

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) see form PCT/ISA/210 (second sheet)

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

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2023/064860

International filing date (day/month/year)
02.06.2023

Priority date (day/month/year)
06.06.2022

International Patent Classification (IPC) or both national classification and IPC
INV. A01N43/12 A01P7/04

Applicant
BAYER AKTIENGESELLSCHAFT

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

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

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

Name and mailing address of the ISA:



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Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Lorusso, Patrizia

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ 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 43bis.1(a))
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.
 - b. ☐ furnished subsequent to the international filing date for the purposes of international search (Rule 13ter.1(a)),
 - ☐ accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.
4. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established to the extent that a meaningful opinion could be formed without a WIPO Standard ST.26 compliant sequence listing.
5. Additional comments:

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

Novelty (N)	Yes: Claims	<u>1-16</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	<u>1-16</u>
	No: Claims	
Industrial applicability (IA)	Yes: Claims	<u>1-16</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

The present invention refers to an agrochemical formulation comprising at least 85% by weight of the crystalline form A of compound of formula (I) (flupyradifurone) displaying at least three defined characteristic reflections (claim 1); it also refers to processes for the production of said crystalline form A (claims 10 and 13), to the crystalline form A (claims 14 and 15) and to the use of the polymorph A for the production of an agrochemical formulation with improved storage stability (claim 16).

Reference is made to the following document; the numbering will be adhered to in the rest of the procedure.

D1 WO 2011/051151 A1 (BAYER CROPSCIENCE AG [DE]; OLENIK BRITTA [DE] ET AL.) 5 May 2011 (2011-05-05), cited in the application

Item V

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

Novelty (Art. (2) PCT)

Document D1, cited in the application, discloses a crystalline form of flupyradifurone. Fig. 1a of D1 discloses an X-ray powder diffractogram of a crystalline form of flupyradifurone which displays different reflections as those of of present claims 1, 14 and 15. Novelty is acknowledged to independent claims 1, 14-15 and related processes as of independent claims 10 and 13 as well as to the use as of claim 16.

Inventive step (Art 33(3) PCT)

D1 is considered as the closest prior art to the subject-matter of claim 1 as it discloses a crystalline form of flupyradifurone. The application has shown by means of comparative examples that dispersions of polymorph A presently claimed are more stable than the corresponding dispersions of polymorph B, known from D1.

The technical problem is seen as the provision of an improved polymorph of flupyradifurone. The solution given in the application and reflected in the present claims is considered as involving an inventive step: the provision of further crystalline forms is a common practice. However, the provision of a polymorph with improved properties is an unexpected event which implies an inventive step.

Dependent claims 2-9 and related claims 10-16 as such also meet the requirements of the PCT with respect to novelty and inventive step.

Industrial applicability

It is acknowledged to claims 1-16

Item VIII

Certain observations on the international application

Clarity (Art. 6 PCT)

Claim 10 refers to a process for the production "of crystalline form [A] according," the sentence appears to miss some words.

Claim 12 equals claim 11, one thereof is thus redundant.

Claim 9 specifies that the formulation is meant for a certain use. This wording is not limiting for the scope of the claim and thus the claim is seen as redundant.

Claim 16 refers to the polymorphic form A according to claim 13; claim 13 however does not refer to a polymorphic form, but to a process.