

SEÑORA DIRECTORA
DIRECCIÓN DE NUEVAS CREACIONES
SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
E. S. D.

Asunto:	Solicitud No.:	NC2021/0010383
	Referencia:	Solicitud de examen acelerado de conformidad con el Procedimiento Acelerado de Estudio de Solicitudes de Patente (PPH) entre la Superintendencia de Industria y Comercio (SIC) y la Oficina de Patentes y Marcas de los Estados Unidos de América (USPTO)

MAURICIO JARAMILLO CAMPUZANO, identificado como aparece al pie de mi firma, en calidad de apoderado de la sociedad solicitante **ARIELIUM HEALTH, LLC.**, me permito solicitar examen acelerado para la solicitud de patente de la referencia, de conformidad con Procedimiento Acelerado de Estudio de Solicitudes de Patente (PPH) entre la Superintendencia de Industria y Comercio (SIC) y la Oficina de Patentes y Marcas de los Estados Unidos de América (USPTO)

1. Relación entre la solicitud ante la SIC y la solicitud estudiada por la Oficina de Estados Unidos (USPTO).

En el presente caso, la solicitud NC2021/0010383 es una fase nacional de la solicitud internacional PCT/US2020/013418, la cual reivindica prioridad de la solicitud provisional 62/791,122 radicada el 11 de enero de 2019 ante la Oficina de patentes de Estados Unidos USPTO. La patente US11098024 (Número de solicitud 16,741,741), con base en la cual se solicita el presente examen acelerado, reclama prioridad de la misma solicitud provisional de patente número 62/791,122.

2. Copia del fallo o decisión que ha sido relevante para la determinación de la patentabilidad de la solicitud en la USPTO que contienen las reivindicaciones patentables u otorgables que son la base de la petición y su traducción al castellano.

Adjunto a este memorial se presenta copia del Aviso de Permisibilidad de la patente concedida número US11098024 (Número de aplicación 16,741,741) que determinó la patentabilidad de la materia reclamada en la solicitud en mención realizado por la oficina de Estado Unidos, con su respectiva traducción al idioma español.

3. Copia de todas las reivindicaciones que han sido determinadas como patentables u otorgables en la USPTO y su traducción al castellano.

Adjunto a este memorial se presenta copia de todas las reivindicaciones que han sido determinadas como materia patentable por la oficina de Estado Unidos, que corresponden patente número US11098024 (Número de aplicación 16,741,741) y con su respectiva traducción al idioma español.

4. Copia de los antecedentes, información o documentos citados por el examinador de la USPTO en el examen de patentabilidad, en el fallo o decisión correspondientes, incluyendo la literatura no patente. Los documentos de patente deberán presentarse siempre y cuando no estén disponibles para la SIC mediante el acceso a bases de datos gratuitas.

Teniendo en cuenta que el documento citado en el estudio realizado por USPTO es un documento de patente, no es necesario presentarlos ante su Despacho.

5. Una tabla de correspondencias de las reivindicaciones que han sido determinadas como patentables u otorgables en la USPTO y las que se han presentado en la SIC como OSP.

Se adjunta a este memorial una tabla de correspondencia entre las reivindicaciones que en la USPTO se indicaron como patentables y las reivindicaciones modificadas presentadas ante la SIC el 26 de abril de 2022.

6. PETICIÓN

Amablemente se solicita proceder con el examen acelerado de conformidad con el Procedimiento Acelerado de Estudio de Solicitudes de Patente (PPH) entre la Superintendencia de Industria y Comercio (SIC) y la Oficina de Patentes y Marcas de los Estados Unidos de América (USPTO) para la solicitud de la referencia y con el otorgamiento de esta.

7. ANEXOS

- Copia del Aviso de Permisibilidad de la patente número US11098024 (Número de aplicación 16,741,741) realizado por la USPTO y su respectiva traducción al castellano;
- Reivindicaciones a las que se refiere el Aviso de Permisibilidad sobre la Patentabilidad de la solicitud US11098024 (Número de aplicación 16,741,741) y su respectiva traducción al castellano.
- Tabla de correspondencia de las reivindicaciones que han sido determinadas como patentables en la USPTO.

8. NOTIFICACIONES

Recibiré notificaciones en la secretaría de su Despacho; en mis oficinas de abogado ubicadas en la Calle 67 No. 7 – 35, oficina 1204, teléfono 3192900, fax 3210295, Bogotá D.C., Colombia, o; al correo electrónico patentes@gomezpinzon.com.

Atentamente,

MAURICIO JARAMILLO C.

C.C. 80.421.942 de Bogotá

T.P. 74.555 del C.S.J.

PDB



UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

11395 7590 04/29/2021
JWIP & Patent Services, LLC
670 Depot Street, PO Box 1265
Easton, MA 02334

EXAMINER	
KENYON, JOHN S	
ART UNIT	PAPER NUMBER

1625

DATE MAILED: 04/29/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/741,741	01/13/2020	Alex Nivorozhkin	ANX-001	7882

TITLE OF INVENTION: METHODS AND RELATED TOOLS FOR CBD CONVERSION TO THC

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$600	\$0.00	\$0.00	\$600	07/29/2021

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 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity 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 and an extra copy of the form should be submitted. 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.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

11395 7590 04/29/2021
JWIP & Patent Services, LLC
670 Depot Street, PO Box 1265
Easton, MA 02334

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

	(Typed or printed name)
	(Signature)
	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/741,741	01/13/2020	Alex Nivorozhkin	ANX-001	7882

TITLE OF INVENTION: METHODS AND RELATED TOOLS FOR CBD CONVERSION TO THC

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$600	\$0.00	\$0.00	\$600	07/29/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
KENYON, JOHN S	1625	549-390000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

1 _____

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/741,741	01/13/2020	Alex Nivorozhkin	ANX-001	7882
11395	7590	04/29/2021	EXAMINER	
JWIP & Patent Services, LLC 670 Depot Street, PO Box 1265 Easton, MA 02334			KENYON, JOHN S	
			ART UNIT	PAPER NUMBER
			1625	
DATE MAILED: 04/29/2021				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 16/741,741	Applicant(s) Nivorozhkin, Alex	
	Examiner JOHN S KENYON	Art Unit 1625	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 RCE Communication filed 04/13/2021.
☐ 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 1-11, 17-22 and 25-27. 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 <u>04/13/2021</u> . 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 _____.
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/JOHN S KENYON/ Primary Patent Examiner, Art Unit 1625	
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DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.
2. 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.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 04/13/2021, has been entered.

Current Status of 16/741,741

4. Claims 1-11, 17-22, and 25-27 have been examined on the merits. Claims 1-2, 4, 9, and 17-19 are original. Claims 3, 5-8, 10-11, 20-22, and 25-27 are currently amended.

Priority

5. Applicants identify the instant application, Serial #: 16/741,741, filed 01/13/2020, as a U.S. Non-Provisional patent application, which claims Priority from Provisional Application 62/791,122, filed 01/11/2019. This application has one RCE-filing.

Information Disclosure Statement

6. The information disclosure statement (IDS) submitted on 04/13/2021, was filed after the mailing date of the Notice of Allowance on 04/05/2021. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Arguments

7. The Examiner acknowledges receipt of RCE post Notice of Allowance to consider two U.S. Pre-grant publications (see IDS of 04/13/2021).

8. These references have been considered. The references do not constitute prior art or double patent references.

9. Applicants filed an Oath/Declaration on 04/13/2021. This renders moot the objection to a lack of Oath/Declaration (see paragraph 11 in the previous Office Action).

EXAMINER'S AMENDMENT

10. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an interview with Jacob Weintraub, Applicants' Representative on April 2, 2021 (Interview Summary provided in last Office Action).

The application has been amended as follows:

11. Strike "Novel" from the Application title to comply with MPEP 606.
12. Place periods at the end of claims 20-21. This will assure proper punctuation.
13. Revise claim 26 to -- The THC production device of claim 18, wherein the THC is produced in an accelerated conversion environment is selected from the group consisting of THC-9, THC-8, and any combination thereof. -- This avoids lack of antecedent basis in base claim 18 for "the [emphasis] accelerated conversion environment" since claim 18 does not contain "accelerated conversion environment".
14. Revise claim 27 to -- The THC production device of claim 18 wherein the THC may be selectively produced in an accelerated conversion environment. -- This avoids lack of antecedent basis in base claim 18 for "the [emphasis] accelerated conversion environment" since claim 18 does not contain "accelerated conversion environment".

Conclusion

15. The following is an examiner's statement of reasons for allowance: claims 1-11, 17-22, and 25-27 are allowable as written.
16. The reference ERLER (US 2010/0210860 A1), discloses a preparation method of converting CBD to THC (see "Abstract").
17. However, there is no known anticipatory prior art reference against the methods of instant claims 1 and 17 and the device of claim 18. The reference ERLER constitutes a close art, and not a prior art reference, since the ERLER method is characterized in

that CBD is present in an organic solvent and in the presence of a molecular sieve (see “Abstract”).

18. In other words, ERLER does not teach, suggest, or provide motivation for the ERLER molecular sieve to have the acidic qualities necessary to act as the catalyst in the same way as the “acidicly enriched solid support particles” of instant claims 1 and 17-18. In fact, the instant Specification describes the level of acidity of the “acidicly enriched solid support particles” as a characteristic of the functional groups covalently bound to the solid support particles and is distinct from the addition of solution phase acid (see pages 6-7). In contrast, ERLER explicitly indicates that the Lewis acid is added to the reaction mixture comprising the CBD and molecular sieve (see “Abstract” and para [0040]-[0041]). Thus, ERLER does not teach use of “acidicly enriched solid support particles” and therefore could not legitimately be useful as either an anticipatory or obviousness reference against instant claims 1 and 17-18.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN S KENYON whose telephone number is (571)270-1567. The examiner can normally be reached on Monday-Friday 10a-6p.

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, Anna Jiang can be reached on (571) 272-0627. 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 <https://ppair-my.uspto.gov/pair/PrivatePair>. 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.

/JOHN S KENYON/
Primary Patent Examiner, Art Unit 1625

<i>Notice of References Cited</i>	Application/Control No. 16/741,741		Applicant(s)/Patent Under Reexamination Nivorozhkin, Alex	
	Examiner JOHN S KENYON		Art Unit 1625	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20100210860-A1	08-2010	Erler; Joachim	C07D311/80	549/390
	B					
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Issue Classification 	Application/Control No. 16/741,741	Applicant(s)/Patent Under Reexamination Nivorozhkin, Alex
	Examiner JOHN S KENYON	Art Unit 1625

CPC						
Symbol					Type	Version
C07D	/	311	/	80	F	2013-01-01
B01J	/	8	/	0285	I	2013-01-01
B01J	/	8	/	001	I	2013-01-01
B01J	/	31	/	10	I	2013-01-01
B01J	/	21	/	08	I	2013-01-01
B01J	/	27	/	12	I	2013-01-01
B01J	/	29	/	08	I	2013-01-01
B01J	/	29	/	85	I	2013-01-01
B01J	/	35	/	026	I	2013-01-01
A61M	/	11	/	041	I	2013-01-01
A24F	/	40	/	40	I	2020-01-01
B01J	/	29	/	40	I	2013-01-01
B01J	/	2208	/	00628	A	2013-01-01
B01J	/	2208	/	00212	A	2013-01-01

CPC Combination Sets					
Symbol				Type	Set
	/		/		

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/JOHN S KENYON/ Primary Patent Examiner, Art Unit 1625	24 April 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	None

Issue Classification 	Application/Control No. 16/741,741	Applicant(s)/Patent Under Reexamination Nivorozhkin, Alex
	Examiner JOHN S KENYON	Art Unit 1625

INTERNATIONAL CLASSIFICATION				
CLAIMED				
C07D	/	311	/	80
NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

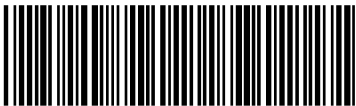
CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/JOHN S KENYON/ Primary Patent Examiner, Art Unit 1625	24 April 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	None

Issue Classification 	Application/Control No. 16/741,741	Applicant(s)/Patent Under Reexamination Nivorozhkin, Alex
	Examiner JOHN S KENYON	Art Unit 1625

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 20	
/JOHN S KENYON/ Primary Patent Examiner, Art Unit 1625 (Primary Examiner) _____ (Date) _____		O.G. Print Claim(s) 1	O.G. Print Figure None

<i>Search Notes</i> 	Application/Control No. 16/741,741	Applicant(s)/Patent Under Reexamination Nivorozhkin, Alex
	Examiner JOHN S KENYON	Art Unit 1625

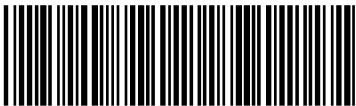
CPC - Searched*		
Symbol	Date	Examiner
C07D 311/80	04/02/2021	/J.K./

CPC Combination Sets - Searched*		
Symbol	Date	Examiner
Reviewed Examiner-Conducted prior art and double patent art search using PE2E SEARCH database for: "("cannabidiol" AND "tetrahydrocannabinol" AND "support particle") AND C07D 311/80.cpc." - see "SEARCH 5" in enclosed search notes.	04/02/2021	/J.K./

US Classification - Searched*			
Class	Subclass	Date	Examiner

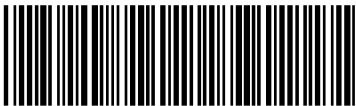
* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/JOHN S KENYON/ Primary Patent Examiner, Art Unit 1625	
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<i>Search Notes</i> 	Application/Control No. 16/741,741	Applicant(s)/Patent Under Reexamination Nivorozhkin, Alex
	Examiner JOHN S KENYON	Art Unit 1625

Search Notes		
Search Notes	Date	Examiner
Followed "Search Standards Training - July 2020" slides, especially slides 79-80 for displaying Indicia 1 and 3 for Quality Compact Prosecution	04/01/2021	/J.K./
Reviewed Examiner-Conducted PALM & PE2E SEARCH: Inventor and Assignee Name Searches and DAV Continuity Data Map; searched for prior art and double patent references (by inventor name and assignee/owner name searches)- see "SEARCH 1" through "SEARCH 4" enclosed in search records	04/02/2021	/J.K./
Reviewed STIC-Conducted STN (registry hcaplus casreact) search history for prior art within STN search transcript and reviewed for double patenting by inventor and assignee/owner name search within STN search transcript for 16/741,741- see search summary labeled "SEARCH 6", which is included in this record.	04/02/2021	/J.K./
Reviewed Applicant-provided art and IDS of 04/13/2021	04/24/2021	/J.K./
Reviewed Specification, Drawings, and claims for search strategies/queries	04/01/2021	/J.K./
Reviewed PCT/US20/13418 ISR and Written Opinion	04/01/2021	/J.K./
Reviewed patent family	04/01/2021	/J.K./
Reviewed papers in instant and parent Image File Wrapper	04/02/2021	/J.K./

/JOHN S KENYON/ Primary Patent Examiner, Art Unit 1625	
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Search Notes 	Application/Control No. 16/741,741	Applicant(s)/Patent Under Reexamination Nivorozhkin, Alex
	Examiner JOHN S KENYON	Art Unit 1625

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
C07D 311/80	C07D 311/80	04/02/2021	/J.K./
C07D 311/80/PE2E	Reviewed Examiner-Conducted prior art and double patent art search using PE2E SEARCH database for: ("cannabidiol" AND "tetrahydrocannabinol" AND "support particle") AND C07D 311/80.cpc." - see "SEARCH 5" in enclosed search notes.	04/02/2021	/J.K./
STIC-STN	Reviewed STIC-Conducted STN (registry hcplus casreact) search history for prior art within STN search transcript and reviewed for double patenting by inventor and assignee/owner name search within STN search transcript for 16/741,741- see search summary labeled "SEARCH 6", which is included in this record.	04/02/2021	/J.K./
PALM/PE2E	Reviewed Examiner-Conducted PALM & PE2E SEARCH: Inventor and Assignee Name Searches and DAV Continuity Data Map; searched for prior art and double patent references (by inventor name and assignee/owner name searches)- see "SEARCH 1" through "SEARCH 4" enclosed in search records	04/02/2021	/J.K./

/JOHN S KENYON/ Primary Patent Examiner, Art Unit 1625	
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Inventor Information for 16/741741

A review of said results did not retrieve any applicable art

Inventor Name	City	State/Country
NIVOROZHKIN, ALEX	WEST ROXBURY	MASSACHUSETTS

Appln Info

Contents

Petition Info

Atty/Agent Info

Continuity Data

Foreign Data

Inventors

Applicants

Address

Fees

Post Info

Pre Grant Pub

Search Another: Application #

or Patent #

or International Registration #

Search

Search

Search

PCT / /

or PG PUBS #

Search

Search

Attorney Docket #

Search

Bar Code #

Search

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Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | Home page

PE2E SEARCH - Search History (Prior Art)

A review of said results did not retrieve any applicable art

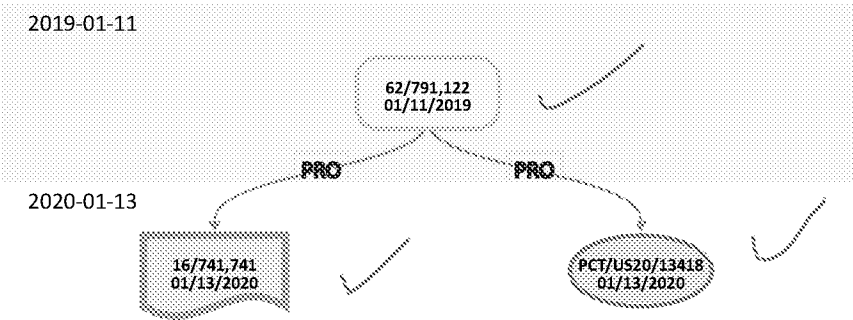
Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
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L2	1	L1 AND ("cannabidiol" OR "CBD") AND ("THC" OR "tetrahydrocannabinol")	(US-PGPUB ; USPAT)	OR	ON	ON	2021/04/02 11:04 AM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	38	NIVOROZHKIN-ALEX\$.in.	(US-PGPUB ; USPAT)	OR	ON	ON	2021/04/02 11:04 AM
N2	1	N1 AND ("cannabidiol" OR "CBD") AND ("THC" OR "tetrahydrocannabinol")	(US-PGPUB ; USPAT)	OR	ON	ON	2021/04/02 11:04 AM

Application: 16/741,741 (04/02/2021)
Total: 3 nodes
Filter: No Filters

A review of said results did not retrieve any applicable art



Patent Assignment Abstract of Title

Total Assignments: 1**Application #:** 16741741**Filing Dt:** 01/13/2020**Patent #:** NONE**Issue Dt:****PCT #:** NONE**Intl Reg #:****Publication #:** US20200223814**Pub Dt:** 07/16/2020**Inventor:** Alex Nivorozhkin**Title:** NOVEL METHODS AND RELATED TOOLS FOR CBD CONVERSION TO THC**Assignment: 1****Reel/Frame:** 054703 / 0183**Received:** 12/20/2020**Recorded:** 12/20/2020**Mailed:** 12/22/2020**Pages:** 3**Conveyance:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).**Assignor:** NIVOROZHKIN, ALEX**Exec Dt:** 06/09/2020**Assignee:** ARIELUM HEALTH, LLC

118 DENT STREET

WEST ROXBURY, MASSACHUSETTS 02132

Correspondent: JACOB G. WEINTRAUB

670 DEPOT STREET

PO BOX 1265

EASTON, MA 02334

Search Results as of: 04/02/2021 12:45 AM

If you have any comments or questions concerning the data displayed, contact PRD / Assignments at 571-272-3350. v.2.6
Web interface last modified: Jun 26, 2017 v.2.6

PE2E SEARCH - Search History (Prior Art)

A review of said results did not retrieve any applicable art

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L1	0	("Arielium").as.	(US-PGPUB ; USPAT)	OR	ON	ON	2021/04/02 12:04 AM

PE2E SEARCH - Search History (Interference)

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PE2E SEARCH - Search History (Prior Art)

A review of said results did not retrieve any applicable art

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	1	("cannabidiol" AND "tetrahydrocannabinol" AND "support particle") AND C07D 311/80.cpc.	(US-PGPUB ; USPAT)	OR	ON	ON	2021/04/02 01:04 AM

PE2E SEARCH - Search History (Interference)

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16/741,741

Full Search History

=> d his nofile

A thorough review of these results DID NOT retrieve any prior art reference. Furthermore, a thorough review by inventor name and assignee/owner name search DID NOT retrieve any double patent references.

(FILE 'HOME' ENTERED AT 15:15:47 ON 23 DEC 2020)

D SET

D CLUSTER

FILE 'HCAPLUS' ENTERED AT 15:16:04 ON 23 DEC 2020

E US2020-16741741/APPS

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SEL RN 1-

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1972-08-3/BI OR 5957-75-5/BI)

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D RN

L4 38 SEA SPE=ON ABB=ON PLU=ON 13956-29-1/CRN

L5 STR 13956-29-1

L6 82 SEA FAM FUL L5

E TETRAHYDROCANNABINOL/CN

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D RN

L8 40 SEA SPE=ON ABB=ON PLU=ON 1972-08-3/CRN

L9 STR 1972-08-3

L10 333 SEA FAM FUL L9

L11 82 SEA SPE=ON ABB=ON PLU=ON (L3 OR L4 OR L6)

L12 333 SEA SPE=ON ABB=ON PLU=ON (L7 OR L8 OR L10)

FILE 'CASREACT' ENTERED AT 15:18:34 ON 23 DEC 2020

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L14 5 SEA SPE=ON ABB=ON PLU=ON L13 AND (PARTIC? OR GRAIN? OR
GRANULA? OR BEAD OR ZEOLIT?)

L15 4 SEA SPE=ON ABB=ON PLU=ON L14 AND ACID?

L16 5 SEA SPE=ON ABB=ON PLU=ON (L14 OR L15)

L17 24 SEA SPE=ON ABB=ON PLU=ON NIVOROZHKIN A?/AU

L18 1 SEA SPE=ON ABB=ON PLU=ON L17 AND L13

L19 1 SEA SPE=ON ABB=ON PLU=ON L17 AND L16

L20 1 SEA SPE=ON ABB=ON PLU=ON (L18 OR L19)

FILE 'HCAPLUS' ENTERED AT 15:25:40 ON 23 DEC 2020

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L22 11120 SEA SPE=ON ABB=ON PLU=ON CANNABIDIOL OR CBD OR EPIDIOLEX OR
EPIDYOLEX

L23 114 SEA SPE=ON ABB=ON PLU=ON (L11 OR L21) (L) (RACT OR RCT)/RL

L24 70 SEA SPE=ON ABB=ON PLU=ON (L11 OR L21) (L) (REACT? OR
CONVERS? OR CONVERT? OR CONTACT? OR INTRODUC?)

L25 477 SEA SPE=ON ABB=ON PLU=ON L22 (7A) (REACT? OR CONVERS? OR
CONVERT? OR CONTACT? OR INTRODUC?)

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L27 15847 SEA SPE=ON ABB=ON PLU=ON TETRAHYDROCANNABINOL OR THC OR
MARINOL OR NAMISOL

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IMF)/RL

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 PRODUC? OR SYNTH? OR YIELD? OR MANUFACT?)
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 SYNTH? OR YIELD? OR MANUFACT?)
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 OR GRANULA? OR BEAD OR ZEOLIT?
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 L39 9466493 SEA SPE=ON ABB=ON PLU=ON ACID?
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 L43 78 SEA SPE=ON ABB=ON PLU=ON L41 AND L42
 L44 77 SEA SPE=ON ABB=ON PLU=ON (L41 OR L42 OR L43) AND (L31 OR
 L32 OR L33 OR L34 OR L35 OR L36)
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 L38 OR L39)
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 (L) L39
 L50 23725 SEA SPE=ON ABB=ON PLU=ON (L37 OR L38) (L) L36
 L51 135555 SEA SPE=ON ABB=ON PLU=ON L36 (7A) L39
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 L53 8 SEA SPE=ON ABB=ON PLU=ON (L47 OR L48 OR L52)
 L54 81 SEA SPE=ON ABB=ON PLU=ON NIVOROZHKIN A?/AU
 L55 2 SEA SPE=ON ABB=ON PLU=ON L54 AND (L11 OR L21 OR L22 OR L23
 OR L24 OR L25)
 L56 2 SEA SPE=ON ABB=ON PLU=ON L54 AND (L12 OR L26 OR L27 OR L28
 OR L29 OR L30)
 L57 2 SEA SPE=ON ABB=ON PLU=ON L55 AND L56
 L58 1 SEA SPE=ON ABB=ON PLU=ON (L55 OR L56 OR L57) AND (L31 OR
 L32 OR L33 OR L34 OR L35 OR L36 OR L37 OR L38 OR L39)
 L59 2 SEA SPE=ON ABB=ON PLU=ON (L55 OR L56 OR L57 OR L58)

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 E CANNABIDIOL/CN
 L61 2 SEA SPE=ON ABB=ON PLU=ON CANNABIDIOL/CN
 D 1-2 DCSE
 L62 46 SEA SPE=ON ABB=ON PLU=ON 53318/DCSE
 L63 1711 SEA SPE=ON ABB=ON PLU=ON L61/DCR OR L62/DCR
 L64 3362 SEA SPE=ON ABB=ON PLU=ON CANNABIDIOL/BI,ABEX,BIEX OR
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 ,BIEX

L65 253 SEA SPE=ON ABB=ON PLU=ON L64 (15A) (REACT?/BI,ABEX,BIEX OR
CONVERS?/BI,ABEX,BIEX OR CONVERT?/BI,ABEX,BIEX OR CONTACT?/BI,A
BEX,BIEX OR INTRODUC?/BI,ABEX,BIEX)
E TETRAHYDROCANNABINOL/CN

L66 1 SEA SPE=ON ABB=ON PLU=ON TETRAHYDROCANNABINOL/CN
D DCSE

L67 84 SEA SPE=ON ABB=ON PLU=ON 45362/DCSE

L68 1462 SEA SPE=ON ABB=ON PLU=ON L66/DCR OR L67/DCR

L69 3965 SEA SPE=ON ABB=ON PLU=ON TETRAHYDROCANNABINOL/BI,ABEX,BIEX
OR THC/BI,ABEX,BIEX OR MARINOL/BI,ABEX,BIEX OR NAMISOL/BI,ABEX,
BIEX

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IEX OR MANUFACT?/BI,ABEX,BIEX)

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OR BEAD/BI,ABEX,BIEX OR ZEOLIT?/BI,ABEX,BIEX

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L69 OR L70)

L74 79 SEA SPE=ON ABB=ON PLU=ON L73 AND L65

L75 423 SEA SPE=ON ABB=ON PLU=ON L73 AND L70

L76 50 SEA SPE=ON ABB=ON PLU=ON L74 AND L75

L77 88 SEA SPE=ON ABB=ON PLU=ON (L74 OR L75 OR L76) AND L71

L78 281 SEA SPE=ON ABB=ON PLU=ON (L74 OR L75 OR L76) AND L72

L79 61 SEA SPE=ON ABB=ON PLU=ON L77 AND L78

L80 7 SEA SPE=ON ABB=ON PLU=ON L76 AND L79

L81 10 SEA SPE=ON ABB=ON PLU=ON L76 AND L77

L82 194218 SEA SPE=ON ABB=ON PLU=ON L71 (15A) L72

L83 15 SEA SPE=ON ABB=ON PLU=ON L79 AND L82

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L85 176 SEA SPE=ON ABB=ON PLU=ON L64 (7A) (REACT?/BI,ABEX,BIEX OR
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BEX,BIEX OR INTRODUC?/BI,ABEX,BIEX)

L86 530 SEA SPE=ON ABB=ON PLU=ON L69 (7A) (PREPAR?/BI,ABEX,BIEX OR
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IEX OR MANUFACT?/BI,ABEX,BIEX)

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L89 7 SEA SPE=ON ABB=ON PLU=ON L84 AND L85 AND L86 AND L87

L90 9 SEA SPE=ON ABB=ON PLU=ON (L80 OR L81) AND (L88 OR L89)

L91 10 SEA SPE=ON ABB=ON PLU=ON (L80 OR L89 OR L90)

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L93 1 SEA SPE=ON ABB=ON PLU=ON L60 AND (L68 OR L69 OR L70)

L94 1 SEA SPE=ON ABB=ON PLU=ON L92 AND L93

L95 1 SEA SPE=ON ABB=ON PLU=ON (L92 OR L93 OR L94) AND (L71 OR
L72)

L96 1 SEA SPE=ON ABB=ON PLU=ON (L92 OR L93 OR L94 OR L95)

FILE 'MEDLINE, BIOSIS, CEABA, COMPENDEX, INSPEC, INSPHYS, EMBASE' ENTERED
AT 15:46:34 ON 23 DEC 2020

L97 45 SEA SPE=ON ABB=ON PLU=ON NIVOROZHKIN A?/AU,AUTH

L98 40145 SEA SPE=ON ABB=ON PLU=ON CANNABIDIOL OR CBD OR EPIDIOLEX OR
EPIDYOLEX

L99 8802 SEA SPE=ON ABB=ON PLU=ON L3

L100 1175 SEA SPE=ON ABB=ON PLU=ON L98 (7A) (REACT? OR CONVERS? OR
CONVERT? OR CONTACT? OR INTRODUC?)

L101 43918 SEA SPE=ON ABB=ON PLU=ON TETRAHYDROCANNABINOL OR THC OR
MARINOL OR NAMISOL

16/741,741

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L102      21152 SEA SPE=ON  ABB=ON  PLU=ON  L7
L103      5639 SEA SPE=ON  ABB=ON  PLU=ON  L101 (7A) (PREPAR? OR PRODUC? OR
          SYNTH? OR YIELD? OR MANUFACT?)
L104      5973827 SEA SPE=ON  ABB=ON  PLU=ON  PARTICLE OR PARTICULATE OR GRAIN?
          OR GRANULA? OR BEAD OR ZEOLIT?
L105      12090818 SEA SPE=ON  ABB=ON  PLU=ON  ACID?
L106      7271 SEA SPE=ON  ABB=ON  PLU=ON  (L98 OR L99 OR L100) AND (L101 OR
          L102 OR L103)
L107      142 SEA SPE=ON  ABB=ON  PLU=ON  L106 AND L100
L108      1016 SEA SPE=ON  ABB=ON  PLU=ON  L106 AND L103
L109      32 SEA SPE=ON  ABB=ON  PLU=ON  L107 AND L108
L110      16 SEA SPE=ON  ABB=ON  PLU=ON  (L107 OR L108 OR L109) AND L104
L111      255 SEA SPE=ON  ABB=ON  PLU=ON  (L107 OR L108 OR L109) AND L105
L112      8 SEA SPE=ON  ABB=ON  PLU=ON  L110 AND L111
L113      0 SEA SPE=ON  ABB=ON  PLU=ON  L109 AND L110
L114      5 SEA SPE=ON  ABB=ON  PLU=ON  L100 (S) L103
L115      5 SEA SPE=ON  ABB=ON  PLU=ON  L109 AND L114
L116      21 SEA SPE=ON  ABB=ON  PLU=ON  (L110 OR L112 OR L113 OR L115)
L117      0 SEA SPE=ON  ABB=ON  PLU=ON  L97 AND (L98 OR L99 OR L100)
L118      0 SEA SPE=ON  ABB=ON  PLU=ON  L97 AND (L101 OR L102 OR L103)
L119      0 SEA SPE=ON  ABB=ON  PLU=ON  (L117 OR L118)

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FILE 'CASREACT' ENTERED AT 15:51:59 ON 23 DEC 2020
D STAT QUERY L16

FILE 'HCAPLUS' ENTERED AT 15:52:06 ON 23 DEC 2020
D STAT QUERY L53

FILE 'WPIX' ENTERED AT 15:52:12 ON 23 DEC 2020
D STAT QUERY L91

FILE 'MEDLINE, BIOSIS, CEABA, COMPENDEX, INSPEC, INSPHYS, EMBASE' ENTERED
AT 15:52:22 ON 23 DEC 2020
D QUE L116

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FILE 'CASREACT, HCAPLUS, WPIX, MEDLINE, BIOSIS, CEABA, COMPENDEX, EMBASE'
ENTERED AT 15:52:33 ON 23 DEC 2020
L120      28 DUP REM L16 L53 L91 L116 (16 DUPLICATES REMOVED)
          ANSWERS '1-5' FROM FILE CASREACT
          ANSWERS '6-9' FROM FILE HCAPLUS
          ANSWERS '10-17' FROM FILE WPIX
          ANSWERS '18-22' FROM FILE MEDLINE
          ANSWERS '23-24' FROM FILE BIOSIS
          ANSWER '25' FROM FILE COMPENDEX
          ANSWERS '26-28' FROM FILE EMBASE
          D 1-5 IBIB ABS RX
          D 6-9 IBIB ABS HITIND
          D 10-17 IBIB AB
          D 18-28 IALL

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FILE 'HOME' ENTERED AT 15:53:06 ON 23 DEC 2020

FILE 'CASREACT' ENTERED AT 15:53:16 ON 23 DEC 2020
D QUE L20

FILE 'HCAPLUS' ENTERED AT 15:53:21 ON 23 DEC 2020
D QUE L59

FILE 'WPIX' ENTERED AT 15:53:26 ON 23 DEC 2020

16/741,741

D QUE L96

FILE 'MEDLINE, BIOSIS, CEABA, COMPENDEX, INSPEC, INSPHYS, EMBASE' ENTERED
AT 15:53:32 ON 23 DEC 2020

D QUE L119

FILE 'CASREACT, HCAPLUS, WPIX' ENTERED AT 15:53:44 ON 23 DEC 2020

L121 3 DUP REM L20 L59 L96 L119 (1 DUPLICATE REMOVED)

ANSWER '1' FROM FILE CASREACT

ANSWER '2' FROM FILE HCAPLUS

ANSWER '3' FROM FILE WPIX

D 1 IBIB ABS

D 2 IBIB ABS HITIND

D 3 IBIB AB

FILE 'HOME' ENTERED AT 15:53:59 ON 23 DEC 2020

Bibliographic Data

Application No: 16/741,741

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged:

/JOHN S KENYON/

Examiner's Signature

Initials

Title:

METHODS AND RELATED TOOLS FOR CBD CONVERSION TO THC

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
01/13/2020	549	1625	ANX-001
RULE			

APPLICANTS

INVENTORS

Alex Nivorozhkin, West Roxbury, MA, UNITED STATES

CONTINUING DATA

This application has PRO of 62791122 01/11/2019

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

02/03/2020

**** SMALL ENTITY ****

STATE OR COUNTRY

UNITED STATES

ADDRESS

JWIP & Patent Services, LLC
670 Depot Street, PO Box 1265
Easton, MA 02334
UNITED STATES

FILING FEE RECEIVED

\$785

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		16741741
	Filing Date		2020-01-13
	First Named Inventor	Alex Nivorozhkin	
	Art Unit	1625	
	Examiner Name	John S. Kenyon	
	Attorney Docket Number	ANX-001	

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/J.S.K/	1	20040049059		2004-03-11	MUELLER	
/J.S.K/	2	20160211693		2016-07-21	JJ 206 LLC	
	3					
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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²ⁱ	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16741741
Filing Date	2020-01-13
First Named Inventor	Alex Nivorozhkin
Art Unit	1625
Examiner Name	John S. Kenyon
Attorney Docket Number	ANX-001

1							
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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
1			

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/JOHN S KENYON/	Date Considered	04/24/2021
--------------------	-----------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16741741
Filing Date	2020-01-13
First Named Inventor	Alex Nivorozhkin
Art Unit	1625
Examiner Name	John S. Kenyon
Attorney Docket Number	ANX-001

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jacob G. Weintraub/	Date (YYYY-MM-DD)	2021-04-13
Name/Print	Jacob G. Weintraub	Registration Number	56,469

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Aviso de permisibilidad	Solicitud No. 16/741,741	Solicitante(s) Nivorozhkin, Alex	
	Examinador JOHN S KENYON	Unidad de Arte 1625	Estado AIA Sí

La FECHA DE CORREO de esta comunicación aparece en la carátula con la dirección de correspondencia.

Siendo todas las reivindicaciones permitidas, EL TRÁMITE EN LOS MÉRITOS SE CIERRA (O SE MANTIENE CERRADO) en esta solicitud. Si no se incluye aquí, (o si se ha enviado por correo anteriormente), un Aviso de permisibilidad (PTOL-85) u otras comunicaciones apropiadas, se enviarán por correo en tiempo debido. ESTE AVISO DE PERMISIBILIDAD NO ES LA CONCESIÓN DE DERECHOS DE PATENTES. Esta solicitud está sujeta a retiro de emisión, a la iniciativa de la Oficina o tras petición del solicitante. Ver 37 CFR 1.313 y MPEP 1308.

1. ☒ Esta comunicación se hace en respuesta a la respuesta radicada Comunicación RCE radicada 04/13/2021.
☐ Una declaración bajo 37 CFR 1.130(b) fue presentada el _____
2. Una elección se hizo por el solicitante en respuesta a un requerimiento de restricción hecho en la entrevista del ____; el requerimiento de restricción y la elección se han incorporado en esta acción.
3. ☒ Las reivindicaciones permitidas son 1 - 11, 17 - 22 y 25 - 27. Como resultado de las reivindicaciones permitidas, puede ser elegible a beneficiarse del programa de Procedimiento Acelerado de Patentes en una Oficina de Propiedad Intelectual participante para la solicitud correspondiente. Para mayor información, por favor ver http://uspto.gov/patents/init_events/pph/index.jsp o enviar una pregunta a PPHfeedback@uspto.gov.
4. ☐ Se hace un reconocimiento de una reivindicación de prioridad extranjera bajo 35 U.S.C. § 119(a)-(d) or (f).

Copias certificadas :

- a) ☐ Todas b) ☐ Algunas c) ☐ Ninguna de:
1. ☐ Copias certificadas de los documentos de prioridad se han recibido.
 2. ☐ Copias certificadas de los documentos de prioridad se han recibido en la solicitud No. _____
 3. ☐ Copias certificadas de los documentos de prioridad se han recibido en esta solicitud de fase nacional de la Oficina Internacional (Regla 17.2(a) del PCT)

*Copias certificadas no se han recibido: _____

El solicitante tiene TRES MESES DESDE LA “FECHA DE CORREO” de esta comunicación para presentar una respuesta cumpliendo con los requisitos que se listan abajo. La falta de cumplimiento resultará en el ABANDONO de la solicitud. ESTE PERIODO DE TRES MESES NO SE PUEDE EXTENDER

5. ☐ DIBUJOS CORREGIDOS (como “hoja de reemplazo”) deben ser presentados ☐ incluyendo cambios requeridos por la modificación/comentario del examinador o en la Acción Oficial de Papel No../Fecha de correo____. Identificar indicios tales como el número de aplicación (ver 37 CFR 1.84 (c)) debe escribirse en los dibujos en el frente (no por detrás) de cada hoja. Hoja(s) de reemplazo deben marcarse en el encabezado de acuerdo con 37 CFR 1.121(d). 6. DEPÓSITO DE y/o INFORMACIÓN sobre el depósito de material biológico debe presentarse. Ver el comentario adjunto del examinador con relación al REQUISITO PARA EL DEPÓSITO DE MATERIAL BIOLÓGICO.	
Adjunto(s) 1. ☒ Aviso de referencias citadas (PTO-892) 2. ☒ Información de declaraciones de divulgación (PTO/SB/08), Papel No../Fecha de Correo 2 páginas <u>04/13/2021</u>. 3. ☐ Comentarios del examinador relacionados con el depósito de material biológico_____ 4. ☐ Resumen de entrevista (PTO-413), Papel No../Fecha de Correo _____	5. ☒ Comentarios/correcciones del examinador 6. ☐ Declaración del Examinador acerca de las razones para permitir las reivindicaciones 7. ☐ Otro_____
/JOHN S KENYON/ Examinador, Unidad de Arte 1625	

Solicitud/Número de control: 16/741,741
Unidad: 1625

ACCIÓN DETALLADA

Aviso de Estado PRE-AIA (Ley de inventos de américa) o AIA

1. La presente solicitud, radicado en o luego de marzo 16 de 2013, está siendo examinada bajo el primer inventor para presentar provisiones del AIA.
2. En caso de que la determinación del estado de la solicitud como sujeta a AIA 35 USC 102 y 103 (o sujeto a la AIA 35 U.S.C. 102 y 103 anterior) es incorrecta, cualquier corrección de la base legal para el rechazo no se considerará un nuevo motivo de rechazo si se basó en el estado de la técnica y la justificación que respalda la rechazo, sería el mismo en cualquiera de los dos estados.

Examen continuado según 37 CFR 1.114

3. Se presentó una solicitud de continuación del examen bajo el 37 CFR 1.114, incluyendo la tasa establecida en el 37 CFR 1.17(e), en esta solicitud después de la concesión o después de una acción de la Oficina bajo Ex Parte Quayle, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Dado que esta solicitud es elegible para la continuación del examen bajo el 37 CFR 1.114, y la tasa establecida en el 37 CFR 1.17(e) ha sido pagada oportunamente, la tramitación de esta solicitud ha sido reabierta de acuerdo con el 37 CFR 1.114. La presentación del solicitante presentada el 13/04/2021, ha sido introducida.

Estado Actual de 16/741,741

4. Las reivindicaciones 1-11, 17-22 y 25-27 han sido examinadas en cuanto al fondo. Las reivindicaciones 1-2, 4, 9 y 17-19 son originales. Las reivindicaciones 3, 5-8, 10-11, 20-22 y 25-27 son actualmente modificadas.

Prioridad

5. Los solicitantes identifican la presente solicitud, número de serie: 16/741.741, presentada 13/01/2020, como una solicitud de patente no provisional de los Estados Unidos, que reivindica la prioridad de la solicitud provisional 62/791,122, presentada el 11/01/2019. Esta solicitud tiene una presentación RCE.

Declaración de divulgación de información

6. La declaración de divulgación de información (IDS) presentada el 13/04/2021, fue presentada después de la fecha de envío de la notificación de concesión el 05/04/2021. La presentación cumple con las disposiciones del 37 CFR 1.97. En consecuencia, la declaración de divulgación de información está siendo considerada por el examinador.

Respuesta a los Argumentos

7. El examinador acusa recibo del RCE post Notice of Allowance para considerar dos publicaciones estadounidenses previas a la concesión (ver IDS de 13/04/2021).

8. Estas referencias han sido consideradas. Las referencias no constituyen el estado de la técnica ni las referencias de patentes dobles.

9. Los solicitantes presentaron un juramento/declaración el 13/04/2021. Esto deja sin efecto la objeción de falta de Juramento/Declaración (véase el párrafo 11 de la anterior Acción de la Oficina).

MODIFICACIÓN DEL EXAMINADOR

10. A continuación figura una modificación del examinador al expediente. Si los cambios y/o adiciones son inaceptables para el solicitante, se puede presentar una modificación según lo dispuesto en 37 CFR 1.312. Para asegurar la consideración de dicha modificación, ésta DEBE ser presentada a más tardar con el pago de la tasa de expedición.

La autorización para esta modificación del examinador se dio en una entrevista con Jacob Weintraub, representante de los solicitantes, el 2 de abril de 2021 (el resumen de la entrevista se proporciona en la última Acción de la Oficina).

La solicitud ha sido modificada como sigue:

11. Suprimir "Novel" del título de la Solicitud para cumplir con el MPEP 606.

12. Colocar puntos al final de las reivindicaciones 20-21. Esto asegurará la correcta puntuación.

13. Revisar la reivindicación 26 como -- El dispositivo de producción de THC de la reivindicación 18, en el que el THC se produce en un entorno de conversión acelerada se selecciona del grupo que consiste en THC-9, THC-8, y cualquier combinación de los mismos. -- Esto evita la falta de fundamento del antecedente en la reivindicación base

18 para "el [énfasis] entorno de conversión acelerada" ya que la reivindicación 18 no contiene "entorno de conversión acelerada".

14. Revisar la reivindicación 27 como -- El dispositivo de producción de THC de la reivindicación 18 en el que el THC puede producirse selectivamente en un entorno de conversión acelerada. -- Esto evita la falta de fundamento del antecedente en la reivindicación base 18 para "el [énfasis] entorno de conversión acelerada" ya que la reivindicación 18 no contiene "entorno de conversión acelerada".

Conclusión

15. La siguiente es la exposición de motivos del examinador para la concesión: las reivindicaciones 1-11, 17-22 y 25-27 son admisibles tal como están escritas.

16. La referencia ERLER (US 2010/0210860 A1), divulga un método de preparación para convertir el CBD en THC (véase el "Resumen").

17. Sin embargo, no se conoce ninguna referencia del estado de la técnica anticipada contra los métodos de las reivindicaciones instantáneas 1 y 17 y el dispositivo de la reivindicación 18. La referencia ERLER constituye un arte cercano, y no una referencia del arte previo, ya que el método ERLER se caracteriza en que el CBD está presente en un disolvente orgánico y en presencia de un tamiz molecular (véase el "Resumen").

18. En otras palabras, ERLER no enseña, sugiere o motiva que el tamiz molecular ERLER tenga las cualidades ácidas necesarias para actuar como catalizador de la misma manera que las "partículas de soporte sólido enriquecidas con ácido" de las reivindicaciones

instantáneas 1 y 17-18. De hecho, la presente especificación describe el nivel de acidez de las "partículas de soporte sólido enriquecidas con ácido" como una característica de los grupos funcionales unidos covalentemente a las partículas de soporte sólido y es distinta de la adición de ácido en fase de solución (véanse las páginas 6-7). Por el contrario, ERLER indica explícitamente que el ácido de Lewis se añade a la mezcla de reacción que comprende el CDB y el tamiz molecular (véase el "Resumen" y el párrafo [0040]-[0041]). Por lo tanto, ERLER no enseña el uso de "partículas de soporte sólido enriquecidas con ácido" y, por lo tanto, no podría ser legítimamente útil como referencia anticipatoria u obvia contra las reivindicaciones instantáneas 1 y 17-18.

Cualquier consulta relativa a esta comunicación o a comunicaciones anteriores del examinador debe dirigirse a JOHN S KENYON cuyo número de teléfono es (571)270-1567. Normalmente se puede contactar con el examinador de lunes a viernes de 10a-6p.

Las entrevistas con el examinador están disponibles por teléfono, en persona, y por videoconferencia utilizando una herramienta de colaboración basada en la web suministrada por la USPTO. Para programar una entrevista, se anima al solicitante a utilizar la Solicitud de Entrevista Automatizada de la USPTO (AIR) en <http://www.uspto.gov.interviewpractice>.

Si los intentos de encontrar al examinador por teléfono no son exitosos, el supervisor del examinador, Andrew Kosar puede ser

encontrado en 571-272-0913. El número de fax para la organización en donde esta solicitud está asignada es 571-273-8300.

Información acerca del estatus de una solicitud puede ser obtenida del sistema Patent Application Information Retrieval PAIR. Información del estatus para solicitud publicadas se puede obtener ya sea a través del PAIR privado o público.

Información del estatus para solicitudes que aún no se han publicado está disponible a través del PAR privado únicamente. Para mayor información sobre el sistema PAIR ver <http://pair-direct.uspto.gov>. Si tiene dudas acerca de acceder al sistema PAIR privado, contacte el Electronic Business Center EBC al 866-217-9197 (gratis). Si requiere asistencia de un representante de servicio al cliente de la USPTO o acceso al sistema de información automatizada, llame al 800-786-9199 (EN USA O CANADÁ) o 571-272-1000.

/JOHN S KENYON/

Examinador principal, Unidad 1625

TABLA DE CORRESPONDENCIA

Reivindicaciones modificadas presentadas ante la SIC - NC2021/0010383	Reivindicaciones consideradas como admisibles por la Oficina de Estados Unidos USPTO US 11098024 16,741,741	Correspondencia
1. Un método eficiente en materiales para la conversión de cannabidiol (CBD) en tetrahidrocannabinol (THC) que comprende la etapa de: introducir CBD en las partículas sólidas de soporte enriquecidas en ácido para crear un entorno de conversión acelerada activada por CBD, tal que se produzca THC.	1. Un método eficiente en materiales para la conversión de cannabidiol (CBD) en tetrahidrocannabinol (THC) que comprende la etapa de: introducir CBD en las partículas sólidas de soporte enriquecidas en ácido para crear un entorno de conversión acelerada activada por CBD, tal que se produzca THC.	Hay correspondencia.
2. El método eficiente en materiales de la reivindicación 1, en donde las partículas sólidas de soporte se seleccionan del grupo que consiste en perlas de resina enriquecidas en ácido, gel de sílice funcionalizado enriquecido en ácido, óxido de circonio enriquecido en ácido, zeolitas de aluminosilicato enriquecidas en ácido, zeolitas de aluminofosfosilicato enriquecidas en ácido, y cualquier combinación de los mismos.	2. El método eficiente en materiales de la reivindicación 1, en donde las partículas sólidas de soporte se seleccionan del grupo que consiste en perlas de resina enriquecidas en ácido, gel de sílice funcionalizado enriquecido en ácido, óxido de circonio enriquecido en ácido, zeolitas de aluminosilicato enriquecidas en ácido, zeolitas de aluminofosfosilicato enriquecidas en ácido, y cualquier combinación de los mismos.	Hay correspondencia.
3. El método eficiente en materiales de la reivindicación 1 que comprende además la etapa de calentar dicho entorno de conversión acelerada activada por CBD.	3. El método eficiente en materiales de la reivindicación 1 que comprende además la etapa de calentar dicho entorno de conversión acelerada activada por CBD.	Hay correspondencia.
4. El método eficiente en materiales de la reivindicación 3, en donde el entorno de conversión acelerada se calienta hasta menos de o igual a 100 °C	4. El método eficiente en materiales de la reivindicación 3, en donde el entorno de conversión acelerada se calienta hasta menos de o igual a 100 °C	Hay correspondencia.
5. El método eficiente en materiales de la reivindicación 1 en donde la etapa de introducir el CBD en las partículas sólidas de soporte enriquecidas en ácido es mediante disolución en disolvente del CBD para crear el entorno de conversión acelerada activada por CBD.	5. El método eficiente en materiales de la reivindicación 1 en donde la etapa de introducir el CBD en las partículas sólidas de soporte enriquecidas en ácido es mediante disolución en disolvente del CBD para crear el entorno de conversión acelerada activada por CBD.	Hay correspondencia.
6. El método eficiente en materiales de la reivindicación 1 en donde la etapa de introducir el CBD en las partículas sólidas de soporte enriquecidas en ácido es mediante fusión directa sin disolvente del CBD para crear el entorno de conversión acelerada activada por	6. El método eficiente en materiales de la reivindicación 1 en donde la etapa de introducir el CBD en las partículas sólidas de soporte enriquecidas en ácido es mediante fusión directa sin disolvente del CBD para crear el entorno de conversión acelerada activada por	Hay correspondencia.

CBD.	CBD.	
7. El método eficiente en materiales de la reivindicación 1 que comprende además la etapa de extracción de las partículas sólidas de soporte.	7. El método eficiente en materiales de la reivindicación 1 que comprende además la etapa de extracción de las partículas sólidas de soporte.	Hay correspondencia.
8. El método eficiente en materiales de la reivindicación 1 en donde el THC producido en el entorno de conversión acelerada se selecciona del grupo que consiste en THC-9, THC-8 y cualquier combinación de los mismos.	8. El método eficiente en materiales de la reivindicación 1 en donde el THC producido en el entorno de conversión acelerada se selecciona del grupo que consiste en THC-9, THC-8 y cualquier combinación de los mismos.	Hay correspondencia.
9. El método eficiente en materiales de la reivindicación 8, en donde el THC se produce selectivamente en el entorno de conversión acelerada.	9. El método eficiente en materiales de la reivindicación 8, en donde el THC se produce selectivamente en el entorno de conversión acelerada.	Hay correspondencia.
10. El método eficiente en materiales de la reivindicación 8 en donde el THC producido en el entorno de conversión acelerada tiene una tendencia a favor de THC-9.	10. El método eficiente en materiales de la reivindicación 8 en donde el THC producido en el entorno de conversión acelerada tiene una tendencia a favor de THC-9.	Hay correspondencia.
11. El método eficiente en materiales de la reivindicación 8 en donde el THC producido en el entorno de conversión acelerada tiene una tendencia a favor de THC-8.	11. El método eficiente en materiales de la reivindicación 8 en donde el THC producido en el entorno de conversión acelerada tiene una tendencia a favor de THC-8.	Hay correspondencia.
12. Un método sin disolvente para la conversión de cannabidiol (CBD) en tetrahidrocannabinol (THC) que comprende la etapa de: introducir CBD en partículas sólidas de soporte enriquecidas en ácido mediante fusión directa del CBD para crear un entorno de conversión acelerada activada por CBD, tal que se produzca THC.	12. Un método sin disolvente para la conversión de cannabidiol (CBD) en tetrahidrocannabinol (THC) que comprende la etapa de: introducir CBD en partículas sólidas de soporte enriquecidas en ácido mediante fusión directa del CBD para crear un entorno de conversión acelerada activada por CBD, tal que se produzca THC.	Hay correspondencia.
13. Un dispositivo de producción de tetrahidrocannabinol (THC) que comprende: un recipiente para contener partículas sólidas de soporte enriquecidas en ácido; y una pluralidad de partículas sólidas de soporte enriquecidas en ácido activadas por CBD situadas en el interior del recipiente, en donde el THC se produce a partir de las partículas sólidas de soporte enriquecidas en ácido activadas por CBD.	13. Un dispositivo de producción de tetrahidrocannabinol (THC) que comprende: un recipiente para contener partículas sólidas de soporte enriquecidas en ácido; y una pluralidad de partículas sólidas de soporte enriquecidas en ácido activadas por CBD situadas en el interior del recipiente, en donde el THC se produce a partir de las partículas sólidas de soporte enriquecidas en ácido activadas por CBD.	Hay correspondencia.
14. El dispositivo de producción de THC de la	14. El dispositivo de producción de THC de la	Hay correspondencia.

reivindicación 13, en donde el recipiente se selecciona del grupo que consiste en un recipiente de reacción, un recipiente de recogida, una columna, un dispositivo de vapeo, un cartucho para un dispositivo de vapeo, un dispositivo para fumar, un aplicador para la piel, una jeringa, y cualquier combinación de los mismos.	reivindicación 13, en donde el recipiente se selecciona del grupo que consiste en un recipiente de reacción, un recipiente de recogida, una columna, un dispositivo de vapeo, un cartucho para un dispositivo de vapeo, un dispositivo para fumar, un aplicador para la piel, una jeringa, y cualquier combinación de los mismos.	
15. El dispositivo de producción de THC de la reivindicación 13 en donde el recipiente se selecciona para la producción comercial de THC.	15. El dispositivo de producción de THC de la reivindicación 13 en donde el recipiente se selecciona para la producción comercial de THC.	Hay correspondencia.
16. El dispositivo de producción de THC de la reivindicación 13 en donde el recipiente se selecciona para la producción para uso personal de THC.	16. El dispositivo de producción de THC de la reivindicación 13 en donde el recipiente se selecciona para la producción para uso personal de THC.	Hay correspondencia.
17. El dispositivo de producción de THC de una cualquiera de la reivindicación 13 que comprende además una fuente calefactora adecuada para controlar la temperatura del recipiente.	17. El dispositivo de producción de THC de una cualquiera de la reivindicación 13 que comprende además una fuente calefactora adecuada para controlar la temperatura del recipiente.	Hay correspondencia.
18. El dispositivo de producción de THC de la reivindicación 13 en donde las partículas sólidas de soporte se seleccionan del grupo que consiste en perlas de resina enriquecidas en ácido, gel de sílice funcionalizado enriquecido en ácido, óxido de circonio enriquecido en ácido, zeolitas de aluminosilicato enriquecidas en ácido, zeolitas de aluminofosfosilicato enriquecidas en ácido, y cualquier combinación de los mismos.	18. El dispositivo de producción de THC de la reivindicación 13 en donde las partículas sólidas de soporte se seleccionan del grupo que consiste en perlas de resina enriquecidas en ácido, gel de sílice funcionalizado enriquecido en ácido, óxido de circonio enriquecido en ácido, zeolitas de aluminosilicato enriquecidas en ácido, zeolitas de aluminofosfosilicato enriquecidas en ácido, y cualquier combinación de los mismos.	Hay correspondencia.
19. El dispositivo de producción de THC de la reivindicación 13 en donde el THC producido en el entorno de conversión acelerada se selecciona del grupo que consiste en THC-9, THC-8 y cualquier combinación de los mismos.	19. El dispositivo de producción de THC de la reivindicación 13 en donde el THC producido en el entorno de conversión acelerada se selecciona del grupo que consiste en THC-9, THC-8 y cualquier combinación de los mismos.	Hay correspondencia.
20. El dispositivo de producción de THC de la reivindicación 13 en donde el THC se puede producir selectivamente en el entorno de conversión acelerada.	20. El dispositivo de producción de THC de la reivindicación 13 en donde el THC se puede producir selectivamente en el entorno de conversión acelerada.	Hay correspondencia.
Las reivindicaciones 12 – 16, 23, 24, 28 – 41 fueron eliminadas del capítulo reivindicatorio	Las reivindicaciones 12 – 16, 23, 24, 28 – 41 fueron eliminadas del capítulo reivindicatorio	

AMENDMENTS TO THE CLAIMS

The following claims will replace all prior versions of said claims in the application:

What is claimed is:

1. (Original) A material-efficient method for conversion of cannabidiol (CBD) to tetrahydrocannabinol (THC) comprising the step of:
introducing CBD to acidically enriched solid support particles to create a CBD-activated accelerated conversion environment,
such that THC is produced.
2. (Original) The material-efficient method of claim 1, wherein the solid support particles are selected from the group consisting of acidically enriched resin beads, acidically enriched functionalized silica gel, acidically enriched zirconium oxide, acidically enriched aluminosilicate zeolites, acidically enriched aluminophosphosilicate zeolites, and any combination thereof.
3. (Currently amended) The material-efficient method of claim 1-~~or 2~~, further comprising the step of heating said CBD-activated accelerated conversion environment.
4. (Original) The material-efficient method of claim 3, wherein the accelerated conversion environment is heated to less than or equal to 100 °C.
5. (Currently amended) The material-efficient method of ~~any one of~~ claims 1, ~~2, 3, or 4~~, wherein the step of introducing the CBD to the acidically enriched solid support particles is through solvent dissolution of the CBD to create the CBD-activated accelerated conversion environment.
6. (Currently amended) The material-efficient method of ~~any one of~~ claims 1, ~~2, 3, or 4~~, wherein the step of introducing the CBD to the acidically enriched solid support

particles is through solvent-free direct melt of the CBD to create the CBD-activated accelerated conversion environment.

7. (Currently amended) The material-efficient method of ~~any one of~~ claims 1, 2, 3, 4, 5, or 6, further comprising the step of extraction of the solid support particles.

8. (Currently amended) The material-efficient method of ~~any one of~~ claims 1, 2, 3, 4, 5, 6, or 7, wherein the THC produced in the accelerated conversion environment is selected from the group consisting of THC-9, THC-8, and any combination thereof.

9. (Original) The material-efficient method of claim 8, wherein the THC is selectively produced in the accelerated conversion environment.

10. (Currently amended) The material-efficient method of claim 8 ~~or 9~~, wherein the THC produced in the accelerated conversion environment has a THC-9 bias.

11. (Currently amended) The material-efficient method of claim 8 ~~or 9~~, wherein the THC produced in the accelerated conversion environment has a THC-8 bias.

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Original) A solvent-free method for conversion of cannabidiol (CBD) to tetrahydrocannabinol (THC) comprising the step of:

introducing CBD to acidically enriched solid support particles through direct melt of the CBD to create a CBD-activated accelerated conversion environment, such that THC is produced.

18. (Original) A tetrahydrocannabinol (THC) production device comprising:
a vessel for containing acidically enriched solid support particles; and
a plurality of CBD-activated acidically enriched solid support particles
positioned inside the vessel, wherein THC is produced from the CBD-activated acidically enriched solid support particles.

19. (Original) The THC production device of claim 18, wherein the vessel is selected from the group consisting of a reaction vessel, a collection vessel, a column, a vape device, a cartridge for a vape device, a smoking device, a skin applicator, a syringe, and any combination thereof.

20. (Currently amended) The THC production device of claim ~~18 or 19~~, wherein the vessel is selected for commercial production of THC

21. (Currently amended) The THC production device of claim ~~18 or 19~~, wherein the vessel is selected for personal use production of THC

22. (Currently amended) The THC production device of ~~any one of claim 18, 19, 20 or 21~~, further comprising a heating source suitable to control the temperature of vessel.

23. (Cancelled)

24. (Cancelled)

25. (Currently amended) The THC production device of ~~any one of claim 18, 19, 20, 21, 22, 23, or 24~~, wherein the solid support particles are selected from the group consisting of acidically enriched resin beads, acidically enriched functionalized silica gel,

acidicly enriched zirconium oxide, acidicly enriched aluminosilicate zeolites, acidicly enriched aluminophosposilicate zeolites, and any combination thereof.

26. (Currently amended) The THC production device of ~~any one of~~ claim 18, ~~19, 20, 21, 22, 23, 24, or 25~~, wherein the THC produced in the accelerated conversion environment is selected from the group consisting of THC-9, THC-8, and any combination thereof.

27. (Currently amended) The THC production device of ~~any one of~~ claim 18, ~~19, 20, 21, 22, 23, 24, 25, or 26~~, wherein the THC may be selectively produced in the accelerated conversion environment.

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)

36. (Cancelled)

37. (Cancelled)

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

REIVINDICACIONES

1. Un método eficiente en materiales para la conversión de cannabidiol (CBD) en tetrahidrocannabinol (THC) que comprende la etapa de:

5 introducir CBD en las partículas sólidas de soporte enriquecidas en ácido para crear un entorno de conversión acelerada activada por CBD,
tal que se produzca THC.

10 2. El método eficiente en materiales de la reivindicación 1, en donde las partículas sólidas de soporte se seleccionan del grupo que consiste en perlas de resina enriquecidas en ácido, gel de sílice funcionalizado enriquecido en ácido, óxido de circonio enriquecido en ácido, zeolitas de aluminosilicato enriquecidas en ácido, zeolitas de aluminofosfosilicato enriquecidas en ácido, y cualquier combinación de los mismos.

15 3. El método eficiente en materiales de la reivindicación 1, que comprende además la etapa de calentar dicho entorno de conversión acelerada activada por CBD.

4. El método eficiente en materiales de la reivindicación 3, en donde el entorno de conversión acelerada se calienta hasta menos de o igual a 100 °C.

20 5. El método eficiente en materiales de la reivindicación 1 en donde la etapa de introducir el CBD en las partículas sólidas de soporte enriquecidas en ácido es mediante disolución en disolvente del CBD para crear el entorno de conversión acelerada activada por CBD.

25 6. El método eficiente en materiales de la reivindicación 1 en donde la etapa de introducir el CBD en las partículas sólidas de soporte enriquecidas en ácido es mediante fusión directa sin disolvente del CBD para crear el entorno de conversión acelerada activada por CBD.

30 7. El método eficiente en materiales de la reivindicación 1 que comprende además la etapa de extracción de las partículas sólidas de soporte.

35 8. El método eficiente en materiales de la reivindicación 1 en donde el THC producido en el entorno de conversión acelerada se selecciona del grupo que consiste en THC-9, THC-8 y cualquier combinación de los mismos.

9. El método eficiente en materiales de la reivindicación 8, en donde el THC se

produce selectivamente en el entorno de conversión acelerada.

10. El método eficiente en materiales de la reivindicación 8 en donde el THC producido en el entorno de conversión acelerada tiene una tendencia a favor de THC-9.

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11. El método eficiente en materiales de la reivindicación 8 en donde el THC producido en el entorno de conversión acelerada tiene una tendencia a favor de THC-8.

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12. Un método sin disolvente para la conversión de cannabidiol (CBD) en tetrahidrocannabinol (THC) que comprende la etapa de:

introducir CBD en partículas sólidas de soporte enriquecidas en ácido mediante fusión directa del CBD para crear un entorno de conversión acelerada activada por CBD, tal que se produzca THC.

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13. Un dispositivo de producción de tetrahidrocannabinol (THC) que comprende:
un recipiente para contener partículas sólidas de soporte enriquecidas en ácido; y
una pluralidad de partículas sólidas de soporte enriquecidas en ácido activadas por CBD situadas en el interior del recipiente, en donde el THC se produce a partir de las partículas sólidas de soporte enriquecidas en ácido activadas por CBD.

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14. El dispositivo de producción de THC de la reivindicación 13, en donde el recipiente se selecciona del grupo que consiste en un recipiente de reacción, un recipiente de recogida, una columna, un dispositivo de vapeo, un cartucho para un dispositivo de vapeo, un dispositivo para fumar, un aplicador para la piel, una jeringa, y cualquier combinación de los mismos.

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15. El dispositivo de producción de THC de la reivindicación 13 en donde el recipiente se selecciona para la producción comercial de THC.

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16. El dispositivo de producción de THC de la reivindicación 13 en donde el recipiente se selecciona para la producción para uso personal de THC.

17. El dispositivo de producción de THC de una cualquiera de la reivindicación 13 que comprende además una fuente calefactora adecuada para controlar la temperatura del recipiente.

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18. El dispositivo de producción de THC de la reivindicación 13 en donde las partículas sólidas de soporte se seleccionan del grupo que consiste en perlas de resina enriquecidas en ácido, gel de sílice funcionalizado enriquecido en ácido, óxido de circonio enriquecido en ácido, zeolitas de aluminosilicato enriquecidas en ácido, zeolitas de aluminofosfosilicato enriquecidas en ácido, y cualquier combinación de los mismos.

19. El dispositivo de producción de THC de la reivindicación 13 en donde el THC producido en el entorno de conversión acelerada se selecciona del grupo que consiste en THC-9, THC-8 y cualquier combinación de los mismos.

20. El dispositivo de producción de THC de la reivindicación 13 en donde el THC se puede producir selectivamente en el entorno de conversión acelerada.