

PATENT COOPERATION TREATY

From the:
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing (*day/month/year*)
08 October 2019

Applicant's or agent's file reference
PCT00836

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/IB2019/055749

International filing date (*day/month/year*)

05 July 2019

Priority date (*day/month/year*)

10 July 2018

International Patent Classification (IPC) or both national classification and IPC

A01N 47/34 (2006.01) A01N 43/56 (2006.01) A01N 53/00 (2006.01)

Applicant

UPL LTD

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 and 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 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.

Name and mailing address of the ISA

AUSTRALIAN PATENT OFFICE
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AUSTRALIA
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Date of completion of this opinion

8 October 2019

Authorised Officer

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/IB2019/055749

Box No. I Basis of this 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 (under Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account **the rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(b))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY		International Application No. PCT/IB2019/055749									
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										
1. Statement <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; vertical-align: top;"> Novelty (N) </td> <td style="width: 40%; vertical-align: top;"> Claims 9 Claims 1-8 </td> <td style="width: 30%; vertical-align: top; text-align: center;"> YES NO </td> </tr> <tr> <td style="vertical-align: top;"> Inventive step (IS) </td> <td style="vertical-align: top;"> Claims NONE Claims 1-9 </td> <td style="vertical-align: top; text-align: center;"> YES NO </td> </tr> <tr> <td style="vertical-align: top;"> Industrial applicability (IA) </td> <td style="vertical-align: top;"> Claims 1-9 Claims NONE </td> <td style="vertical-align: top; text-align: center;"> YES NO </td> </tr> </table>			Novelty (N)	Claims 9 Claims 1-8	YES NO	Inventive step (IS)	Claims NONE Claims 1-9	YES NO	Industrial applicability (IA)	Claims 1-9 Claims NONE	YES NO
Novelty (N)	Claims 9 Claims 1-8	YES NO									
Inventive step (IS)	Claims NONE Claims 1-9	YES NO									
Industrial applicability (IA)	Claims 1-9 Claims NONE	YES NO									
2. CITATIONS AND EXPLANATIONS: <u>CITATIONS</u> D1: CN 108174846 A (CHONGZUO GUIZHONG TERMITE PREVENTION AND CONTROL CO LTD) 19 June 2018 D2: CN 107212010 A (MENG ZONGYONG) 29 September 2017 D3: CN 106508947 A (JIANGXI JINYUANLAI HIGH-NEW MAT CO LTD) 22 March 2017 D4: CN 106135245 A (NANJING GAOZHENG AGROCHEMICAL CO LTD) 23 November 2016 D5: CN 106212460 A (QINGDAO YUEBANG AGRICULTURAL SEED IND CO LTD) 14 December 2016 D6: CN 102057933 A (WEIHAI HANFU BIOCHEMICAL PHARMACEUTICAL CO LTD) 18 May 2011 D7: CN 102228053 B (SHAANXI MEIBANG PESTICIDE CO) 19 March 2014 D8: CN 106342875 A (HUATE WESTERN SHAANXI SCIENCE AND TECH IND CO LTD) 25 January 2017 <u>NOVELTY (N)</u> Claim 1-8 are not novel and therefore do not comply with PCT Article 33(2). D1 CN108174846A discloses an insecticidal pesticide composition in the form of a microemulsion. This composition of D1 contains chlorantraniliprole (insecticidal diamide), Bifenthrin (insecticide), and flufenoxuron (benzoylphenyl urea compound) as an insect growth regulator along with a range of agriculturally acceptable excipients (abstract, examples 1 and 2, claim 1 & 3). It is discussed as being used to control termites (see abstract, examples). As a result of this disclosure claims 1-8 are anticipated. D2 CN107212010 discloses an insecticidal pesticide composition in the form of a microemulsion. This composition of D2 contains dihalogenated pyrazolecarboxamide (chlorantraniliprole) (insecticidal diamide), emamectin bezoate (insecticide), and lufenuron (benzoylphenyl urea compound) along with a range of agriculturally acceptable excipients (abstract, examples, claim 1). It is discussed as being active across a range of lepidoptera, coleoptera and homopetera (see [0002]). As a result of this disclosure claims 1-8 are anticipated. D3 CN106508947 discloses a ternary coating for seeds that is used to control a range of pests such as borers and planthoppers. The combinations of D3 include multiple examples that satisfy the present claims such as examples 2 and 8 that are composition containing chlorantraniliprole (insecticidal diamide), nitepyram (neonicotinamide insecticide), and lufenuron (benzoylphenyl urea compound) (abstract, examples, claim 1). As a result of this disclosure claims 1-8 are anticipated. D4 CN106135245A discloses a pesticidal composition containing cyantraniliprole (insecticidal diamide), Allicin (a known biopesticide for insects), and diflubenzuron (benzoylphenyl urea compound) (abstract, examples, claim 1). The combination of D4 contains a range of acceptable excipients and is discussed as being applied to control insect populations in an area. As a result of this disclosure claims 1-7 are anticipated. D5 CN106212460A discloses an insecticidal pesticide composition in the form of a microemulsion. This composition of D5 contains cyhalodiamide and tetrachlorantraniliprole (insecticidal diamide), numerous pyrethroids such as beta-cyfluthrin and deltamethrin and fenpropathrin (insecticide), and diflunezuron (benzoylphenyl urea compound) along with a range of agriculturally acceptable excipients and other active agents (abstract, examples, claim 1). As a result of this disclosure claims 1-7 are anticipated. D6-D8 all disclose binary combinations of the most preferred components as defined in claim 9 and the present examples however do not disclose the addition of an additional insecticidal agent. D6 CN102057933A discloses the combination of chlorantraniliprole											

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and novaluron. D7 CN102228053B discloses the combination of Novaluron and bifenthrin. D8 CN106342875A discloses the combination of chlorantraniliprole and bifenthrin. Therefore claims 1-9 are novel over the disclosure of any one of D6-D8.

Claims 1-8 are not novel and therefore do not comply with PCT Article 33(2) when compared with document D1-D5 as discussed above. The closest prior art document is D1, it teaches chlorantraniliprole and bifenthrin but teaches the alternate benzoylphenyl urea compound flufenoxuron so does not anticipate the present claim 9. Claim 9 is therefore novel and complies with PCT Article 33(2).

INVENTIVE STEP (IS)

Claim 1-9 do not involve an inventive step and therefore do not comply with PCT Article 33(3).

Given the above novelty objection, claims 1-8 do not involve an inventive step.

Either D1 or D8 differ from the present claim 9 by failing to disclose that the combination containing chlorantraniliprole and bifenthrin would also contain the choice of novaluron. The combination of claim 9 represents an alternative benzoylphenyl urea compound to D1 or the addition of this component in D8. Novaluron is a well-known benzoylphenyl urea compound with established insecticidal activity, it is also already established to be combined with either chlorantraniliprole (see D6) or with bifenthrin (see D7) resulting in allegedly synergistic effects. Furthermore, a range of documents have previously investigated the combination of insecticidal diamides and benzoylphenyl urea compound to achieve effective insecticidal combinations (as evidenced by any of D1-D6). Consequently, the combination as defined in claim 9 is considered to be an obvious non-inventive combination and as a result lacks an inventive step.

Furthermore, with regards D8 as discussed in the present objection, for the same reasons it is considered relevant to claim 9, it is also considered to deprive claims 1-8 of an inventive step.

As a result all of claims 1-9 do not involve an inventive step and therefore do not comply with PCT Article 33(3).

INDUSTRIAL APPLICABILITY (IA)

The invention defined in the claims is considered to meet the requirements of Industrial Applicability under Article 33(4) of the PCT because it can be made by, or used in, industry.

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International Application No.

Box No. VII Certain defects in the international application

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The following defects in the form or contents of the international application have been noted:

Claim 3 contains a paragraph featuring the repetitions of words (see page 83 line 22) "and mixtures thereof and mixtures thereof"