado de Cooperación en Materia de Patentes (PCT), regla 51 bis del Reglamento y Circular Única de la Superintendencia de Industria y Comercio, se le comunica que:

- La solicitud no contiene copia del documento en que consta la cesión del derecho de patente del inventor al solicitante o a su causante (Art. 26-k) Decisión 486).
- El solicitante debe presentar un nuevo título, que permita identificar la materia de la cual trata la solicitud, ya que el relacionado no se encuentra con la precisión necesaria para identificar claramente el objeto de la solicitud de patente (Regla 4.3 PCT, Art. 27, 27 Decisión 486, Circular Única 5.2.9).

En cumplimiento de lo dispuesto por el artículo 39 de la Decisión 486, se le requiere para que dentro del término de dos meses siguientes a la fecha de notificación del presente oficio, complete los requisitos anteriormente enunciados. En caso de no dar cumplimiento al presente requerimiento, la solicitud se considerará abandonada y perderá su prelación.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única N° 10 de 2001.



ALIX CARMENZA CÉSPEDES DE VERGEL
Jefe de la División de Nuevas Creaciones.

El anterior requerimiento fue notificado por fijación en lista de fecha, 202051

11 JUN 2004