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NOTICE OF ALLOWANCE AND FEE(S) DUE

4743 7590 04/03/2025

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CHICAGO, IL 60606-6357

EXAMINER	
RAGHU, GANAPATHIRAM	
ART UNIT	**PAPER NUMBER**
1652	

DATE MAILED: 04/03/2025

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/435,340	02/07/2024	Brian Michael Green	32471/M202647G	4214

TITLE OF INVENTION: METHODS FOR MAKING L-GLUFOSINATE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1290	$0.00	$0.00	$1290	07/03/2025

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

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Notice of Allowability	Application No. 18/435,340	Applicant(s) Green et al.	
	Examiner GANAPATHIRAMA RAGHU	Art Unit 1652	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 03/10/2025.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 1-6 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 11/07/2024.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/GANAPATHIRAMA RAGHU/ Primary Examiner, Art Unit 1652	03/19/2025

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Application Status

Applicants' response, arguments, amendments and a Terminal disclaimer filed on 03/10/2025 have been fully considered and are deemed to be persuasive to overcome the rejections previously applied; in said amendment, applicants' have amended claim 1. Thus, amended claims 1-6 are pending in this application for examination. Rejections and/or objections not reiterated from previous office action are hereby withdrawn.

The Terminal Disclaimer filed on 03/10/2025 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of allowed patent US 11,905,538 B2 has been reviewed and accepted. The Terminal Disclaimer has been recorded.

Information disclosure statement

The information disclosure statements (IDS) submitted on 11/07/2024 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the IDS statement is considered and initialed by the examiner.

Withdrawn-Double Patenting rejection

Previous rejection of claims 1-6 of the instant application rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of US 11,905,538 B2, is being withdrawn due to submission of a Terminal Disclaimer.

Claim Rejections: 35 USC § 102 (AIA)

Claims 1-6 rejected under 35 U.S.C. 102(a)(1) and 35 U.S.C. 102(a)(2) as being anticipated by Long DA., (US 8,445,406 B2, in IDS), is being withdrawn due to claim

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amendments, persuasive arguments and an Appendix A showing unexpected results (for details, see applicants' arguments/remarks dated 03/10/2025; pages 4-5).

Withdrawn-Claim Rejections: 35 USC § 103 (AIA)

Previous rejection of claims 1-6 rejected under 35 U.S.C. 103(a) as being unpatentable over Long DA., (US 8,445, 406 B2, in IDS) as applied to claims 1-6 (see 35 U.S.C. 102(a)(1) and 35 U.S.C. 102(a)(2) rejection above) and in view of Bhoge et al., (US 10,888,095 B2), is being withdrawn due to claim amendments, persuasive arguments and an Appendix A showing unexpected results (for details, see applicants' arguments/remarks dated 03/10/2025; pages 4-5).

Allowable Subject Matter

Claims 1-6 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GANAPATHIRAMA RAGHU whose telephone number is (571)272-4533. The examiner can normally be reached on M-F 8:30am-5pm EST. Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Mondesi can be reached on 408-918-7584. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GANAPATHIRAMA RAGHU/
Primary Examiner, Art Unit 1652

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Brian Michael Green et al.

Application No.: 18/435,340 Confirmation No.: 4214

Filed: February 7, 2024 Art Unit: 1652

For: METHODS FOR MAKING L-GLUFOSINATE Examiner: G. Raghu

AMENDMENT IN RESPONSE TO NON-FINAL OFFICE ACTION UNDER 37 C.F.R. § 1.111

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

INTRODUCTORY COMMENTS

In response to the Office Action dated October 10, 2024, please amend the above-identified U.S. patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 4 of this paper.

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AMENDMENTS TO THE CLAIMS

1. (Currently amended) A formulation comprising:

L-glufosinate ammonium in an amount from 10-30% by weight of the formulation and D-glufosinate, wherein the formulation has greater than about 90% L-glufosinate compared to the sum of the D-glufosinate and the L-glufosinate present in the formulation;

one or more additional components selected from the group consisting of:

sodium alkyl ether sulfate in an amount from 10-40% by weight of the formulation;

1-methoxy-2-propanol in an amount from 0.5-2% by weight of the formulation;

dipropylene glycol in an amount from 4-18% by weight of the formulation;

alkyl polysaccharide in an amount from 4-20% by weight of the formulation; and

water as the balance of the formulation.

2. (Original) The formulation of claim 1, wherein the L-glufosinate composition comprises L-glufosinate ammonium in an amount of 12.25% by weight of the formulation; and wherein the one or more additional components comprise sodium alkyl ether sulfate in an amount of 31.6% by weight of the formulation; 1-methoxy-2-propanol in an amount of 1% by weight of the formulation; dipropylene glycol in an amount of 8.6% by weight of the formulation; alkyl polysaccharide in an amount of 9.8% by weight of the formulation; and water in an amount of 36.75% by weight of the formulation.

3. (Original) The formulation of claim 1, wherein the L-glufosinate composition comprises L-glufosinate ammonium in an amount of 24.5% by weight of the formulation; and wherein the one or more additional components comprise sodium alkyl ether sulfate in an amount of 31.6% by weight of the formulation; 1-methoxy-2-propanol in an amount of 1% by weight of the formulation; dipropylene glycol in an amount of 8.6% by weight of the formulation; alkyl polysaccharide in an amount of 9.8% by weight of the formulation; and water in an amount of 24.5% by weight of the formulation.

4. (Original) The formulation of claim 1, wherein the L-glufosinate composition comprises L-glufosinate ammonium in an amount of 12.25% by weight of the formulation; and wherein the one or more additional components comprise sodium alkyl ether sulfate in an amount of 15.8% by weight of the formulation; 1-methoxy-2-propanol in an amount of

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0.5% by weight of the formulation; dipropylene glycol in an amount of 4.3% by weight of the formulation; alkyl polysaccharide in an amount of 4.9% by weight of the formulation; and water in an amount of 62.25% by weight of the formulation.

5. (Original) The formulation of claim 1, wherein the L-glufosinate composition comprises L-glufosinate ammonium in an amount of 12.25% by weight of the formulation; and wherein the one or more additional components comprise sodium alkyl ether sulfate in an amount of 22.1% by weight of the formulation; 1-methoxy-2-propanol in an amount of 1% by weight of the formulation; alkyl polysaccharide in an amount of 6.2% by weight of the formulation; and water in an amount of 58.45% by weight of the formulation.

6. (Original) The formulation of claim 1, wherein the L-glufosinate composition comprises L-glufosinate ammonium in an amount of 24.5% by weight of the formulation; and wherein the one or more additional components comprise sodium alkyl ether sulfate in an amount of 22.1% by weight of the formulation; 1-methoxy-2-propanol in an amount of 1% by weight of the formulation; alkyl polysaccharide in an amount of 6.2% by weight of the formulation; and water in an amount of 46.2% by weight of the formulation.

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REMARKS

Upon entry of this amendment, claims 1-6 will be pending. Claim 1 has been amended to recite that the formulation comprises L-glufosinate ammonium in an amount from 10-30% by weight of the formulation and D-glufosinate, wherein the formulation has greater than about 90% L-glufosinate compared to the sum of the D-glufosinate and the L-glufosinate present in the formulation, support for which is found in the application as filed (see, e.g., page 15, line 23 – page 16, line 2). No new matter has been added.

The rejections from the Office Action are addressed below. Reconsideration of the application is requested in view of the foregoing amendments and remarks that follow.

Double Patenting Rejection

Claims 1-6 of the instant application were rejected as being unpatentable over claims 1-15 of US 11,905,538.

A terminal disclaimer referencing U.S. Patent No. 11,905,538 is submitted herewith. In view thereof, Applicant respectfully requests that this rejection be withdrawn.

Claim Rejections – 35 U.S.C. § 102 – Anticipation

Claims 1-6 were rejected as being anticipated by **Long DA (US 8,445,406)**. Applicant respectfully traverses based on the amended claims.

Long discloses that the glufosinate used in the aqueous herbicidal formulations is **racemic** glufosinate:

> Note that the compounds of formula (I) contain an asymmetric carbon atom. The L enantiomer has been observed to be the biologically active isomer. The formula (I) therefore is intended to encompass all stereoisomers and mixtures thereof, particularly the racemate, and the biologically active enantiomer in each case. Examples of active ingredients of the formula (I) include glufosinate and/or its ammonium salt such as in a racemic mixture; i.e., 2-amino-4[hydroxy(methyl)phosphinoyl]butanoic acid and its ammonium salt, the L enantiomer of glufosinate and its ammonium salt or other salts such as potassium, sodium, diethylamine, triethylamine, bilanafos/bialaphos; e.g., L-2-amino-4-[hydroxy(methyl) phosphinoyl]butanoyl-L-alaninyl-L-alanine and its sodium salt.

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Long at column 3, lines 10-23.

As indicated above, claim 1 has been amended to recite that "the formulation has greater than about 90% L-glufosinate compared to the sum of the D-glufosinate and the L-glufosinate present in the formulation."

Thus, the recited L-glufosinate composition in amended claim 1 is **not** racemic glufosinate.

In view thereof, the claims are not anticipated by the cited art, and Applicant respectfully requests that the rejection be withdrawn.

Claim Rejections – 35 U.S.C. § 103 – Obviousness

Claims 1-6 were rejected as being unpatentable over **Long** as applied to claims 1-6 and in view of **Bhoge et al. (US 10,888,095)**. Applicant respectfully traverses based on the amended claims.

As indicated above, Long discloses that the glufosinate used in the aqueous herbicidal formulations is racemic glufosinate.

However, as also indicated above, claim 1 has been amended such that "the formulation has greater than about 90% L-glufosinate compared to the sum of the D-glufosinate and the L-glufosinate present in the formulation." .

Thus, none of the cited art (alone or in combination) disclose or suggest the claimed formulation with the recited L-glufosinate ammonium.

Moreover, attached hereto as Appendix A is additional experimental data that has been performed by Applicant showing that the claimed herbicidal formulation recited in claim 1 has unexpected results.

As shown in Appendix A, tests were carried out using racemic glufosinate and L-glufosinate to determine the phytotoxicity to glufosinate-tolerant soybean at various concentrations (i.e., 300 g/ha, 600 g/ha, and 1200 g/ha). As shown, the L-glufosinate surprisingly resulted in less phytotoxicity to the soybeans than the same amount of racemic glufosinate (i.e., LGA 300 vs. GA 300, etc.) and when comparing the same amounts of L-glufosinate (i.e., LGA 300 vs. GA 600 or LGA 600 vs. GA 1200).

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In view of the above, the claimed subject matter is not obvious over the cited art. Applicant respectfully requests that the rejection be withdrawn.

Conclusion

In view of the above, Applicant believes the claims are in condition for allowance and request notification of the same. Should the Office have any questions regarding this response or the application, the Office is invited to contact the undersigned agent at the telephone number indicated below.

The Director is hereby authorized to charge any additional fees which may be required with respect to this communication, or credit any overpayment, to Deposit Account No. 13-2855, under Order No. 32471/M202647G.

Dated: March 10, 2025

Respectfully submitted,

Electronic signature: /Joshua T. Elliott/
Joshua T. Elliott
Registration No.: 43,603
MARSHALL, GERSTEIN & BORUN LLP
233 S. Wacker Drive
6300 Willis Tower
Chicago, Illinois 60606-6357
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Attorney for Applicant

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APPENDIX A

Additional experimental data

[0001] Methodology - green house experiments

[0002] Greenhouse trials were conducted to evaluate the phytotoxicity of L-glufosinate ammonium. Glufosinate-ammonium (GA) and L-glufosinate-ammonium (LGA) were used as technical grades at 600 g/L. All treatments were applied with an adjuvant Sodium-lauryl-ester-sulfate (SLES) with adjuvant ratios typically used in commercial with Glufosinate formulations. The treatments were applied with a track sprayer using flat fan nozzles, a water volume of 200 L/ha and one replicate per treatment.

[0003] The herbicide combinations were applied post-emergence to soybeans at growth stage GS13. Two glufosinate-tolerant soybean cultivars were used: (i) GLXMA (S1) – CZ 1660 GTLL) and (ii) GLXMA (S1) – CZ 3519 GTLL. A visual crop injury assessment (i.e., % crop injury compared to an untreated control) was made at 7 days after treatment (DAT).

[0004] Experimental Results – greenhouse

[0005] The results of the phytotoxicity experiment are summarized in table 2e below. Surprisingly, all LGA treatments are causing less phytotoxicity than respective GA treatments applied at the same molecular weight. There is some difference in sensitivity to glufosinate between the two soybean varieties but the difference in crop response from LGA as compared to GA is visible in both varieties and at all three application rates 300, 600 and 1200 g/ha. This was not expected.

Table 2e: Ratings of herbicidal activity (phytotoxicity) in an greenhouse experiment against the above mentioned glufosinate tolerant soybeans (GLXMA) after a single post-emergence treatments with racemate glufosinate-ammonium (GA) and L-glufosinate-ammonium (LGA) rated 7 DAA.

Field crop	**LGA 300 g/ha**	**GA 300 g/ha**	**LGA 600 g/ha**	**GA 600 g/ha**	**LGA 1200 g/ha**	**GA 1200 g/ha**
GLXMA (CZ1660)	0	5	10	15	10	40
GLXMA (CZ3519)	5	10	10	35	15	70
average	**2.5**	**7.5**	**10**	**25**	**12.5**	**55**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/435,340	02/07/2024	Brian Michael Green	32471/M202647G	4214

4743 7590 10/10/2024

MARSHALL, GERSTEIN & BORUN LLP
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EXAMINER
RAGHU, GANAPATHIRAM

ART UNIT	PAPER NUMBER
1652	

NOTIFICATION DATE	DELIVERY MODE
10/10/2024	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mgbdocket@marshallip.com

Office Action Summary	Application No. 18/435,340	Applicant(s) Green et al.	
	Examiner GANAPATHIRAMA RAGHU	Art Unit 1652	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 02/07/2024.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-6 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-6 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 02/07/2024 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date 05/06/2024.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

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Petitioner Ex. 1002

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Detailed Action

Claims 1-6 are pending in this application and are now under consideration.

Priority

This application is a CON of 18/179,136 filed on 03/06/2023 now US Patent 11,913,048, which is a CON of 16/997,133 filed on 08/19/2020 now US Patent 11,560,577, which is a CON of 16/287,290 filed on 02/27/2019 now US Patent 10,781,465, which is a CON of 15/787,448 filed on 10/18/2017 now US Patent 10,260,078, which is a DIV of 15/445,254 filed on 02/28/2017 now US Patent 9,834,802 and applicants' claim for the benefit of priority under 35 U.S.C. 119(e) to the Provisional Applications: 62/302,421 filed on 03/02/2016; 62/336,989 filed on 05/16/2016; and 62/413,240 filed on 10/26/2016 is acknowledged.

Information disclosure statement

The information disclosure statements (IDS) submitted on 05/06/2024 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the IDS statement is considered and initialed by the examiner.

Double Patenting rejection

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164

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USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-6 of the instant application are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of US 11,905,538 B2. An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentably distinct from the reference claim, because the examined claim is either anticipated by, or would have been obvious over reference claim. See, e.g., *In re Berg*, 140 F.3d 1428,46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir.1993); *In re Longi* 759 F.2d 887,225 USPQ 645 (Fed. Cir. 1985). Although the conflicting claims are not identical, they are not patentably distinct from each other.

Claims 1-6 of the instant application cannot be considered patentably distinct over claims 1-15 of US 11,905,538 B2 when there is specifically disclosed embodiments and falls within the scope of the instant claims 1-6 herein. In the instant case, the allowed patent specification and the allowed patent i.e., claims 1-15 of US 11,905,538 B2 discloses as a preferred embodiment and are directed to "A formulation comprising: L-glufosinate … ". Regarding rejection of instant claims 1-6 over allowed patent 1-15 of US 11,905,538 B2, examiner takes the position that the product claims of US 11,905,538 B2 and the product claims 1-6 of the instant application is a different form/version of the

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allowed patent claims; examiner also notes in said allowed patent there was no restriction in place for "a method of making L-glufosinate …". Therefore, the product and claims 1-6 of the instant invention are deemed as an obvious variation of the invention of allowed patents claims -15 of US 11,905,538 B2.

Claim Rejections: 35 USC § 102 (AIA)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention.

(a)(2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection **will not be considered** a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Claims 1-6 are rejected under 35 U.S.C. 102(a)(1) and 35 U.S.C. 102(a)(2) as being anticipated by Long DA., (US 8,445,406 B2, in IDS), when given the broadest reasonable interpretation.

Claims 1-6 as interpreted are directed to product claims i.e., a formulation comprising: L-glufosinate ammonium in an amount from 10-30% by weight of the formulation; **one or** more additional components selected from the group consisting of: sodium alkyl ether sulfate in an amount from 10-40% by weight of the formulation; 1-methoxy-2-propanol in an amount from 0.5-2% by weight of the formulation; dipropylene glycol in an amount from 4-18% by weight of the formulation; alkyl polysaccharide in an

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amount from 4-20% by weight of the formulation; and water as the balance of the formulation… and claims use open-ended transitional term "comprising" which is inclusive of additional, unrecited elements.

Long DA., (US 8,445, 406 B2, in IDS) disclose stable concentrated herbicidal composition comprising surfactant alkyl ether sulfate (Abstract; and entire document); L-enantiomer glufosinate and its salt in an amount 20%-35% (Abstract; col. 1, Summary of the invention; col. 2, lines, 39-67; col. 3, lines 10-34); surfactant alkyl ether sulfate in an amount 3-35% by weight (col. 3, lines 35-54); said composition further comprising organic solvent such dipropylene glycol in an amount 1-20% by weight (col. 3, lines 55-67 to col. 4, lines 1-20); alkyl polysaccharide/alkyl polyglucoside in an amount 1-15% by weight (Abstract; col. 4, lines 21-67 to col. 5, lines 1-19). Also see Examples 1 to 9, Table, col. 6; Examples 10 to 12, col. 7-8; Table Examples 13-14, col. 9-10; claims and entire document.

Therefore, the reference of Long DA., (US 8,445, 406 B2, in IDS) is deemed to anticipate claims 1-6 as written and when given the broadest reasonable interpretation.

Since the Office does not have the facilities for examining and comparing applicants' composition with the composition of the prior art, the burden is on the applicant to show a novel or unobvious difference between the claimed product and the product of the prior art (i.e., that the composition of the prior art does not possess the same material structural and functional characteristics of the composition of the instant invention). See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald* et al., 205 USPQ 594.

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Claim Rejections: 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long DA., (US 8,445, 406 B2, in IDS) as applied to claims 1-6 (see 35 U.S.C. 102(a)(1) and 35 U.S.C. 102(a)(2) rejection above) and in view of Bhoge et al., (US 10,888,095 B2).

The disclosure of Long DA., (US 8,445, 406 B2, in IDS) as applied to claims 1-6 is described above in 35 U.S.C. 102(a)(1) and 35 U.S.C. 102(a)(2) rejection above. However, Long DA., is silent regarding wherein **one or** more additional components selected from the group consisting of: … 1-methoxy-2-propanol in an amount from 0.5-2% by weight of the formulation; … (as in claims 1-6).

Regarding claims 1-6, analogous art Bhoge et al., (US 10,888,095 B2) teach stable herbicidal compositions comprising glufosinate, and said herbicidal composition further comprising 1-methoxy-2-propanol including the structural and functional information of

herbicidal compositions comprising 1-methoxy-2-propanol in an amount 1-2% by weight (see Abstract; Example 1, TABLE 1; claims 5-6; and entire document).

Therefore, it would have been obvious to a person of ordinary skill in the art to combine and modify the teachings of Long DA., and employ the compositions comprising herbicide glufosinate and 1-methoxy-2-propanol of Bhoge et al., that teach structural and functional elements of the instant invention to prepare stable herbicidal compositions, and the expectation of success is high, because the combined teachings provide teaching, suggestion and motivation.

Examiner also finds support in: MPEP 2144.05 [R-5]: Optimization Within Prior Art Conditions or Through Routine Experimentation Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation". As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch, 617* F.2d 272,276,205 USPQ 215,219 (CCPA 1980). See also *In re Woodruff,* 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. *Cir.* 1990), and *In re Aller,* 220 F2d 454,456,105 USPQ 233,235 (CCPA 1955).

Therefore, claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long DA., (US 8,445, 406 B2, in IDS) as applied to claims 1-6 (see 35 U.S.C.

102(a)(1) and 35 U.S.C. 102(a)(2) rejection above) and in view of Bhoge et al., (US 10,888,095 B2).

Allowable Subject Matter/Conclusion

None of the claims are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GANAPATHIRAMA RAGHU whose telephone number is (571)272-4533. The examiner can normally be reached on M-F 8:30am-5pm EST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Mondesi can be reached on 408-918-7584. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GANAPATHIRAMA RAGHU/
Primary Examiner, Art Unit 1652

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
18/435,340	02/07/2024		1820	32471/M202647G	6	1

CONFIRMATION NO. 4214

UPDATED FILING RECEIPT

4743
MARSHALL, GERSTEIN & BORUN LLP
233 SOUTH WACKER DRIVE
6300 WILLIS TOWER
CHICAGO, IL 60606-6357



Date Mailed: 06/06/2024

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Brian Michael Green, Lutherville, MD;
Michelle Lorraine Gradley, Canterbury, UNITED KINGDOM;

Applicant(s)

BASF SE, Ludwigshafen, GERMANY;

Power of Attorney: The patent practitioners associated with Customer Number 04743

Domestic Priority data as claimed by applicant

This application is a CON of 18/179,136 03/06/2023 PAT 11,913,048
which is a CON of 17/530,018 11/18/2021 PAT 11,905,538
which is a CON of 16/997,133 08/19/2020 PAT 11,560,577
which is a CON of 16/287,290 02/27/2019 PAT 10,781,465
which is a CON of 15/787,448 10/18/2017 PAT 10,260,078
which is a DIV of 15/445,254 02/28/2017 PAT 9,834,802
which claims benefit of 62/413,240 10/26/2016 ABN
and claims benefit of 62/336,989 05/16/2016 ABN
and claims benefit of 62/302,421 03/02/2016 ABN

Foreign Applications for which priority is claimed (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

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Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

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If Required, Foreign Filing License Granted: 02/21/2024
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/435,340**
Projected Publication Date: 09/12/2024
Non-Publication Request: No
Early Publication Request: No
Title

METHODS FOR MAKING L-GLUFOSINATE

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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

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

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

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

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative,

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this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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

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

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WHAT IS CLAIMED IS:

1. A formulation comprising:

L-glufosinate ammonium in an amount from 10-30% by weight of the formulation;

one or more additional components selected from the group consisting of:

sodium alkyl ether sulfate in an amount from 10-40% by weight of the formulation;

1-methoxy-2-propanol in an amount from 0.5-2% by weight of the formulation;

dipropylene glycol in an amount from 4-18% by weight of the formulation;

alkyl polysaccharide in an amount from 4-20% by weight of the formulation; and

water as the balance of the formulation.

2. The formulation of claim 1, wherein the L-glufosinate composition comprises L-glufosinate ammonium in an amount of 12.25% by weight of the formulation; and wherein the one or more additional components comprise sodium alkyl ether sulfate in an amount of 31.6% by weight of the formulation; 1-methoxy-2-propanol in an amount of 1% by weight of the formulation; dipropylene glycol in an amount of 8.6% by weight of the formulation; alkyl polysaccharide in an amount of 9.8% by weight of the formulation; and water in an amount of 36.75% by weight of the formulation.

3. The formulation of claim 1, wherein the L-glufosinate composition comprises L-glufosinate ammonium in an amount of 24.5% by weight of the formulation; and wherein the one or more additional components comprise sodium alkyl ether sulfate in an amount of 31.6% by weight of the formulation; 1-methoxy-2-propanol in an amount of 1% by weight of the formulation; dipropylene glycol in an amount of 8.6% by weight of the formulation; alkyl polysaccharide in an amount of 9.8% by weight of the formulation; and water in an amount of 24.5% by weight of the formulation.

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4. The formulation of claim 1, wherein the L-glufosinate composition comprises L-glufosinate ammonium in an amount of 12.25% by weight of the formulation; and wherein the one or more additional components comprise sodium alkyl ether sulfate in an amount of 15.8% by weight of the formulation; 1-methoxy-2-propanol in an amount of 0.5% by weight of the formulation; dipropylene glycol in an amount of 4.3% by weight of the formulation; alkyl polysaccharide in an amount of 4.9% by weight of the formulation; and water in an amount of 62.25% by weight of the formulation.

5. The formulation of claim 1, wherein the L-glufosinate composition comprises L-glufosinate ammonium in an amount of 12.25% by weight of the formulation; and wherein the one or more additional components comprise sodium alkyl ether sulfate in an amount of 22.1% by weight of the formulation; 1-methoxy-2-propanol in an amount of 1% by weight of the formulation; alkyl polysaccharide in an amount of 6.2% by weight of the formulation; and water in an amount of 58.45% by weight of the formulation.

6. The formulation of claim 1, wherein the L-glufosinate composition comprises L-glufosinate ammonium in an amount of 24.5% by weight of the formulation; and wherein the one or more additional components comprise sodium alkyl ether sulfate in an amount of 22.1% by weight of the formulation; 1-methoxy-2-propanol in an amount of 1% by weight of the formulation; alkyl polysaccharide in an amount of 6.2% by weight of the formulation; and water in an amount of 46.2% by weight of the formulation.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	32471/M202647G
	Application Number	
Title of Invention	METHODS FOR MAKING L-GLUFOSINATE	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

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Inventor 2 Remove

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All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	32471/M202647G
	Application Number	
Title of Invention	METHODS FOR MAKING L-GLUFOSINATE	

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence Information of this application.			
Customer Number	04743		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	METHODS FOR MAKING L-GLUFOSINATE		
Attorney Docket Number	32471/M202647G	**Small Entity Status Claimed**	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	2	**Suggested Figure for Publication (if any)**	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	04743		

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Petitioner Ex. 1002

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	32471/M202647G
	Application Number	
Title of Invention	METHODS FOR MAKING L-GLUFOSINATE	

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	18/179136	2023-03-06
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
18/179136	Continuation of	17/530018	2021-11-18
Prior Application Status	Patented		Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/530018	Continuation of	16/997133	2020-08-19	11560577	2023-01-24
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/997133	Continuation of	16/287290	2019-02-27	10781465	2020-09-22
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/287290	Continuation of	15/787448	2017-10-18	10260078	2019-04-16
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15/787448	Division of	15/445254	2017-02-28	9834802	2017-12-05

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
15/445254	Claims benefit of provisional	62/413240	2016-10-26
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
15/445254	Claims benefit of provisional	62/336989	2016-05-16

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	32471/M202647G
	Application Number	
Title of Invention	METHODS FOR MAKING L-GLUFOSINATE	

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
15/445254	Claims benefit of provisional	62/302421	2016-03-02
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.			Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

			Remove
Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.			Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

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