

16, par. [0062] on pg. 20 and 21, par. [0045] on pg. 11). Therefore, the process of Austic would also result in the OSI of the transesterified product being greater than an OSI of the feedstock.

Regarding claim 2, Austic teaches performing transesterification reaction using ethanol instead of methanol (see Example 4 on pg. 15) and teaches jojoba oil as the feedstock (the same feedstock as instant claims), therefore the transesterified product produced from jojoba oil would not comprise methyl esters.

Austic anticipates claims 1 and 2.

Claims 3 and 4 are rejected under 35 U.S.C. 102(a)(1) and under 35 U.S.C. 102(a)(2) as being anticipated by **Austic** (WO 2012/106701; Pub. Aug. 9, 2012; Of Record) as applied to claims 1 and 2 above **as evidenced by Busson-Breysse** (JAOCS, 1994; Of Record) **and Fucosterol** (Cayman Chemical, CAS Entry, 2019; Of Record).

Regarding claims 3 and 4, Austic does not teach the feedstock to further comprise an antioxidant (claim 3), a skin conditioning agent and a volatile compound (claim 4). Jojoba oil comprises various sterols such as fucosterol (see Busson-Breysse Table 4), which is an antioxidant (see Fucosterol pg. 1 Description). The instant specification discloses that jojoba oil comprises various sterols, antioxidants (tocopherols etc.,) function as skin conditioning agents and are volatile (see par. [0050]). Austic teaches using jojoba oil in its transesterification methods and catalyzed by contacting with a lipase (Lipozyme TL IM), the same process taught in the instant specification (par. [0055,0062]). Therefore it is reasonably expected that the process of

Gunawan in view of Austic is teaching a method in which the feedstock (jojoba oil) comprises an antioxidant, skin conditioning agent and a volatile compound and the transesterification process would occur without removing or degrading the antioxidant, skin conditioning agent and a volatile compound.

Austic anticipates claims 3 and 4.

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.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims the examiner presumes that the subject matter of the various claims was commonly owned as of the effective filing date of the claimed invention(s) absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and effective filing dates of each claim that was not commonly owned as of the effective filing date of the later invention in order for the examiner to consider the applicability of 35 U.S.C. 102(b)(2)(C) for any potential 35 U.S.C. 102(a)(2) prior art against the later invention.

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

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6 and 7 are rejected under 35 U.S.C. 103 as being unpatentable over **Austic** (WO 2012/106701; Pub. Aug. 9, 2012; Of Record) **in view of Arquette** (US 5,968,530; Iss. Oct. 19, 1999; Applicant IDS; Of Record).

Regarding claims 6 and 7, Austic does not teach the jojoba oil comprises hydrogenated wax esters. Arquette teaches preparing esterified products for use in cosmetic products and teaches using jojoba oil in the esterification methods (col. 4 lines 40-65). Arquette teachings jojoba oil is also called jojoba wax esters (col. 5 lines 1-15) and teaches jojoba wax esters, hydrogenated jojoba wax esters or a mixture of the two are used in the esterification reaction to produce the emollients (lubricants) for use cosmetic compositions (col. 8 lines 1-30,49-60).

It would have been obvious to one of ordinary skill before the effective filing date of the claimed invention to use jojoba oil comprising hydrogenated jojoba esters instead of jojoba oil to produce transesterified wax esters in the methods of Austic as taught by Arquette. One of ordinary skill in the art would be motivated to do so because it was known in the art that jojoba oil, hydrogenated jojoba oil and mixtures thereof can also be used in transesterification processes to produce emollient compositions and the artisan is substituting hydrogenated jojoba oil instead of jojoba oil in the methods of Austic.

Austic and Arquette teach a method using hydrogenated jojoba oil in their methods, and teach a process in which jojoba oil is catalyzed by contacting with a lipase (Lipozyme TL IM), the same process taught in the instant specification (par. [0057]). Therefore it is reasonably expected that the process of Austic and Arquette would also produce a transesterified product whose dropping point is greater than the dropping point of the feedstock and the dropping point increases as a percentage of hydrogenated jojoba wax esters in the feedstock increases. Since Arquette teaches using mixtures of jojoba oil and hydrogenated jojoba oil, the percentage of hydrogenated wax esters can be varied, and the dropping point would change based on the hydrogenation since the same method steps (providing a feedstock, contacting with a lipase and catalytically transesterifying the wax esters) are taught by Austic and Arquette.

The teachings of Austic and Arquette would render claims 6 and 7 obvious.

Response to Arguments

Applicant's arguments filed 01/19/2021 regarding the teachings of Gunawan have been fully considered (see pg. 5-7) and are persuasive. Applicants presented evidence showing that when a feedstock comprising jojoba wax esters is transesterified under the conditions disclosed in Gunawan, the OSI of the transesterified product is not greater than the OSI of the feedstock as recited in claim 1 (see Table 4, section 8 on page 5 in the declaration under 37 CFR 1.132 filed on 01/19/2021). The previous rejections of claims 1-4 as being obvious under 35 USC 103 over Gunawan in view of Austic and of claim 6 and 7 under 35 USC 103 over Gunawan in view of Austic and Arquette are withdrawn.

However, as discussed above, the teachings of Austic anticipate the method claimed in instant claims 1-4 and the combined teachings of Austic in view of Arquette render the method recited in claims 6 and 7 obvious.

It is noted Applicants had previously argued in the remarks filed on 09/19/2019 that the instant method is performed under different reaction conditions as compared to the method disclosed in Austic. Applicants argued that Austic teaches using large vessels for reacting gases with the feedstock while the instant method discloses use of packed columns and liquid reactants. Applicants argued Austic teaches performing the reactions under lower temperatures (between 35°C to 65°C) than the temperatures disclosed in the instant application (see remarks filed on 09/19/2019 paragraph across pages 9 and 10). These arguments are not persuasive because Austic teaches the same transesterification process as recited in claim 1. Austic teaches performing the transesterification reaction on feedstock comprising jojoba esters (same feedstock as instant claims), using the same enzymes at the same dosage (LIPOZYME TL IM at 4% w/w oil) under solvent-less conditions. The instant specification teaches the same conditions (see instant specification par. [0055] on pg. 16, par. [0062] on pg. 20 and 21, par. [0045] on pg. 11). Therefore, the process of Austic would also result in the OSI of the transesterified product being greater than an OSI of the feedstock. It is noted that the features upon which applicant relies (i.e., reactions in packed bed reactors, higher temperatures etc.,) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is again re-iterated that the only active method steps in instant claim 1 are providing a feedstock comprising jojoba wax esters, contacting the feedstock with a lipase and catalytically transesterifying the jojoba wax esters in the feedstock with the lipase to form a transesterified product. The limitations “wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock” is the intended result of the method of claim 1 and would inherently be met if the prior art process teaches the same active method steps as recited in claim 1. The method of claim does not recite any additional limitations (process conditions) that are necessary and/or critical to achieve the result that an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SRIKANTH PATURY whose telephone number is (571)270-1020. The examiner can normally be reached on Monday-Friday, 9:30 - 6:30 EST.

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

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Louise W Humphrey can be reached on 571-272-5543. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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

/LOUISE W HUMPHREY/
Supervisory Patent Examiner, Art Unit 1657

/Srikanth Patury/
Examiner, Art Unit 1657

<i>Search Notes</i> 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

CPC - Searched*		
Symbol	Date	Examiner
Please see Partial text search in WEST appended hereto	3/20/2017	KCS
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Search Notes 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

US Classification - Searched*			
Class	Subclass	Date	Examiner
Partial text search in WEST	Partial text search in WEST	3/20/2017	KCS
CPC	C12P7/6436 C11C3/003	3/20/2017	KCS
IPC	C12P7/64)	3/20/2017	KCS
USPC	435/134	3/20/2017	KCS
Updated Partial text search in WEST	Updated Partial text search in WEST	10/19/2017	KCS
CPC	C12P7/6436, C11C3/003	10/19/2017	KCS
IPC	C12P7/64	10/19/2017	KCS
USPC	435/134	10/19/2017	KCS
Re-updated Partial text search in WEST	Re-updated Partial text search in WEST	06/23/2018	KCS
CPC	C12P7/6436 C11C3/003 C11C3/10	06/23/2018	KCS
IPC	C12P7/64	06/23/2018	KCS
USPC	435/134	06/23/2018	KCS

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	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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Search Notes 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

Search Notes		
Search Notes	Date	Examiner
Inventor name search in PE2E & PALMsearch in	3/1/2017	KCS
Assignee name search in PE2E & PALM	3/1/2017	KCS
Verified Application priority data in PE2E & PALM	3/1/2017	KCS
Partial Text Search in WEST:DWPI, EPAB, FPRS, JPAB, USOC, USPT according to search strtrgy and terms in WEST search history appende hereto	3/20/2017	KCS
STN Search	09/20/2016	KCS
Updated Inventor name search in PE2E, WEST & PALM	10/19/2017	KCS
Updated Assignee name search in PE2E & PALM	10/19/2017	KCS
Reverified Application priority data in PE2E & PALM	10/19/2017	KCS
Updated Partial Text Search in WEST:DWPI, EPAB, FPRS, JPAB, USOC, USPT according to search strtrgy and terms in WEST search history appende hereto	10/19/2017	KCS
14578075 Google Search Transesterification oil OI20171019	10/19/2017	KCS
Re-updated Inventor name search in PE2E, WEST & PALM	06/23/2018	KCS
Re-updated Assignee name search in WEST, PE2E & PALM	06/23/2018	KCS
Reverified Application priority data in WEST PE2E & PALM	06/23/2018	KCS
Updated Partial Text Search in WEST:DWPI, EPAB, FPRS, JPAB, USOC, USPT according to search strtrgy and terms in WEST search history appende hereto	06/23/2018	KCS
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updated inventor search, see EAST search history	05/28/2019	/sp/
updated inventor search, see EAST search history	11/25/2019	/sp/
updated inventor, assignee search, see EAST search history	02/05/2021	/sp/

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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<i>Search Notes</i> 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	896	"flora".as.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/02/05 15:20
L2	86	l1 and jojoba	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/02/05 15:20
L3	32	l1 and jojoba.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/02/05 15:20
L4	5,318	(C12P7/6436 or C11C3/003 or C11C3/10).cpc.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/02/05 15:21
L5	301	l4 and jojoba	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/02/05 15:21
L6	295	l5 and ester	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/02/05 15:21
L7	158	l6 and lipase	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/02/05 15:21

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Doc code: IDS

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PTO/SB/08a (02-18)

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

Application Number	14578075
Filing Date	2014-12-19
First Named Inventor	Jeff Addy
Art Unit	1657
Examiner Name	Patury, Srikanth
Attorney Docket Number	FLORATECH002

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	1	WO199920224	WO		1999-04-29	Arquette, Demetrios		
	2	WO2011107977	WO		2011-09-09	Basheer et al.		

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

Application Number	14578075
Filing Date	2014-12-19
First Named Inventor	Jeff Addy
Art Unit	1657
Examiner Name	Patury, Srikanth
Attorney Docket Number	FLORATECH002

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
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Examiner Signature	/SRIKANTH PATURY/	Date Considered	02/04/2021
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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	14578075
Filing Date	2014-12-19
First Named Inventor	Jeff Addy
Art Unit	1657
Examiner Name	Patury, Srikanth
Attorney Docket Number	FLORATECH002

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	/Adam Stephenson/	Date (YYYY-MM-DD)	2021-01-19
Name/Print	Adam R. Stephenson	Registration Number	58349

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.**

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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.

FLORATECH002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

DECLARATION

Applicant: Jeff Addy

Docket No: FLORATECH002

Examiner: Patury, Srikanth

Ser. No: 14578075

Filed: December 19, 2014

Group Art Unit: 1657

Conf. No.: 2053

Title: Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

DECLARATION UNDER 37 C.F.R. 1.132

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

Sir/Madam:

I, Jeff Addy, declare as follows:

1. I am a named inventor on this patent application. I have read and am familiar with the contents of this application. It is my understanding the pending claims have been rejected because the Examiner believes claims 1-2 are anticipated by Austic et al., WO2012/106701 ("Austic"), claims 3-4 are anticipated by Austic in view of the paper by Busson-Breysse et al, "Jojoba Wax: Its Esters and Some of Its Minor Components," *J. Acad. Org. Chem. Soc.* V. 71, No. 9, p. 999-1002 (1994) ("Busson-Breysse"); and Fucosterol (Cayman Chemical, CAS No. 17605-67-3, CAS Entry, 2019) ("Fucosterol"); and claims 6-7 are obvious over Austic in view of Arquette (US. Pat. No. 5,968,530) ("Arquette").

2. As Austic provides no information regarding the oxidative stability index (OSI) values for any of the products made using the processes disclosed in the reference, I am providing the following observations about the disclosure of the Austic reference and its likelihood of producing a transesterified product involving jojoba wax esters that would demonstrate an increased OSI relative to the OSI of the feedstock.
3. A representative real-world quantitative measure of oxidative stability can be accomplished by determining an Oxidative Stability Index (OSI) of a given material. OSI evaluation determines the relative resistance of, for example, fats or oils to oxidation that can then be used to infer shelf life. A higher OSI value (hours) indicates a longer shelf life for a given product.

Austic's Disclosed Process:

4. Austic's overall process is summarized in p. 3, lines 26-33. In short, Austic discloses a multiphase reaction system where a lower alcohol gas feedstock is passed through a liquid reaction mixture. The carrier for the gas phase is taught to include atmospheric air, oxygen, nitrogen, noble gases, carbon dioxide, and combinations of the same (p. 7 lines 34-35). Glycerol is used as the carrier for fatty acids in the liquid phase including the lipolytic enzyme and can be a product of the reaction (see glyceride feedstock on p. 3, line 17 and on p. 4, line 21). Preferred lower alcohols are taught to be C₁-C₅ alcohols on p. 4, line 19. The other portion of the feedstock of Austic is a fatty acid. The goal of Austic is to produce fatty acid alkyl esters (FAAE) like fatty acid methyl esters (FAME) and fatty acid ethyl esters (FAEE) to form a biodiesel product. Austic is fundamentally an esterification process where lower alcohols are reacted with fatty acids to form esters (FAMEs or FAAEs). Based on the disclosure of Austic, the process will always produce an ester that includes a methyl, ethyl, propyl, butyl, or pentyl group. This is consistent with Austic's goal to produce a fuel that can be burned in a diesel engine (as opposed to a heavier fuel oil product).

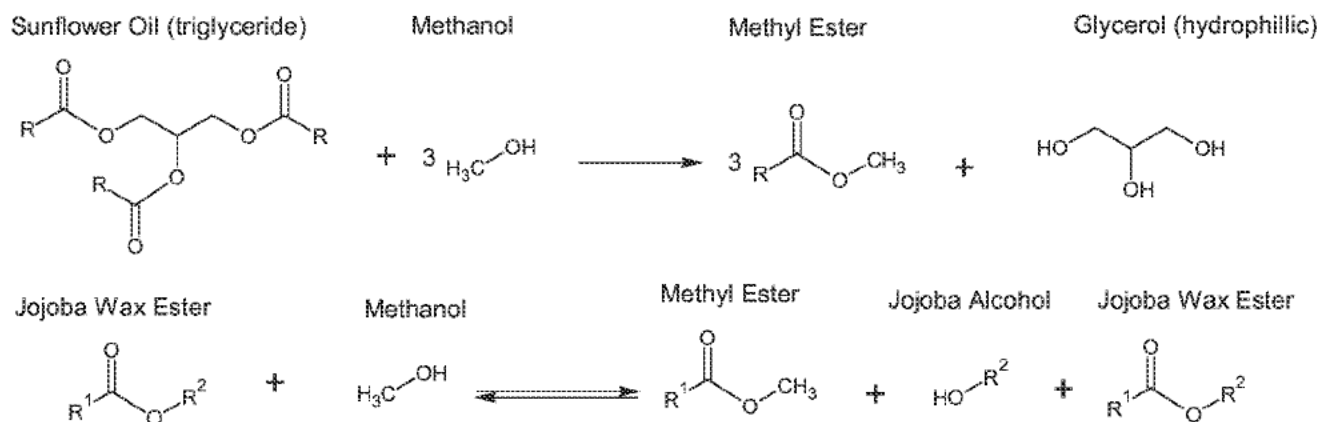
5. Austic's process is not intended to be a transesterification process. It is instead intended to be an esterification process producing in a controlled way a biodiesel product with very minimal free fatty acid (FFA) remaining.
6. The Austic process depends on one of the reactants coming from the gas phase, and the gas phase removing undesired products like water to keep the reaction moving toward completion with the undesired products being at least partially removed prior to recycle back to the reactor (p. 6, lines 6-8, p. 7, lines 1-5). Two phases have the potential to exist in the liquid phase of the reactor of Austic. The first is an oil phase which includes the reactants and the second is a glycerol phase that contains carrier glycerol and glycerol that is produced during the reaction (particularly reactions involving triglycerides and recovered frying oils like the yellow greases disclosed in the examples of Austic).

Analysis.

7. The Examiner is proposing that jojoba oil be used as at least part of the feedstock of the process of Austic to produce biodiesel. In other words, the fatty alcohols of jojoba oil would participate in the presence of a lipolytic enzyme type disclosed in the reference while a C₁-C₅ alcohol in a gas phase with recycle is distributed therethrough in a reactor vessel like that disclosed in Austic.
8. It is important to understand the significant structural differences between the chemical components of jojoba oil and the oils actually used in the examples provided in Austic. The oils from the examples are triglyceride oils from plant and likely some animal sources that, by virtue of being triglycerides, contain a glycerol backbone and three fatty acid side chains. In contrast, jojoba oil does not contain a glycerol group at all, but instead is a mixture of long chain fatty acid esters (wax esters). So, while jojoba oil is called an oil in Austic's disclosure, as a mixture of wax esters without a glycerol group, it is chemically significantly different from the yellow greases and other FFA feedstocks in the examples of Austic.
9. Austic fails to provide sufficient reaction condition information in the document to permit me to attempt to replicate the results in the examples in the reference.

Because of this, I was unable to attempt to use a process like that in Austic with jojoba oil to do a side-by-side comparison of the OSI of jojoba oil processed using Austic's taught process and corresponding jojoba wax esters transesterified using the process disclosed in the present application. This is initial evidence that Austic fails to enable one of ordinary in the art to practice its taught process across the entire range of FFA feedstocks listed in the long list on p. 4 and 5.

10. While actual direct experimentation using Austic's process was impossible, based on the theory of the reaction chemistry taught in Austic and as illustrated in the stoichiometric equations in Scheme I below, an input oil with a glycerol backbone like a triglyceride would, for all practical purposes, make the esterification irreversible due to the liberated glycerol falling out of solution and forming a two-phase liquid system. Without the generated glycerol being able to take part in the reaction phase due to solubility differences, the reaction will proceed to an equilibrium heavily favored toward FFAE.



Scheme I

11. In contrast, if jojoba oil were to be substituted for the glyceride-containing triglycerides, a two-phase liquid system would not form, and the equilibrium would shift dramatically away from FFAE. The glycerol counterpart in jojoba oil, the various long chain jojoba fatty alcohols will remain in the reaction phase rather than forming a glycerol phase, shifting the reaction away from FFAE and toward wax-ester formation. Without the irreversible reaction characteristics the Austic

reaction takes advantage of that are only afforded by triglyceride inputs with actual glycerol moieties, the jojoba oil product will wind up containing substantial quantities of wax-esters and jojoba fatty alcohols in addition to FFAE.

12. Austic's process assumes the lipid, as a reactant, is the limiting reagent, reacting with methanol until the reaction reaches maximum methyl ester content at equilibrium. To demonstrate this, an example reaction was conducted using sunflower oil as a triglyceride source where a maximum methyl ester content was achieved at 40% molar excess dosing of methanol as shown in Figure 1 and Table 1 below. Jojoba oil, on the other hand, has a much lower FFAE equilibrium, this again is explained by the irreversibility of the triglyceride reaction after liberation of the glycerol. When the same experiment was conducted using jojoba oil and methanol, despite increasing the molar excess of methanol, the jojoba-based reaction only reached a maximum FAME conversion of 34%.

Table 1

% Excess MeOH (mol)	FAME % Sunflower Oil	FAME % Jojoba Oil
0	49%	11%
10	63%	15%
20	81%	23%
30	96%	27%
40	99%	31%
50	99%	32%
75	99%	33%
100	99%	33%
150	99%	33%
300	99%	34%

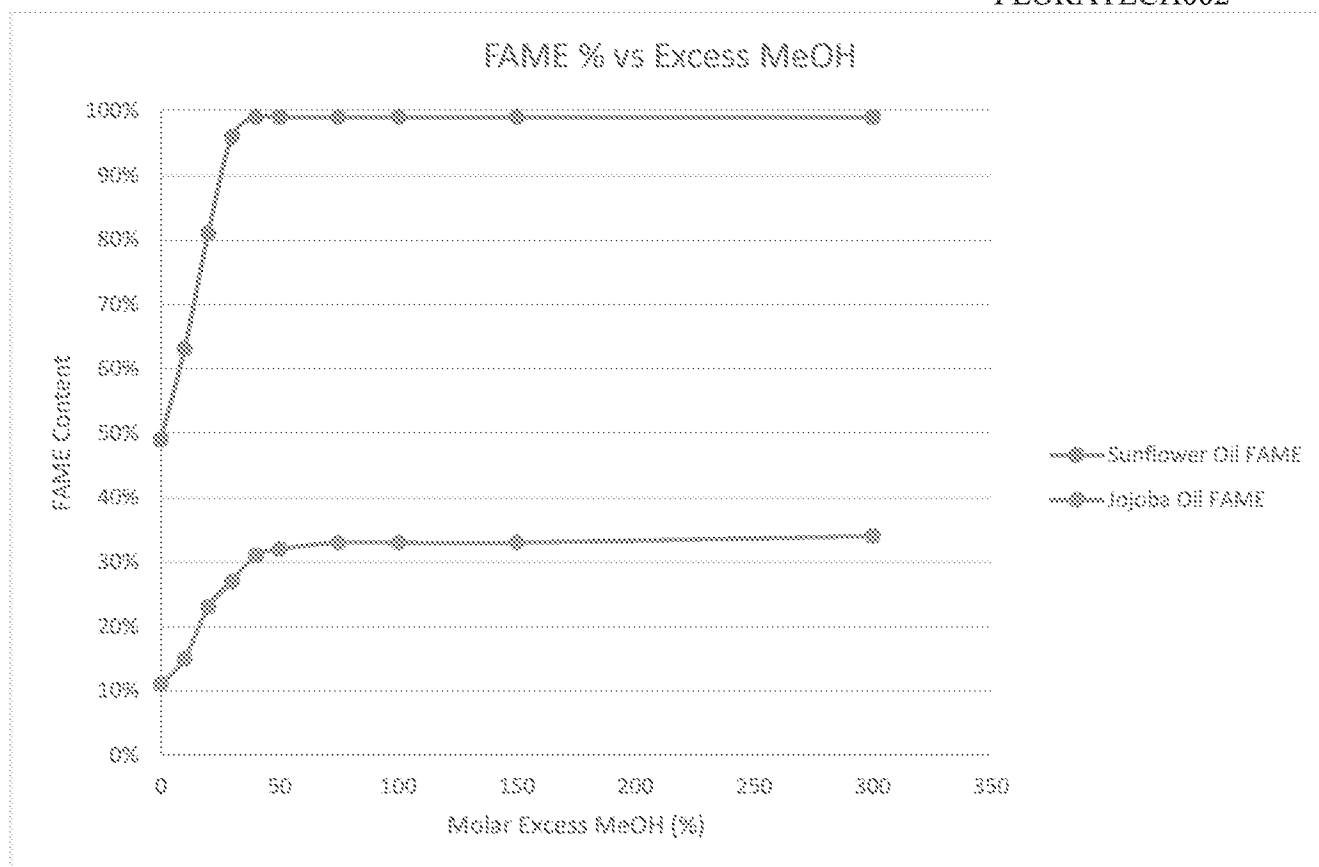


Figure 1

13. As a result of its use of gaseous alcohols, Austic's process can only produce a methyl, ethyl, propyl, butyl, or pentyl ester with the jojoba fatty alcohols. These products would have carbon numbers of C_{19} - C_{28} and are completely dissimilar to the products created using the process of the present application (C_{36} - C_{46} wax esters). In addition, the FAAE component of the Austic product involving jojoba oil may only be 1/3 of the product stream on a molar basis. Using the process of Austic with jojoba oil as a feedstock would inevitably result in an wax ester and jojoba free fatty alcohol waste stream that contains a substantial amount of the feedstock.
14. Austic does not teach that the wax esters would be desirable in a biodiesel product. There is simply no information in the Austic reference that describes how to remove the wax esters and other undesirable components (jojoba free fatty alcohol)

from the FAAEs that may be useful for a biodiesel product. Nor does Austic provide any information that an FAAE containing jojoba oil actually would work for or be desirable in any way for use as a biodiesel product let alone an unconventional mixture of FAAE, jojoba fatty alcohols, and jojoba wax esters. Because of this, using jojoba oil in the process of Austic would inevitably result in a biodiesel unsatisfactory for its intended purpose.

15. The foregoing illustrates how Austic entirely fails to provide an enabling disclosure needed for one of ordinary skill to utilize jojoba oil in its process to make a product consistent with its stated purpose—making biodiesel. Correspondingly, there is nothing in Austic that would teach or suggest that the resulting OSI of the product would be higher than the OSI of the feedstock. Indeed, the contrary is true—because the Austic process is being used to form a biodiesel, oxidation of the product during reaction is expressly contemplated, for example, by the use of atmospheric air or oxygen as the carrier gas. Use of atmospheric air or oxygen will inevitably result in oxidation of the reactants during the reaction producing a product that will have a lower OSI than an OSI of the original feedstock materials. This is true regardless of whether Austic itself regards atmospheric air or oxygen as an “inert gas” (p. 7 line 33) as chemistry dictates this result, particularly in a situation involving jojoba oil where only partial conversion of the reactants to FAAEs is possible leaving the unreacted jojoba FFAs free to react with the carrier gas.
16. The examples in Austic all use methanol or ethanol as the lower alcohol and therefore will inevitably result in a product that contains methyl or ethyl esters, unlike the wax ester products disclosed in the present specification. While the disclosure of Austic states that propyl, butyl, and pentyl alcohols could be used, the reference fails to provide any operating conditions for employing these alcohols in the process of Austic. Austic fails to provide key information to persons attempting to extend the process of Austic to these alcohols, such as temperatures, air flow rates, vacuum timing, etc. Accordingly, the disclosure of Austic also fails

to enable the full range of the potential alcohols disclosed. Based on the foregoing, it is clear that the disclosure of Austic also fails to enable the full range of potential feedstock materials listed on p. 4, lines 35-37 – p. 5, lines 1-20.

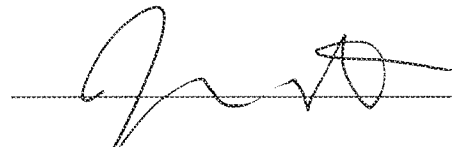
17. Contrary to what the Examiner has asserted in the Office Action dated 2/11/2021, the equilibrium of the reaction when jojoba oil is used with the reaction process of Austic ensures: 1) that the resulting product is unfit for use as biodiesel, and 2) is certain to have an OSI lower than the OSI of the original jojoba oil feedstock material. Attempting to modify the process of Austic to isolate the wax esters from the reactant stream is contrary to the express teachings of Austic and would result in undue extensive and time-consuming experimentation not suggested by the reference itself. Even if the wax ester composition produced by the Austic reaction was successfully isolated, whether those wax esters have a higher OSI than the OSI feedstock jojoba oil material is unknown until those wax esters are isolated and tested. This unknown result is not one that necessarily will occur, but remains only a possibility that is unverifiable absent extensive experimentation. An increase in OSI of a product from the process of Austic over the OSI of the jojoba oil input is not an inherent result of employing the process of Austic with jojoba oil as a feedstock.
18. As detailed in the present specification, the documented increase in OSI of the wax ester product observed using the disclosed method was unexpected. That result yet remains unexpected to me in view of the teachings of Austic.

19. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

FURTHER AFFIANT SAYETH NOT.

18 MAR 2021

Date


Jeff Addy

Electronic Acknowledgement Receipt

EFS ID:	42251014
Application Number:	14578075
International Application Number:	
Confirmation Number:	2053
Title of Invention:	Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives
First Named Inventor/Applicant Name:	Jeff Addy
Customer Number:	93756
Filer:	Adam Reid Stephenson
Filer Authorized By:	
Attorney Docket Number:	FloraTech002
Receipt Date:	22-MAR-2021
Filing Date:	19-DEC-2014
Time Stamp:	23:58:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	OAR7.pdf	186388	no	25
			e62d0262386a285cbe46f5fb9b8f956cfc0 d28b		

Warnings:

Vantage Exhibit 1002

Page 998 of 1215

CARGILL 00001023

Information:					
2	Affidavit-traversing rejectns or objectns rule 132	132Affidavit3rdfiled.pdf	235397	no	9
			20dc8026dfc49512a41a07ddacc7e797d00 62179		
Warnings:					
Information:					
Total Files Size (in bytes):				421785	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

FLORATECH002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AMENDMENT/REPLY

Applicant: Jeff Addy

Docket No: FLORATECH002

Examiner: Patury, Srikanth

Ser. No: 14578075

Filed: December 19, 2014

Group Art Unit: 1657

Conf. No.: 2053

Title: Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

**RESPONSE TO OFFICE ACTION
DATED FEBRUARY 11, 2021**

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

Sir/Madam:

The following is responsive to the Office Action mailed February 11, 2021. Applicant respectfully requests reconsideration of the application in view of the following:

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

Remarks/Arguments begin on page 16 of this paper.

AMENDMENTS TO THE SPECIFICATION

Please replace paragraphs [0045], [0055], [0059], and [0062] and Table 4 with the following paragraphs:

[0045] In particular implementations, the lipase may be the following: a lipase from *Thermomyces lanuginosus* marketed under the tradenames LIPOZYME TL IM™ or LIPEX™ by Novozymes A/S of Bagsvaerd, Denmark and immobilized on a substrate also manufactured by Novozymes. A representative sequence listing of the lipase is included as SEQ ID NO: 1 herein. In other implemenations, the lipase may be that marketed under the tradename NOVOZYM™ by Novozymes, A/S derived from *Candida antarctica*, a representative sequence listing for which is included as SEQ ID NO: 2 herein. In various implementations, the lipases may be any of the following: those marketed under the tradenames CALB L™, NOVOZYME 435™, NOVOCOR AD L™, and LIPOLASE 100L™ by Novozymes; those marketed under the tradenames CALB™, CALA™, and CRL™ by c-LEcta, GMBH of Leipzig, Germany; those marketed under the tradenames LIPASE A "AMANO" 12™, LIPASE AY "AMANO" 30SD™, LIPASE G "AMANO" 50™, LIPASE R "AMANO"™, LIPASE DF "AMANO" 15™, LIPASE MER "AMANO"™, and NEWLASE F™ by Amano Enzyme Inc. of Nagoya, Japan; those marketed under the tradenames LIPASE MY™, LIPASE OF™, LIPASE PL™, LIPASE PLC/PLG™, LIPASE QLM™, LIPASE QLC/QLG™, LIPASE SL™, and LIPASE TL™ by Meito Sangyo Co., Ltd., of Nagoya, Japan.

[0055] A 2 liter jacketed glass reactor equipped with an agitating blade was loaded with 1.2 kg of refined jojoba oil and 48 g (4% by weight) of LIPOZYME TL IM™

(*Thermomyces lanuginosus* lipase) from Novozymes. A layer of nitrogen was blanketed over the oil and the mixture was agitated at ambient temperature. After five hours, the lipase was removed from the mixture and the jojoba derivative was analyzed. The transesterified product was a slightly yellow liquid similar in texture and color to the initial feedstock. Measurement of the wax ester distributions for the feedstock and both transesterified products was done using an Hewlett Packard GC 5980 Series II gas chromatograph with a Restek MxT-65TG 30 meter, 0.25 mm ID capillary chromatographic column with a Crossbond 65% diphenyl/35% dimethyl polysiloxane film thickness of 0.1 microns. The gas chromatograph has split/splitless injection and uses an FID detector. Operating parameters of the gas chromatograph were as follows: injection port: 300C, detector: 325C, split ratio: 100:1, 1 microliter injection with oven temperature ramping from 280C to 350C over 20 minutes. Helium carrier gas was used. The concentration of tocopherols was measured using HPLC rather than the gas chromatograph. The equipment used was an Agilent LC 1100 series with an autosampler, quaternary pump, diode array detector (DAD), and an Alltech 2000 ELSD operating with a drift tube temperature of 40.0 °C with 1.7 mL/min Nitrogen. The column used was an Agilent RX-SIL 4.6 x 50mm 1.8um normal phase silica column kept at 40.0 °C. The DAD was set to detect UV at wavelengths 210 nm and 295 nm to identify the optically active portion of the tocopherols as they eluted from the column. The mobile phase consisted of an isocratic flow of 98% hexane and 2% isopropanol at 0.5 mL/min with a total run time of 15.00 minutes. Table 3 summarizes the results of both experiments.

Phase	Tradename	International Nomenclature Cosmetic Ingredient (INCI)	Supplier	Weight percent % (of total)
A	Deionized Water	Water	-	66.27
	VERSENE™ Na2 Crystals	Disodium EDTA	The Dow Chemical Co.	0.03
B	Glycerin, USP	Glycerin	The Dow Chemical Co.	5.00
	KELTROL CG-T™	Xanthan Gum	CP Kelco	0.30
C	FLORAMAC™ Macadamia Oil.	<i>Macadamia integrifolia</i> seed oil.	Floritech	3.00
	FLORAESTERS 30™	Jobba Esters (and) Tocopherol	Floritech	3.00
	Transesterified Wax Esters	Jobba Derivative being examined	-	3.00
	Cocoa Butter	<i>Theobroma cacao</i> (Cocoa) seed butter	Cognis Corporation	5.00
	FLORASUN 90™	<i>Helianthus annuus</i> (Sunflower) seed oil (and) Tocopherol	Floritech	2.00
	BOTANISIL CP-33™	Cyclopentasiloxane	Botanigenics, Inc.	4.00
	DOW CORNING 200™ Fluid	Dimethicone	Dow Corning Corporation	0.50
	LEXEMUL 561™	Glyceryl Stearate (and) PEG-100 Stearate	Inolex Chemicals	4.00
	EMULGADE PL™	Cetearyl Glucoside (and) Cetearyl Alcohol	Cognis Corporation	3.00
D	PHENONIP™	Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Butylparaben (and) Propylparaben	Clariant Corporation	0.90

		(and) Isobutylparaben		
			Total	100

Table 4

[0059] The cream was prepared as follows: Step 1: Dissolve the VERSENET™ Na2 crystals into the deionized water with stirring at 75C to form phase A. Step 2: Mix the KELTROL CG-T™ in the glycerin USP to form phase B. Add phase A to phase B with rapid stirring to form phase AB. Step 3: Combine all ingredients of phase C and 75C using propeller agitation. Add phase C to phase AB at 75C using propeller agitation to form phase ABC. Step 4: Reduce the temperature of the cream to 50C and add phase D to phase ABC with propeller agitation. Cool the batch with moderate agitation to room temperature.

[0062] A 10 cm X 100 cm stainless steel cylinder was filled with 0.5 kg of LIPOZYME TL IM™ immobilized on substrates. The cylinder was equipped with mesh screening material on both ends to secure the enzyme substrates and was sealed and conditioned by evacuating the catalyst of excess moisture and salts used in the enzyme manufacturing process. The cylinder was connected to a metering pump and a pressure gauge monitored by a solenoid that automatically shut down flow if the pressure at the entrance to the cylinder rose above 15 psi. Flow rate was calculated by the rate of conversion obtained from batch reactions using the same enzymatic catalyst and was 0.8 kg/hr. A stock of refined jojoba oil was fed to the reactor cylinder at a constant temperature and pressure, as the cylinder was submerged in a water batch to keep the reactor temperature constant. The resulting

product exiting the cylinder was slightly yellow and liquid at room temperature. The properties of the transesterified product produced are summarized in Table 6.

Below please find the full text of the replacement paragraphs with markings to show all the changes relative to the previous versions:

[0045] In particular implementations, the lipase may be the following: a lipase from *Thermomyces lamuginosus* marketed under the tradenames LIPOZYME TL IM™ or LIPEX™ by Novozymes A/S of Bagsvaerd, Denmark and immobilized on a substrate also manufactured by Novozymes. A representative sequence listing of the lipase is included as SEQ ID NO: 1 herein. In other implemenations, the lipase may be that marketed under the tradename NOVOZYM™ by Novozymes, A/S derived from *Candida antarctica*, a representative sequence listing for which is included as SEQ ID NO: 2 herein. In various implementations, the lipases may be any of the following: those marketed under the tradenames CALB L™, NOVOZYME 435™, NOVOCOR AD L™, ~~AND~~ and LIPOLASE 100L™ by Novozymes; those marketed under the tradenames CALB™, CALA™, and CRL™ by c-LEcta, GMBH of Leipzig, Germany; those marketed under the tradenames LIPASE A "AMANO" 12™, LIPASE AY "AMANO" 30SD™, LIPASE G "AMANO" 50™, LIPASE R "AMANO"™, LIPASE DF "AMANO" 15™, LIPASE MER "AMANO"™, and NEWLASE F™ by Amano Enzyme Inc. of Nagoya, Japan; those marketed under the tradenames LIPASE MY™, LIPASE OF™, LIPASE PL™, LIPASE PLC/PLG™, LIPASE QLM™, LIPASE QLC/QLG™, LIPASE SL™, and LIPASE TL™ by Meito Sangyo Co., Ltd., of Nagoya, Japan.

[0055] A 2 liter jacketed glass reactor equipped with an agitating blade was loaded with 1.2 kg of refined jojoba oil and 48 g (4% by weight) of LIPOZYME TL IM™ (*Thermomyces lanuginosus* lipase) from Novozymes. A layer of nitrogen was blanketed over the oil and the mixture was agitated at ambient temperature. After five hours, the lipase was removed from the mixture and the jojoba derivative was analyzed. The transesterified product was a slightly yellow liquid similar in texture and color to the initial feedstock. Measurement of the wax ester distributions for the feedstock and both transesterified products was done using an Hewlett Packard GC 5980 Series II gas chromatograph with a Restek MxT-65TG 30 meter, 0.25 mm ID capillary chromatographic column with a Crossbond 65% diphenyl/35% dimethyl polysiloxane film thickness of 0.1 microns. The gas chromatograph has split/splitless injection and uses an FID detector. Operating parameters of the gas chromatograph were as follows: injection port: 300C, detector: 325C, split ratio: 100:1, 1 microliter injection with oven temperature ramping from 280C to 350C over 20 minutes. Helium carrier gas was used. The concentration of tocopherols was measured using HPLC rather than the gas chromatograph. The equipment used was an Agilent LC 1100 series with an autosampler, quaternary pump, diode array detector (DAD), and an Alltech 2000 ELSD operating with a drift tube temperature of 40.0 °C with 1.7 mL/min Nitrogen. The column used was an Agilent RX-SIL 4.6 x 50mm 1.8um normal phase silica column kept at 40.0 °C. The DAD was set to detect UV at wavelengths 210 nm and 295 nm to identify the optically active portion of the tocopherols as they eluted from the column. The mobile phase consisted of an isocratic flow of 98% hexane and 2% isopropanol at 0.5 mL/min with a total run time of 15.00 minutes. Table 3 summarizes the results of both experiments.

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	FLORAESTERS 30™	Joboba Esters (and) Tocopherol	Floratech	3.00
	Transesterified Wax Esters	Joboba Derivative being examined	-	3.00
	Cocoa Butter	<i>Theobroma cacao</i> (Cocoa) seed butter	Cognis Corporation	5.00
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	BOTANISIL CP-33™	Cyclopentasiloxane	Botanigenics, Inc.	4.00
	DOW CORNING 200™ Fluid	Dimethicone	Dow Corning Corporation	0.50
	LEXEMUL 561™	Glyceryl Stearate (and) PEG-100 Stearate	Inolex Chemicals	4.00
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[0062] A 10 cm X 100 cm stainless steel cylinder was filled with 0.5 kg of LIPOZYME TL IM[™] immobilized on substrates. The cylinder was equipped with mesh screening material on both ends to secure the enzyme substrates and was sealed and conditioned by evacuating the catalyst of excess moisture and salts used in the enzyme manufacturing process. The cylinder was connected to a metering pump and a pressure gauge monitored by a solenoid that automatically shut down flow if the pressure at the entrance to the cylinder rose above 15 psi. Flow rate was calculated by the rate of conversion obtained from batch reactions using the same enzymatic catalyst and was 0.8 kg/hr. A stock of refined jojoba oil was fed to the reactor cylinder at a constant temperature and pressure, as the cylinder was submerged in a water batch to keep the reactor temperature constant. The resulting

product exiting the cylinder was slightly yellow and liquid at room temperature. The properties of the transesterified product produced are summarized in Table 6.

AMENDMENTS TO THE CLAIMS

Please cancel claim 2, amend claim 1, and add claims 21-29 as indicated among the following complete set of pending claims:

1. (Currently amended) A process for transesterifying wax esters, the process comprising:
 - providing a feedstock comprising substantially all jojoba wax esters;
 - contacting the feedstock with a lipase;
 - catalytically transesterifying the jojoba wax esters in the feedstock with the lipase to form a transesterified product;
 - wherein an oxidative stability index (OSI) of the transesterified product is greater ~~than~~ than an OSI of the feedstock; and
 - wherein the transesterified product contains no methyl esters.
2. (Canceled).
3. (Previously presented) The process of claim 1, wherein the feedstock further comprises an antioxidant and catalytically transesterifying the jojoba wax esters in the feedstock with the lipase further comprises catalytically transesterifying without removing or degrading the antioxidant in the feedstock.
4. (Previously presented) The process of claim 3, wherein the feedstock further comprises a skin conditioning agent and a volatile compound and catalytically

transesterifying the jojoba wax esters in the feedstock with the lipase further comprises catalytically transesterifying without removing or degrading the skin conditioning agent and the volatile compound in the feedstock.

5. (Canceled).
6. (Previously presented) The process of claim 1, wherein the jojoba wax esters further comprise hydrogenated jojoba wax esters.
7. (Original) The process of claim 6, wherein a dropping point of the transesterified product is greater than a dropping point of the feedstock and the dropping point of the transesterified product increases as a percentage of hydrogenated jojoba wax esters in the feedstock increases.
- 8-20. (Canceled).
21. (New) A process for transesterifying wax esters, the process comprising:
providing a feedstock comprising jojoba wax esters and no free fatty alcohols therein;
contacting the feedstock with a lipase; and
transesterifying the jojoba wax esters in the feedstock with the lipase to form a transesterified product;

wherein an oxidative stability index (OSI) of the transesterified product is

greater than an OSI of the feedstock; and

wherein the transesterified product comprises no free fatty alcohols therein.

22. (New) The process of claim 21, wherein the jojoba wax esters further comprise hydrogenated jojoba wax esters.
23. (New) The process of claim 22, wherein a dropping point of the transesterified product is greater than a dropping point of the feedstock and the dropping point of the transesterified product increases as a percentage of hydrogenated jojoba wax esters in the feedstock increases.

24. (New) A process for transesterifying wax esters, the process comprising:
- providing a feedstock comprising between 50% to 80% by weight jojoba wax esters and 20% to 50% by weight hydrogenated jojoba wax esters;
 - contacting the feedstock with a lipase; and
 - transesterifying the jojoba wax esters and the hydrogenated jojoba wax esters in the feedstock with the lipase to form a transesterified product;
 - wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock.
25. (New) The process of claim 24, wherein the feedstock consists essentially of the jojoba wax esters and the hydrogenated jojoba wax esters.
26. (New) The process of claim 24, wherein the feedstock consists of the jojoba wax esters and the hydrogenated jojoba wax esters.
27. (New) The process of claim 24, wherein the feedstock does not comprise any free fatty alcohols.
28. (New) The process of claim 24, wherein the transesterified product does not comprise any methyl esters.

29. (New) The process of claim 24, wherein the feedstock product does not comprise any methyl esters.

REMARKS

Claims 1-4 and 6-7 are currently pending in the application. Applicant has canceled claim 2, amended claim 1, and added claims 21-29. Applicant requests reconsideration of the application in light of the following remarks.

Objections to the Specification

The specification has been objected to for containing informalities. Applicant has amended the specification to address the Examiner's concerns by adding the TM symbol next to the tradenames. Applicant notes that an identification of what the generic or descriptive name for each of these components has already be included in the application document adjacent to each tradename. Applicant respectfully requests that the Examiner withdraw the objection to the specification.

Objections to the Claims

Claim 1 has been amended to correct the typographical error noted by the Examiner and the Applicant thus respectfully requests the Examiner withdraw the objection to claim.

Rejections under 35 U.S.C. 102

“To anticipate a claim, a single prior art reference must expressly or inherently disclose each claim limitation. *Celeritas Techs v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998). But disclosure of each element is not quite enough—this court has long held that ‘[a]nticipation requires the presence in a single prior art disclosure of all elements of a claimed invention *arranged as in the claim.*’ *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983) (citing *Soundscriber Corp. v United States*, 360 F.2d 954, 960, 175 Ct. Cl. 644 (Ct. Cl. 1966) (emphasis added).” *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323 (Fed. Cir. 2008).

Claims 1-4 were rejected under 35 U.S.C. 102(a)(1) and 35 U.S.C. 102(a)(1) as being anticipated by Austic (WO2012/106701, hereinafter “Austic”). Applicant respectfully traverses this rejection and requests reconsideration of the claims.

Dependent claim 2 has been canceled, and therefore the anticipation rejection of this claim is moot.

Claim 1 was rejected as being anticipated by Austic. In making the rejection the Examiner argues unequivocally on p. 6 and on p. 12 of the , 2/11/21 OA, that the “The limitations ‘wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock’ is the intended result of the method of claim 1 and would inherently be met if the prior art process [Austic] teaches the same active method steps as recited in claim 1.” The Examiner’s argument, then, stands or falls on 1) Austic teaching the same method elements as recited in claim 1, as amended, and 2) that the claimed OSI physical property of the transesterified product produced using the Austic process would necessarily demonstrate a higher OSI than the OSI of the feedstock materials.

As the Office well knows, MPEP § 2112, under the heading “Examiner Must Provide Rationale or Evidence Tending to Show Inherency”, states that “[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).” MPEP § 2112 further states that “[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.’ *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). In the 2/11/21 Action, the Examiner has not provided any basis in fact or technical reasoning to support the determination that the OSI physical property of the transesterified necessarily is present where the process of Austic operated using jojoba derivatives. The only technical argument the Examiner has provided is allegedly showing that the method steps of Austic are the same as those recited in claim 1.

The Applicant is filing herewith the additional Declaration of Jeff Addy (“Declaration”) to demonstrate that the Examiner’s technical reasoning provided to establish inherency over the Austic reference is wholly inadequate. The Applicant hopes that this declaration will firmly establish in this case that enzymatic processing with wax esters generally is an entirely different and an unpredictable proposition from enzymatic processing of triglycerides and yields products with unexpected properties. These unexpected results are actually noted in the present specification in para. [0071] – [0073]. After three declarations and in view of the observations in the specification, the Applicant believes that there is more than sufficient evidence in this record to establish that a reference that lists “jojoba oil” as part of laundry list of ingredients and provides zero examples of enzymatically processing the same entirely fails to provide an enabling disclosure sufficient to establish an inherent physical property of a product produced using that reference.

At the outset, it is important to point out that the Austic reference teaches a process of performing enzymatic esterification, NOT transesterification. This is an important legal point for an anticipation analysis, as claim 1 specifically recites “...catalytically transesterifying...” Because of this, the ability of the Austic process to transesterify is entirely hypothetical given that its examples and description focus only on the creation of fatty acid alkyl esters to form a biodiesel product from a C₁-C₅ alcohol and a fatty acid—there are no examples of esters being identified for use as feedstock materials. The feedstocks of Austic are structurally and chemically different from those taught in the present Application. Thus, Austic fails to teach or disclose “...catalytically transesterifying...” as recited in independent claim 1 and thus fails to anticipate claim 1 (see Declaration, para. 4 and 5).

In contrast with the Examiner’s repeated assertions in the 2/11/21 Office Action, the Austic process is not conducted in same way as that disclosed in the present specification in part, because it is tailored specifically for forming esters from triglyceride-containing feedstocks. Indeed, the creation of a glycerol phase during the reaction of Austic is critical to achieving the conversion rates disclosed in the examples in the specification (Declaration, para. 6). Austic neglects to provide critical quantitative documentation of the reaction, conversion, and byproducts formed in its examples, information needed to allow a skilled

person to adapt the Austic process to effectively utilize jojoba oil as a feedstock. This, by itself, demonstrates that Austic does not provide an enabling disclosure to one of ordinary skill therefore the reference simply cannot anticipate the subject matter of claim 1.

The Declaration in para. 10 and 11 reviews the chemistry involved in the Austic process when used with sunflower oil (a triglyceride) and the theoretical chemistry if a jojoba wax ester were actually reacted with methanol to form a methyl ester. Paragraph 11 points out how, because jojoba wax esters and jojoba fatty alcohols do not contain glycerol groups, no glycerol phase can be formed from the reactants in the feedstock, thus causing the entire reaction to proceed to equilibrium in a single liquid phase. Paragraph 12, Table 1, and Figure 1 of the Declaration outline the impact of what not having a glycerol phase to drive the reaction to completion has on jojoba oil. By simple inspection, no matter how much excess methanol is applied, the fatty acid methyl esters produced using jojoba esters never rise above 34%.

As clearly articulated in the Declaration and explained above, it is evident that were Austic's process be used with a feedstock "...containing substantially all jojoba wax esters..." (claim 1, as amended) it would be unable to achieve a meaningful conversion because the reaction with jojoba wax esters would not run to completion and the desired highly converted biodiesel product of Austic would not be achieved. Accordingly, one of ordinary skill would have no motivation to utilize the process of Austic as being one that would be successful or worth trying to make transesterified jojoba wax ester products.

In addition, para. 15 of the Declaration establishes that the Austic fails to teach, disclose, or suggest that the OSI of the equilibrium product produced using its process from jojoba oil would be higher than the OSI of the feedstock material. Indeed, the teaching of Austic and basic chemistry indicate otherwise—it is more likely that the OSI of the product materials would be lower than the OSI of the feedstock because of how Austic exposes its reaction products to a carrier gas. Such conditions encourage oxidation. Given how Austic focuses only on forming biodiesel, a product where OSI concerns are largely irrelevant, a skilled

artisan would not read Austic as a means to manage or improve OSI of transesterified products..

In any event, paragraph 16 of the Declaration establishes that Austic is a non-enabling reference notwithstanding the hypothetical examples provided as its disclosure fails to provide any examples of how to carry its reaction out for propyl, butyl, or pentyl alcohols, and the examples (where the feedstock is actually identified) also only teach the use of yellow grease, a triglyceride source, as the feedstock. Given that the reference does not provide enough information to allow Jeff Addy, the declarant, to actually use the Austic process with jojoba oil as proposed by the Examiner, it can hardly be said that Austic provides an enabling disclosure for each one of the laundry list of potential feedstocks in combination with each one of the alcohols disclosed.

A reference that fails to provide an enabling disclosure likewise fails to provide an inherent teaching of a particular characteristic of a chemical product of a reaction. Put differently, Austic's silence on the OSI of both the feedstocks and the products, coupled with the lack of information on how to construct a working process capable of processing jojoba oil and the obviously heterogeneous product of that process, all indicate that it is anyone's guess whether the OSI of the ester product of Austic would be higher than the OSI of the feedstock. This situation, given the repeated evidence provided in the specification (see paras. [0056], [0063], and [0070] – [0073]) and in the three declarations on this record conclusively establish unexpected results when processing wax esters, particularly jojoba wax esters, using a lipase catalyst. Unexpected results are anathema to inherency—such results are the exact opposite of what inherency needs in order to be established.

The foregoing and the Declaration conclusively establish that Austic 1) fails to disclose a process that has the same recited elements as those in claim 1 and 2) the inability of Austic to provide enabling disclosure dooms its ability to inherently disclose "... wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock..." Claim 1, as amended. The Applicant therefore respectfully requests that the rejection of claim 1 be withdrawn.

Dependent claims 3-4 are allowable, among other reasons, for depending from otherwise allowable independent claim 1

In view of the foregoing, the Applicant respectfully requests that the anticipation rejections of claims 1 and 3-4 be withdrawn.

Rejections under 35 U.S.C. 103

Claims 6-7 were rejected under 35 U.S.C. 103 as being unpatentable over Austic in light of Arquette (U.S. Patent No. 5968530). Applicant respectfully traverses this rejection and requests reconsideration of the claims.

Claims 6-7 are allowable, among other reasons, for depending from otherwise allowable independent claim 1.

In addition, the Examiner admits that Austic fails to teach or disclose the use of hydrogenated jojoba wax esters on p. 9 of the 2/11/21 Office Action. The Examiner then turns to Arquette to provide evidence of such wax esters. As it relates to obviousness, the teaching in Austic that the reference is designed to produce biodiesel is fatal to combining the reference with Arquette, because hydrogenated wax esters are not going to be any better than ordinary wax esters in functioning as a diesel fuel (see Declaration, para. 17). Neither Austic nor Arquette teach that including wax esters of any kind into biodiesel produces a functional fuel. Indeed, they teach the opposite, that the FAAEs should be methyl, ethyl, propyl, butyl, or pentyl esters of shorter chain triglycerides to work. As pointed out in paragraph 13 of the declaration, the transesterified products disclosed in the present specification would have completely different carbon numbers from such esters and neither Austic nor Arquette indicate these would be desirable for diesel fuel. The presence of large waste stream components in the process of Austic noted in paragraphs 12 and 14 post-reaction indicates that one of ordinary skill would not be led to select the process of Austic to attempt to transesterify hydrogenated jojoba wax esters like those recited in dependent claims 6 and 7. Rendering a reference like Austic unfit for its intended purpose by introducing hydrogenated wax esters from Arquette is fundamental evidence of non-obviousness.

Finally, the failure of Austic to enable using its process for jojoba oil means it fundamentally cannot enable the use of hydrogenated wax esters either, as the results of such a reaction are unknown and unknowable and not “reasonably expected” as asserted on p. 10 of the 2/11/21 Office Action.

Austic also fails to provide any enabling disclosure for a process for a feedstock that contains jojoba wax esters with no free fatty alcohols or one that includes between 50% and 80% by weight jojoba wax esters and 20% to 50% by weight hydrogenated jojoba wax esters. The absence of any free fatty alcohols from either feedstock simply prevents the esterification process of Austic from taking place at all.

Applicant respectfully requests that the obviousness rejections of claims 6-7 be withdrawn.

Regarding Doctrine of Equivalents

Applicant hereby declares that any amendments herein that are not specifically made for the purpose of patentability are made for other purposes, such as clarification, and that no such changes shall be construed as limiting the scope of the claims or the application of the Doctrine of Equivalents.

CONCLUSION

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

If any fees, including extension of time fees or additional claims fees, are due as a result of this response, please charge Deposit Account No. 60-1853. This authorization is intended to act as a constructive petition for an extension of time, should an extension of time be needed as a result of this response. The examiner is invited to telephone the undersigned if this would in any way advance the prosecution of this case.

Respectfully submitted,

Date: 3/22/2021

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Appendix A:

Legal Standard for Finding Obviousness under 35 U.S.C. 103

The most recent guidelines published by the USPTO regarding the implementation of the Supreme Court's decision in *KSR International Co. v. Teleflex Inc.* 550 U.S. 398, 127 S.Ct. 1727, 167 L.Ed.2d 705 (2007) state that:

An invention that would have been obvious to a person of ordinary skill at the time of the invention is not patentable. See 35 U.S.C. 103(a). As reiterated by the Supreme Court in *KSR*, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the Court are as follows:

- (A) Determining the scope and content of the prior art;
- (B) Ascertaining the differences between the claimed invention and the prior art; and
- (C) Resolving the level of ordinary skill in the pertinent art...

Office personnel fulfill the critical role of fact-finder when resolving the *Graham* inquiries... When making an obviousness rejection, Office personnel must therefore ensure that the written record includes findings of fact concerning the state of the art and the teachings of the references applied. In certain circumstances, it may also be important to include explicit findings as to how a person of ordinary skill would have understood prior art teachings, or what a person of ordinary skill would have known or could have done. Factual findings made by Office personnel are the necessary underpinnings to establish obviousness...

In short, the focus when making a determination of obviousness should be on what a person of ordinary skill in the pertinent art would have known at the time of the invention, and on what such a person should reasonably have been able to do in view of that knowledge. This is so regardless of whether the source of that knowledge and ability was documentary prior art, general knowledge in the art, or common sense...

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) stated

that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”
KSR. . . Exemplary rationales that may support a conclusion of obviousness include:

(A) Combining prior art elements according to known methods to yield predictable results;

(B) Simple substitution of one known element for another to obtain predictable results;

(C) Use of known technique to improve similar devices (methods, or products) in the same way;

(D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

(E) “Obvious to try”-choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. MPEP § 2141(II), (III) and 72 Federal Register 57527 (October 10, 2007).

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 14/578,075		Filing Date 12/19/2014		☐ To be Mailed		
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO										
APPLICATION AS FILED - PART I										
		(Column 1)	(Column 2)							
FOR		NUMBER FILED	NUMBER EXTRA	RATE (\$)		FEE (\$)				
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A	N/A	N/A						
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A	N/A	N/A						
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A	N/A						
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =	*	x \$40 =						
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =	*	x \$210 =						
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).								
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))										
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL						
APPLICATION AS AMENDED - PART II										
		(Column 1)	(Column 2)	(Column 3)						
AMENDMENT	03/22/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))	* 14	Minus	** 20	= 0	x \$50 =		0		
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	x \$240 =		0		
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE		0		
		(Column 1)	(Column 2)	(Column 3)						
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))	*	Minus	**	=	x \$0 =				
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x \$0 =				
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE				
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						LIE				
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/CHRISTINE V MOORE/				
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".										
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

This collection of information is required by 37 CFR 1.16. 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 12 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, 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.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/578,075	12/19/2014	Jeff Addy	FloraTech002	2053
93756	7590	04/23/2021	EXAMINER	
Adam R. Stephenson, LTD. 8350 E Raintree Dr., Ste 245 Scottsdale, AZ 85260			PATURY, SRIKANTH	
			ART UNIT	PAPER NUMBER
			1657	
			NOTIFICATION DATE	DELIVERY MODE
			04/23/2021	ELECTRONIC

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

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

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

adam@iptech.law
ipdocket@iptech.law

Notice of Pre-AIA or AIA Status

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

DETAILED ACTION

The amendments and remarks filed on 03/22/2021 are acknowledged and have been fully considered. Claims 1, 3, 4, 6, 7 and 21-29 are pending. Claim 1 has been amended. Claim 2 is cancelled. Claims 21-29 are added. Claims 5 and 8-20 were previously canceled. Claims 1, 3, 4, 6, 7 and 21-29 are now under consideration and the subject of this office action.

The previous rejections of claim 2 are moot in light of the cancellation of the claim in the amendments filed on 03/22/2021.

The objection to the specification for the use of tradenames/trademarks is withdrawn because the trademarks are indicated by the proper symbol indicating use in commerce such as TM, SM, or [®] following the term.

The objection to claim 1 is withdrawn because the typographical error ('tghan') is corrected.

Claim Rejections - 35 USC § 112(a) (New Matter)

The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 26 is rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention. This NEW MATTER rejection is necessitated by the amendments filed on 03/22/2021.

Claim 26 currently recites limitations which were not disclosed in the original disclosure. Claim 26 is newly added and recites “*wherein the feedstock **consists of the jojoba wax esters and the hydrogenated jojoba wax esters***”. These limitations constitute new matter.

The original disclosure as filed describes providing a feedstock including wax esters (see [0003]), the wax esters may be jojoba wax esters ([0008],[0015],[0018],[0022]) and the jojoba wax esters may further include hydrogenated wax esters ([0009],[0016],[0023]). The disclosure describes that jojoba oil can be used as the wax ester feedstock ([0047]) and discloses examples of transesterification using jojoba oil as the feedstock (Example 1 in [0054] to [0061],

Example 2 in [0062] to [0063]). The specification discloses an example wherein the feedstock is a mixture of jojoba oil and hydrogenated jojoba oil (Example 3 in [0064]) and discloses the hydrogenated wax esters in the feedstock in the amounts of 20% to 50% ([0067], Table 8). However, the specification discloses jojoba oil comprises components other than wax esters and hydrogenated wax esters, such as steryl esters, sterols, antioxidants such as tocopherols ([0048], Table 3 on page 17, Table 6 on page 21). The specification does not disclose a feedstock that **consists of** jojoba wax esters and hydrogenated wax esters. The limitations in claim 26 are hence not supported by the original disclosure.

In amended cases, subject matter not disclosed in the original application is sometimes added and a claim directed thereto. Such a claim is rejected on the ground that it recites elements without support in the original disclosure under 35 U.S.C. 112, first paragraph, *Waldemar Link, GmbH & Co. v. Osteonics Corp.* 32 F.3d 556, 559, 31 USPQ2d 1855, 1857 (Fed. Cir. 1994); *In re Rasmussen*, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981). See MPEP § 2163.06 - § 2163.07(b) for a discussion of the relationship of new matter to 35 U.S.C. 112, first paragraph. New matter includes not only the addition of wholly unsupported subject matter, but may also include adding specific percentages or compounds after a broader original disclosure, or even the omission of a step from a method. See MPEP § 608.04 to § 608.04(c). See *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976) and MPEP § 2163.05 for guidance in determining whether the addition of specific percentages or compounds after a broader original disclosure constitutes new matter.

Instant claim 26 recites limitations, which are not clearly disclosed in the specification as filed, and now change the scope of the instant disclosure as filed. Such limitations recited in new claim 26, which did not appear in the specification or original claims, as filed, introduce new concepts and violate the description requirement of the first paragraph of 35 U.S.C 112. Applicant is required to provide sufficient written support for the limitations recited in present claim 26 in the specification or claims as-filed, or remove these limitations from the claims in response to this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of 35 U.S.C. 112(b):

(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The rejections below are new as necessitated by the amendments filed on 03/22/2021.

Claims 1, 3, 4, 6, 7 and 24-29 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor (or for applications subject to pre-AIA 35 U.S.C. 112, the applicant), regards as the invention.

The term "substantially all" in claim 1 in line 3 is a relative term which renders the claim indefinite. The term "substantially all" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The

amount of jojoba wax esters in the feedstock is not clearly defined and therefore it is not clear which feedstocks are used in the claim. Dependent claims 3, 4, 6 and 7 are rejected for the same reason. It is suggested to delete “substantially all” to obviate the rejection.

Claim 24 recites “a feedstock comprising between 50% to 80% by weight jojoba wax esters and 20% to 50% by weight hydrogenated jojoba wax esters” in lines 2 and 3. The specific amounts of the different wax esters is indefinite because hydrogenated jojoba wax esters are also jojoba wax esters and it is not clear if the initial recitation “50% to 80% by weight jojoba wax esters” includes the later recited hydrogenated jojoba wax esters or if the amounts only refer to non-hydrogenated jojoba wax esters. Dependent claims 25-29 are rejected for the same reason. It is suggested to amend to “a feedstock comprising 50% to 80% by weight jojoba wax esters, wherein some of the jojoba wax esters are hydrogenated and the amount of hydrogenated jojoba wax esters is 20% to 50% by weight”, in light of the specification in Example 3 on pages 22-25, see [0067], [0070].

Claim 29 is also indefinite because it recites the limitation “feedstock product” in line 1. There is insufficient antecedent basis for this limitation in the claim. The term “feedstock product” also renders the claim indefinite, because the meaning of the term is not clear. The feedstock is the raw material which is subject to a transesterification reaction to form a “transesterified product” and it is not clear if the “feedstock product” is the same as or different from the “transesterified product”.

Appropriate clarification is needed.

Claim Rejections - 35 USC § 102

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.

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

A person shall be entitled to a patent unless –

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

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

The rejection of claim 1 is modified and maintained as necessitated by the amendments filed on 03/22/2021. The rejections of claim 21 are new as necessitated by the amendments filed on 03/22/2021.

Claims 1 and 21 are rejected under 35 U.S.C. 102(a)(1) and under 35 U.S.C. 102(a)(2) as being anticipated by **Austic** (WO 2012/106701; Pub. Aug. 9, 2012; Of Record).

Regarding claim 1 and 21, Austic teaches methods for the production of fatty acid alkyl esters from a fatty acid feedstock comprising the steps of providing a reaction mixture comprising the fatty acid feedstock and a lipolytic enzyme and allowing the reaction mixture to react to form fatty acid alkyl esters (pg. 3 lines 26-30, reads on

transesterification). Austic teaches avoiding the use of solvents (pg. 2 line 32) and teaches performing the reaction under an inert gas (pg. 3 line 12). Austic teaches the feedstock comprises fatty acid esters (pg. 4 lines 25-34) and the feedstock can be jojoba oil in one embodiment: "The fatty acid feedstock may be oil selected from the group consisting of: algae oil, canola oil, coconut oil, castor oil, coconut oil (copra oil), corn oil, cottonseed oil, flax oil, fish oil, grape seed oil, hemp oil, jatropha oil, jojoba oil, mustard oil, canola oil, palm oil, palm stearin, palm olein, palm kernel oil, peanut oil, rapeseed oil, rice bran oil, safflower oil, soybean oil, sunflower oil, tall oil, and oil from halophytes, pennycress oil, camelina oil, jojoba oil, coriander seed oil, meadowfoam oil, seashore mallow oil, microbial oils or any combination thereof." (pg. 4 line 37). Austic teaches the enzyme catalyst (pg. 8 line 7) can be a lipase selected from *Candida antarctica* lipase A (CALA), *C. antarctica* lipase B (CALB) (see pg. 9 lines 19-21), commercial lipolytic enzymes such as LIPOZYME TL 100L (see pg. 10 lines 7-10), NOVOZYM 435, LIPOZYME TL IM (see pg. 10 lines 11-15). Austic teaches examples wherein the feedstock (yellow grease) is esterified with lipase NOVOZYM 435 at a dosage of 4% w/w of oil (see Example 1, 6). The instant specification teaches wax esters are found in jojoba plant (par. [0002] on pg. 1) and teaches using jojoba oil in its methods (see instant specification par. [0055] on pg. 16, par. [0062] on pg. 20). Since Austic discloses jojoba oil as a specific oil that can be used as a feedstock in its methods of contacting the feedstock and an alcohol in the presence of a lipase (among a list of other oils), Austic anticipates the limitation 'feedstock comprising jojoba wax esters'. A reference that clearly names the claimed species anticipates the claim no matter how many other species are named. See MPEP §2131.02 II. The instant

specification discloses jojoba oil comprises wax esters (see [0047],[0048] on page 12 of the specification) and esters undergo transesterification when reacted with an alcohol ([0036] on page 6 of the specification). Since Austic teaches jojoba oil as a specific oil that can be used as a feedstock in the esterification reaction with alcohol, the jojoba wax esters in the jojoba oil would undergo transesterification when reacted with the alcohol. Austic teaches performing transesterification reaction using ethanol instead of methanol (see Example 4 on pg. 15) and teaches jojoba oil as the feedstock (the same feedstock as instant claims), therefore the transesterified product produced from jojoba oil would not comprise methyl esters.

Austic is silent regarding the oxidative stability index (OSI) of the transesterified product being greater than the OSI of the feedstock. The limitations “wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock” is the intended result of the method of claim 1 and would inherently be met if the prior art process teaches the same active method steps as recited in claim 1. Austic teaches performing the transesterification reaction on feedstock comprising jojoba esters (same feedstock as instant claims), using the same enzymes at the same dosage (LIPOZYME TL IM at 4% w/w oil) under solventless conditions. The instant specification teaches the same lipase and amounts (see instant specification par. [0055] on pg. 16, par. [0062] on pg. 20 and 21, par. [0045] on pg. 11). Therefore, the process of Austic would also result in the OSI of the transesterified product being greater than an OSI of the feedstock.

Regarding claim 21, the instant specification teaches jojoba oil as the feedstock (see line 2 of [0055] on page 16 of the specification) and teaches it contains wax esters

and no free fatty alcohols therein (see Table 3 on page 17 of the specification). Since Austic also teaches jojoba oil as the feedstock and contacting with a lipase as recited in claim 21, it would inherently meet the limitations “feedstock comprising jojoba wax esters and no free fatty alcohols therein” and “the transesterified product comprises no free fatty alcohols therein”.

Austic anticipates claims 1 and 21.

Claims 3 and 4 are rejected under 35 U.S.C. 102(a)(1) and under 35 U.S.C. 102(a)(2) as being anticipated by **Austic** (WO 2012/106701; Pub. Aug. 9, 2012; Of Record) **as evidenced by Busson-Breysse** (JAOCS, 1994; Of Record) **and Fucosterol** (Cayman Chemical, CAS Entry, 2019; Of Record).

Regarding claims 3 and 4, Austic does not teach the feedstock to further comprise an antioxidant (claim 3), a skin conditioning agent and a volatile compound (claim 4). Jojoba oil comprises various sterols such as fucosterol (see Busson-Breysse Table 4), which is an antioxidant (see Fucosterol pg. 1 Description). The instant specification discloses that jojoba oil comprises various sterols, antioxidants (tocopherols etc.) function as skin conditioning agents and are volatile (see [0049] on pages 13 and 14, Table 2 on pages 14 and 15). Austic teaches using jojoba oil in its esterification methods and catalyzed by contacting with a lipase (Lipozyme TL IM), the same process taught in the instant specification (par. [0055,0062]). Therefore it is reasonably expected that the process of Austic is teaching a method in which the feedstock (jojoba oil) comprises an antioxidant, skin conditioning agent and a volatile

compound and the transesterification process would occur without removing or degrading the antioxidant, skin conditioning agent and a volatile compound.

Austic anticipates claims 3 and 4.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims the examiner presumes that the subject matter of the various claims was commonly owned as of the effective filing date of the claimed invention(s) absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and effective filing dates of each claim that was not commonly owned as of the effective filing date of the later invention in order for the examiner to consider the applicability of 35 U.S.C. 102(b)(2)(C) for any potential 35 U.S.C. 102(a)(2) prior art against the later invention.

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

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The rejections of claims 6 and 7 are maintained. The rejections of claims 22-29 are new as necessitated by the amendments filed on 03/22/2021.

Claims 6, 7, 22-25 and 27-29 are rejected under 35 U.S.C. 103 as being unpatentable over **Austic** (WO 2012/106701; Pub. Aug. 9, 2012; Of Record) as applied to claims 1 and 21 above and **in view of Arquette** (US 5,968,530; Iss. Oct. 19, 1999; Applicant IDS; Of Record).

Regarding claims 6, 7, 22-24, Austic does not teach the feedstock comprising jojoba wax esters further comprises hydrogenated wax esters. Arquette teaches preparing esterified products for use in cosmetic products and teaches using jojoba oil in the esterification methods (col. 4 lines 40-65). Arquette teachings jojoba oil is also called jojoba wax esters (col. 5 lines 1-15) and teaches jojoba wax esters, hydrogenated jojoba wax esters or a mixture of the two are used in the esterification reaction to produce the emollients (lubricants) for use cosmetic compositions (col. 8 lines 1-30,49-60).

It would have been obvious to one of ordinary skill before the effective filing date of the claimed invention to modify the methods of Austic and use a mixture of jojoba wax esters and hydrogenated wax esters as feedstock in its esterification reactions. One of ordinary skill in the art would be motivated to do so because Arquette teaches mixtures of jojoba wax esters and hydrogenated wax esters can be used in alcoholysis reactions (which is a transesterification reaction) and the artisan is substituting one feedstock for another.

Regarding claim 24, Arquette teaches amounts of the jojoba esters to be about 80% or lower (col. 6 lines 55-60) and teaches the viscosity of the transesterified product

is dependent on the amount of the esters (col. 7 see Table). Therefore Arquette is teaching the amount of esters is a result effective variable and finding the optimum concentration would be within the purview of routine experimentation for one of ordinary skill. The amounts of jojoba was esters between 50% to 80% by weight and the amount of hydrogenated jojoba wax esters to be 20% to 50% by weight is rendered obvious by the teachings of Arquette, absent any evidence that the concentrations are critical. See MPEP 2144.05 II.

Regarding claims 7 and 23, Austic in view of Arquette teaches a method using hydrogenated jojoba oil in their methods, and teach a process in which jojoba oil is catalyzed by contacting with a lipase (Lipozyme TL IM), the same process taught in the instant specification (par. [0057]). Therefore it is reasonably expected that the process of Austic in view of Arquette would also produce a transesterified product whose dropping point is greater than the dropping point of the feedstock and the dropping point increases as a percentage of hydrogenated jojoba wax esters in the feedstock increases. Since Arquette teaches using mixtures of jojoba oil and hydrogenated jojoba oil, the percentage of hydrogenated wax esters can be varied, and the dropping point would change based on the hydrogenation since the same method steps (providing a feedstock, contacting with a lipase and catalytically transesterifying the wax esters) are taught by Austic and Arquette.

Regarding claim 25, the claim recites “the feedstock consists essentially of the jojoba wax esters and the hydrogenated wax esters”. The transitional phrase “consisting essentially of” limits the scope of a claim to the specified materials and steps “those that do not materially affect the basic and novel characteristics” of the claimed

invention. The instant disclosure does not clearly indicate what the basic and novel characteristics actually are, therefore “consisting essentially of” will be construed as equivalent to “comprising”. Arquette teaches the alcoholysis (transesterification) reaction is performed using jojoba oil or a mixture of jojoba oil and hydrogenated jojoba oil (containing a mixture of jojoba wax esters and hydrogenated wax esters).

Regarding claims 27-29, the instant specification teaches jojoba oil as the feedstock (see line 2 of [0055] on page 16 of the specification) and teaches it contains wax esters and no free fatty alcohols or fatty acid methyl esters therein (see Table 3 on page 17 of the specification). Claim 29 is interpreted that “feedstock product” means “feedstock”.

Since Austic in view of Arquette also teaches a mixture of jojoba oil and hydrogenated jojoba oil as the feedstock and contacting with a lipase as recited in claim 24, it would inherently meet the limitations “feedstock does not comprise any free fatty alcohols therein” (claim 27), “the transesterified product does not comprise any methyl esters” (claim 28) and “the feedstock does not comprise any methyl esters” (claim 29).

The teachings of Austic and Arquette would render claims 6, 7, 22-25 and 27-29 obvious.

Response to Arguments

Applicant's arguments filed 03/22/2021 have been fully considered but are not persuasive. Applicants traverse the rejection of claims 1, 3 and 4 as being anticipated by Austic (see remarks pages 17-20) and the rejection of claims 6-7 as being unpatentable over Austic in view of Arquette (see remarks pages 21-22). Applicants

argue that instant claim 1 is not anticipated by Austic and the examiner's technical reasoning provided to establish inherency over the teachings of Austic is inadequate (see remarks page 18 first para.). Applicants have also submitted a declaration under 37 C.F.R §1.132 filed on 03/22/2021 by inventor Jeff Addy wherein applicants argue that the process of Austic would not result in the oxidative stability index (OSI) of the transesterified product to be greater than the OSI of the feedstock and argue that therefore claim 1 and dependent claims 3-4 are not anticipated by Austic.

Applicants argue that Austic teaches a process of performing enzymatic esterification and not transesterification. Applicants argue that Austic is primarily a process to form a biodiesel product by converting fatty acids in the feedstock with a lower alcohol to produce fatty acid alkyl esters like fatty acid methyl esters (FAME) and fatty acid alkyl esters (FAEE) which is an esterification process (see remarks page 18 para. 2, see declaration sections 4-6 on pages 2,3).

The examiner agrees that Austic is primarily directed to the utilization of fatty acid feedstock wherein the free fatty acid content in the feedstock is converted to esters by contacting with lipases which is an esterification reaction, however the arguments are not persuasive because Austic explicitly lists "jojoba oil" as a possible feedstock that can be used in its methods (reacting feedstocks with a lipase in the presence of an alcohol). The instant specification discloses jojoba oil comprises wax esters (see [0047],[0048] on page 12 of the specification) and esters undergo transesterification when reacted with an alcohol ([0036] on page 6 of the specification). Austic anticipates the limitation 'feedstock comprising substantially all jojoba wax esters'. A reference that clearly names the claimed species anticipates the claim no matter how many other

species are named. See MPEP §2131.02 II. Since Austic is teaching a process in which jojoba oil is contacted with lipase (LIPOZYME TL IM at 4% w/w oil) and an alcohol (the instant claims also recite contacting jojoba wax esters with a lipase), this would inherently result in transesterification of the wax esters in the jojoba oil, in which the OSI of the transesterified product is higher than the OSI of the feedstock. Therefore Austic anticipates the method of instant claims 1, 3, 4 and new claim 21.

Applicants argue that enzymatic processing of wax esters is different and unpredictable from enzymatic processing of triglycerides and argue the instant disclosure notes unexpected results and cite [0071]-[0073] of the instant specification (see remarks page 18 para. 1, page 20 para 2, see declaration section 8).

These arguments are not persuasive because, as discussed above, the observation that lipases work equally well when used in jojoba ester transesterification reactions (in specification [0072]) is an inherent feature of the lipase. Jojoba wax esters occur naturally in jojoba oil, and when the jojoba oil is contacted with a lipase, the transesterification would occur. As discussed above, based on the teachings of Austic, one of ordinary skill in the art would readily envisage a reaction in which the feedstock is jojoba oil and is contacted with a lipase, therefore Austic anticipates the transesterification reaction of instant claims 1, 3, 4 and new claim 21. Evidence of secondary considerations, such as unexpected results or commercial success, is irrelevant to 35 U.S.C. 102 rejections and thus cannot overcome a rejection so based. See MPEP 2131.04.

Applicants review the theoretical chemistry of Austic's process and argue that if a jojoba wax ester were reacted with methanol, the transesterification reaction would not

proceed to completion and the yield would only be 34% (see remarks page 19, para. 1, see declaration section 10-12). Applicants argue that Austic only teaches lower alcohols which would produce products with different carbon numbers of C₁₉-C₂₈, whereas the instant method would produce C₃₆-C₄₆ wax esters (see declaration section 13, 16).

These arguments are not persuasive because it is noted that the instant claims do not recite any limitations pertaining to alcohol and the yields of the transesterification reaction in association with the type of alcohol added in the process. Applicants do agree that Austic's process would result in a transesterified product (albeit at only 34% yield, see Addy declaration filed on 03/22/2021, section 12, Figure 1). It is again reiterated that Austic explicitly lists "jojoba oil" as a possible feedstock that can be used in its methods (reacting feedstocks with a lipase in the presence of an alcohol). Austic is teaching a process in which jojoba oil is contacted with lipase (LIPOZYME TL IM at 4% w/w oil) and an alcohol, which would result in the production of C₃₆-C₄₆ wax esters.

Applicants argue that Austic only lists "jojoba oil" as part of a laundry list of ingredients and provides zero examples of enzymatically processing jojoba oil (see remarks page 18 para. 1). Applicants argue that Austic teaches only methanol or ethanol as the alcohol in its examples which would result in a product comprising methyl or ethyl esters. Applicants argue that Austic does not teach the operating conditions for when using propyl, butyl and pentyl alcohols and does not teach methods to isolate the wax esters (see declaration sections 16, 17). Therefore, applicants argue that Austic is not enabled for the full range of feedstock materials it discloses, particularly jojoba oil (see remarks page 20 para. 1).

These arguments are not persuasive because Austic does disclose the operating conditions including temperature, amounts of the alcohol (see page 6, Reactor Design), amounts and types of lipases that can be used as a catalyst (see page 9, 10, Enzyme). Further, a prior art is presumed to be operable/enabling. See MPEP 2121 (I).

Therefore, the declaration under 37 CFR 1.132 filed 03/22/2021 is insufficient to overcome the rejection of the claims based upon anticipation by Austic.

Regarding the rejections of claims 6-7 under 35 U.S.C 103 as being unpatentable over Austic in view of Arquette, applicants argue that Austic does not teach the feedstock to comprise hydrogenated jojoba oil and that Arquette which the use of hydrogenated wax esters in transesterification reactions cannot be combined with Austic. Applicants argue that Austic and Arquette teach the FAEEs should be methyl, ethyl, propyl, butyl or pentyl esters of shorter chain triglycerides to work. Applicants argue that the transesterified products disclosed in the instant application would have different carbon numbers from such esters and using hydrogenated wax esters in the methods of Austic would render it unfit (see page 21 of remarks).

These arguments are not persuasive because Austic discloses examples using shorter chain triglycerides but Austic explicitly lists "jojoba oil" as a possible feedstock (pg. 4 lines 25-34) that can be used in its methods (reacting feedstocks with a lipase in the presence of an alcohol). There is no teaching in Austic that hydrogenated jojoba oil would render Austic unfit. Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure. See MPEP 2123. Arquette teaches using jojoba oil and hydrogenated jojoba oil in alcoholysis reactions (a transesterification reaction). Austic is teaching a process in which jojoba oil is contacted

with lipase (LIPOZYME TL IM at 4% w/w oil) and an alcohol, therefore the combined teachings of Austic in view of Arquette would also result in the production of C₃₆-C₄₆ wax esters (the esters found in jojoba oil).

It is again re-iterated that the only active method steps in instant claim 1 is providing a feedstock comprising jojoba wax esters, contacting the feedstock with a lipase and catalytically transesterifying the jojoba wax esters in the feedstock with the lipase to form a transesterified product. The limitations 'feedstock further comprises an antioxidant' (in claim 3), 'feedstock further comprises a skin conditioning agent' (in claim 4), 'feedstock does not comprise free fatty alcohols' (in claims 21, 27) and 'feedstock product does not comprise any methyl esters' (in claim 29) are all inherent properties of the feedstock. Austic teaches 'jojoba oil' as the feedstock which is the same feedstock disclosed in the instant methods. The limitations that the feedstock

The limitations "wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock", "the transesterified product does not comprise any methyl esters" is the intended result of the method and would inherently be met if the prior art process comprises the same active method steps. The method of claim does not recite any additional limitations (process conditions) that are necessary and/or critical to achieve the result that an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock. It is also noted the instant claims recite a method using the transitional phrase "comprising" which does not preclude any additional process steps. See MPEP 2111.03.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SRIKANTH PATURY whose telephone number is (571)270-1020. The examiner can normally be reached on Monday-Friday, 9:30 - 6:30 EST.

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

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Louise W Humphrey can be reached on 571-272-5543. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the

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

/Srikanth Patury/
Examiner, Art Unit 1657

/LOUISE W HUMPHREY/
Supervisory Patent Examiner, Art Unit 1657

<i>Search Notes</i> 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

CPC - Searched*		
Symbol	Date	Examiner
Please see Partial text search in WEST appended hereto	3/20/2017	KCS
Please see Updated Partial text search in WEST appended hereto	10/19/2017	KCS
Please see Re-updated Partial text search in WEST appended hereto	06/23/2018	KCS
C12P7/6436 or C11C3/003 or C11C3/10 - text limited	05/28/2019	/sp/

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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Search Notes 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

US Classification - Searched*			
Class	Subclass	Date	Examiner
Partial text search in WEST	Partial text search in WEST	3/20/2017	KCS
CPC	C12P7/6436 C11C3/003	3/20/2017	KCS
IPC	C12P7/64)	3/20/2017	KCS
USPC	435/134	3/20/2017	KCS
Updated Partial text search in WEST	Updated Partial text search in WEST	10/19/2017	KCS
CPC	C12P7/6436, C11C3/003	10/19/2017	KCS
IPC	C12P7/64	10/19/2017	KCS
USPC	435/134	10/19/2017	KCS
Re-updated Partial text search in WEST	Re-updated Partial text search in WEST	06/23/2018	KCS
CPC	C12P7/6436 C11C3/003 C11C3/10	06/23/2018	KCS
IPC	C12P7/64	06/23/2018	KCS
USPC	435/134	06/23/2018	KCS

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

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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Search Notes 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

Search Notes		
Search Notes	Date	Examiner
Inventor name search in PE2E & PALMsearch in	3/1/2017	KCS
Assignee name search in PE2E & PALM	3/1/2017	KCS
Verified Application priority data in PE2E & PALM	3/1/2017	KCS
Partial Text Search in WEST:DWPI, EPAB, FPRS, JPAB, USOC, USPT according to search strtrgy and terms in WEST search history appende hereto	3/20/2017	KCS
STN Search	09/20/2016	KCS
Updated Inventor name search in PE2E, WEST & PALM	10/19/2017	KCS
Updated Assignee name search in PE2E & PALM	10/19/2017	KCS
Reverified Application priority data in PE2E & PALM	10/19/2017	KCS
Updated Partial Text Search in WEST:DWPI, EPAB, FPRS, JPAB, USOC, USPT according to search strtrgy and terms in WEST search history appende hereto	10/19/2017	KCS
14578075 Google Search Transesterification oil OI20171019	10/19/2017	KCS
Re-updated Inventor name search in PE2E, WEST & PALM	06/23/2018	KCS
Re-updated Assignee name search in WEST, PE2E & PALM	06/23/2018	KCS
Reverified Application priority data in WEST PE2E & PALM	06/23/2018	KCS
Updated Partial Text Search in WEST:DWPI, EPAB, FPRS, JPAB, USOC, USPT according to search strtrgy and terms in WEST search history appende hereto	06/23/2018	KCS
Google Search	07/31/2018	KCS
updated inventor search, see EAST search history	05/28/2019	/sp/
updated inventor search, see EAST search history	11/25/2019	/sp/
updated inventor, assignee search, see EAST search history	02/05/2021	/sp/
updated inventor, assignee search	03/30/2021	/sp/

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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<i>Search Notes</i> 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	3,037	((("ADDY") near3 ("Jeff")) OR ((("DALY") near3 ("Clay")) OR ((("BROWN") near3 ("James")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/03/30 23:57
L2	903	"flora".as.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/03/30 23:57
L3	32	l2 and jojoba.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/03/30 23:57
S32	202	"jojoba oil" and transesterification and lipase	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/03/24 18:39
S33	36	("jojoba" same (transesterification or trans-esterification)) and lipase	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/03/24 18:39
S34	284	"jojoba" and ((transesterification or trans-esterification or alcoholysis) same lipase)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/03/24 18:47
S35	9	"jojoba" same ((transesterification or trans-esterification or alcoholysis) same lipase)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/03/24 18:47
S36	20	("wax ester" same (hydrogenated near3 "wax ester")) and transesterif\$5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/03/25 11:58
S37	9	("wax ester" same (hydrogenated near3 "wax ester")) same transesterif\$5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/03/25 11:58
S38	9	"20130149414"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/03/27 21:25

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**Courtesy Reminder for
Application Serial No: 14/578,075**

Attorney Docket No: FloraTech002

Customer Number: 93756

Date of Electronic Notification: 04/23/2021

This is a courtesy reminder that new correspondence is available for this application. If you have not done so already, please review the correspondence. The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

An email notification regarding the correspondence was sent to the following email address(es) associated with your customer number:

ipdocket@iptech.law
adam@iptech.law

To view your correspondence online or update your email addresses, please visit us anytime at **<https://ppair-my.uspto.gov/pair/PrivatePair>**.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov or call 1-866-217-9197.

Vantage Exhibit 1002

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CARGILL 00001079

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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/578,075	Filing Date 12/19/2014	☐ To be Mailed
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ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE (\$)	FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 = *		x \$40 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 = *		x \$210 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED - PART II

	(Column 1)		(Column 2)	(Column 3)	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	06/03/2021		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	
	Total (37 CFR 1.16(i))	* 13	Minus	** 20	= 0	x \$50 = 0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	x \$240 = 0
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
TOTAL ADD'L FEE						0
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	
	Total (37 CFR 1.16(i))	*	Minus	**	=	x \$0 =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x \$0 =
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
TOTAL ADD'L FEE						
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/MARSHA R RICHARDS/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".						
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.						

This collection of information is required by 37 CFR 1.16. 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 12 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, 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.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	42894010
Application Number:	14578075
International Application Number:	
Confirmation Number:	2053
Title of Invention:	Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives
First Named Inventor/Applicant Name:	Jeff Addy
Customer Number:	93756
Filer:	Adam Reid Stephenson
Filer Authorized By:	
Attorney Docket Number:	FloraTech002
Receipt Date:	03-JUN-2021
Filing Date:	19-DEC-2014
Time Stamp:	21:05:08
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Response After Final Action	AAF1.pdf	118742	no	8
			8bd29a7e711e7509ad12ceb39b59668d10ef3066		

Warnings:

Vantage Exhibit 1002

Page 1056 of 1215

CARGILL 00001081

Information:	
Total Files Size (in bytes):	118742
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AMENDMENT/REPLY

Applicant: Jeff Addy

Docket No: FLORATECH002

Examiner: Patury, Srikanth

Ser. No: 14578075

Filed: December 19, 2014

Group Art Unit: 1657

Conf. No.: 2053

Title: Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

AMENDMENT UNDER 37 C.F.R. 1.116

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

Sir/Madam:

The following is responsive to the Office Action mailed April 23, 2021. Applicant respectfully requests reconsideration of the application in view of the following:

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

Remarks/Arguments begin on page 7 of this paper.

AMENDMENTS TO THE CLAIMS

Please cancel claim 26 and amend claims 24 and 29 as indicated among the following complete set of pending claims:

1. (Previously presented) A process for transesterifying wax esters, the process comprising:
 - providing a feedstock comprising substantially all jojoba wax esters;
 - contacting the feedstock with a lipase;
 - catalytically transesterifying the jojoba wax esters in the feedstock with the lipase to form a transesterified product;
 - wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock; and
 - wherein the transesterified product contains no methyl esters.
2. (Canceled).
3. (Previously presented) The process of claim 1, wherein the feedstock further comprises an antioxidant and catalytically transesterifying the jojoba wax esters in the feedstock with the lipase further comprises catalytically transesterifying without removing or degrading the antioxidant in the feedstock.
4. (Previously presented) The process of claim 3, wherein the feedstock further comprises a skin conditioning agent and a volatile compound and catalytically

transesterifying the jojoba wax esters in the feedstock with the lipase further comprises catalytically transesterifying without removing or degrading the skin conditioning agent and the volatile compound in the feedstock.

5. (Canceled).
6. (Previously presented) The process of claim 1, wherein the jojoba wax esters further comprise hydrogenated jojoba wax esters.
7. (Original) The process of claim 6, wherein a dropping point of the transesterified product is greater than a dropping point of the feedstock and the dropping point of the transesterified product increases as a percentage of hydrogenated jojoba wax esters in the feedstock increases.
- 8-20. (Canceled).

21. (Previously presented) A process for transesterifying wax esters, the process comprising:
- providing a feedstock comprising jojoba wax esters and no free fatty alcohols therein;
 - contacting the feedstock with a lipase; and
 - transesterifying the jojoba wax esters in the feedstock with the lipase to form a transesterified product;
 - wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock; and
 - wherein the transesterified product comprises no free fatty alcohols therein.
22. (Previously presented) The process of claim 21, wherein the jojoba wax esters further comprise hydrogenated jojoba wax esters.
23. (Previously presented) The process of claim 22, wherein a dropping point of the transesterified product is greater than a dropping point of the feedstock and the dropping point of the transesterified product increases as a percentage of hydrogenated jojoba wax esters in the feedstock increases.

24. (Currently amended) A process for transesterifying wax esters, the process comprising:
- providing a feedstock comprising ~~between~~ 50% to 80% by weight jojoba wax esters, wherein some of the jojoba wax esters are hydrogenated and the amount of hydrogenated jojoba wax esters is and 20% to 50% by weight~~hydrogenated jojoba wax esters~~;
 - contacting the feedstock with a lipase; and
 - transesterifying the jojoba wax esters and the hydrogenated jojoba wax esters in the feedstock with the lipase to form a transesterified product;
 - wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock.
25. (Previously presented) The process of claim 24, wherein the feedstock consists essentially of the jojoba wax esters and the hydrogenated jojoba wax esters.
26. (Canceled) ~~The process of claim 24, wherein the feedstock consists of the jojoba wax esters and the hydrogenated jojoba wax esters.~~
27. (Previously presented) The process of claim 24, wherein the feedstock does not comprise any free fatty alcohols.
28. (Previously presented) The process of claim 24, wherein the transesterified product does not comprise any methyl esters.

29. (Currently Amended) The process of claim 24, wherein the feedstock ~~product~~ does not comprise any methyl esters.

REMARKS

Claims 1, 3-4, 6-7, and 21-29 are currently pending in the application. Applicant has canceled claim 26 and amended claims 24 and 29. Applicant requests reconsideration of the application in light of the following remarks.

Rejections under 35 U.S.C. 112(a) and (b)

Claim 26 stands rejected by the Examiner under 35 U.S.C. 112(a) for allegedly reciting new matter. While the Applicant respectfully disagrees with the Examiner's analysis, in the interests of presenting the case in better form for appeal, claim 26 has been canceled, rendering the rejection moot.

Claim 24 was rejected by the Examiner as being indefinite under 35 U.S.C. 112(b). In accordance with this rejection, the claims have been amended to comply with the Examiner's suggestion and are now believed to conform to Section 112(b). Applicant respectfully requests that the rejection of claim 24 under 35 U.S.C. 112(b) be withdrawn.

Claim 29 stands rejected by the Examiner as being indefinite under 35 U.S.C. 112(b). In accordance with this rejection, the claim has been amended to remove the typographical error to clarify that it is the feedstock that does not contain methyl esters. The Applicant therefore respectfully requests that the rejection of claim 29 under 35 U.S.C. 112(b) be withdrawn.

Regarding Doctrine of Equivalents

Applicant hereby declares that any amendments herein that are not specifically made for the purpose of patentability are made for other purposes, such as clarification, and that no such changes shall be construed as limiting the scope of the claims or the application of the Doctrine of Equivalents.

CONCLUSION

Applicant respectfully requests timely entry of the amendments submitted herewith.

If any fees, including extension of time fees or additional claims fees, are due as a result of this response, please charge Deposit Account No. 60-1853. This authorization is intended to act as a constructive petition for an extension of time, should an extension of time be needed as a result of this response. The examiner is invited to telephone the undersigned if this would in any way advance the prosecution of this case.

Respectfully submitted,

Date: 6/3/2021

By: /Adam Stephenson/
Adam R. Stephenson
Reg. No. 58,349

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Scottsdale, AZ 85260
480.264.6075
480.718.8336 fax
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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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE	REQUEST ID
14/578,075	12/19/2014	Jeff Addy	FloraTech002	140886

Acknowledgement of Loss of Entitlement to Entity Status Discount

The entity status change request below filed through Private PAIR on 06/10/2021 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

☒ Applicant changing to regular undiscounted fee status.

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

This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

Signature:	/Adam Stephenson/
Name:	Adam R. Stephenson
Registration Number:	58349



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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/578,075	12/19/2014	Jeff Addy	FloraTech002	2053
93756	7590	06/11/2021	EXAMINER	
Adam R. Stephenson, LTD. 8350 E Raintree Dr., Ste 245 Scottsdale, AZ 85260			PATURY, SRIKANTH	
			ART UNIT	PAPER NUMBER
			1657	
			NOTIFICATION DATE	DELIVERY MODE
			06/11/2021	ELECTRONIC

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

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

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

adam@iptech.law
ipdocket@iptech.law

Advisory Action Before the Filing of an Appeal Brief	Application No. 14/578,075	Applicant(s) Addy et al.	
	Examiner SRIKANTH PATURY	Art Unit 1657	AIA (FITF) Status Yes

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

THE REPLY FILED 03 June 2021 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

a) ☐ The period for reply expires ____ months from the mailing date of the final rejection.

b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires ____ months from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANTS FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because

a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);

b) ☐ They raise the issue of new matter (see NOTE below);

c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____ (See 37CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☒ Applicants reply has overcome the following rejection(s): 112 (a) New Matter of claim 26 and 112 (b) of claims 24-29

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): (a) ☐ will not be entered, or (b) ☒ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

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

9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.

13. ☐ Note the attached Information *Disclosure Statement(s)*. (PTO/SB/08) Paper No(s). _____

14. ☐ Other: _____

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: 1,3-4,6-7,21-25 and 27-29.

Claim(s) withdrawn from consideration: _____

/SRIKANTH PATURY/ Examiner, Art Unit 1657	/LOUISE W HUMPHREY/ Supervisory Patent Examiner, Art Unit 1657
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Continuation of 7 and 12.

The amendments filed on 06/03/2021 are considered and entered.

The cancellation of claim 26 renders the previous rejection of claim 26 under 35 USC 112 (a) for New Matter moot.

The amendments to claims 24 and 29 overcome the previous rejections of claims 24-29 under 35 USC 112(b) for being indefinite.

The request for reconsideration has been considered but does NOT place the application in condition for allowance because:

As previously discussed in the Final Rejection dated 04/23/2021, Claims 1, 3, 4, 6, 7 would still be rejected under 35 USC 112(b) as being indefinite for reciting relative term 'substantially all' (see pages 5,6).

Claims 1, 3, 4 and 21 would still be rejected under 35 USC 102(a)(1) and 35 USC 102(a)(2) as being anticipated by Austic and claims 6, 7, 22-25 and 27-29 would still be rejected under 35 USC 103 as being unpatentable over Austic in view of Arquette (see pages 7-14).

Applicants have not presented any arguments regarding the merits of these rejections in the remarks filed on 06/03/2021 and these rejections are maintained.

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FLORATECH002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AMENDMENT/REPLY

Applicant: Jeff Addy

Docket No: FLORATECH002

Examiner: Patury, Srikanth

Ser. No: 14578075

Filed: December 19, 2014

Group Art Unit: 1657

Conf. No.: 2053

Title: Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

AMENDMENT UNDER 37 C.F.R. 1.116

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

Sir/Madam:

The following is responsive to the Office Action mailed April 23, 2021. Applicant respectfully requests reconsideration of the application in view of the following:

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

Remarks/Arguments begin on page 7 of this paper.

OK TO ENTER: /S.P/

06/07/2021

1

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL **(Submitted Only via EFS-Web)**

Application Number	14578075	Filing Date	2014-12-19	Docket Number (if applicable)	FLORATECH002	Art Unit	1657
First Named Inventor	Jeff Addy			Examiner Name	Patury, Srikanth		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

☐ Other _____

☒ Enclosed

☒ Amendment/Reply

☐ Information Disclosure Statement (IDS)

☒ Affidavit(s)/ Declaration(s)

☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
 (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to
 Deposit Account No 601853

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

Signature of Registered U.S. Patent Practitioner			
Signature	Adam Stephenson/	Date (YYYY-MM-DD)	2021-07-20
Name	Adam R. Stephenson	Registration Number	58349

This collection of information is required by 37 CFR 1.114. 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 1.11 and 1.14. This collection is estimated to take 12 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, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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.

FLORATECH002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

DECLARATION

Applicant: Jeff Addy

Docket No: FLORATECH002

Examiner: Patury, Srikanth

Ser. No: 14578075

Filed: December 19, 2014

Group Art Unit: 1657

Conf. No.: 2053

Title: Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

DECLARATION UNDER 37 C.F.R. 1.132

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

Sir/Madam:

I, Jeff Addy, declare as follows:

1. I am a named inventor on this patent application. I have read and am familiar with the contents of this application. It is my understanding that claims 6, 7, 22-25, and 27-29 are currently being rejected over Austic (WO2012106701) in view of Arquette (U.S. Pat. No. 5,968,530).
2. This declaration outlines the results of an actual comparative experiment conducted between a chemically catalyzed transesterification of a mixture of hydrogenated jojoba oil (HJW) and refined jojoba oil and a enzymatically catalyzed transesterification of the same mixture like the experimental results disclosed in para. [0064] – [0070] of the present specification using 20% HJW. This experiment was conducted to further demonstrate the unexpected results of the

enzymatic transesterification processes documented in the present specification. Comparative Oxidative Stability Index (OSI) values for the products of both experiments and for the feedstock are included in this declaration along with various other physical properties. OSI evaluation determines the relative resistance of, for example, fats or oils to oxidation that can then be used to infer shelf life. A higher OSI value (hours) indicates a longer shelf life for a given product.

Experimental Procedure: Enzymatically Catalyzed Process

3. A 3-Neck, 1 L jacketed reaction flask equipped with an overhead agitator, vacuum, and nitrogen sparge was used as the reaction system. A total quantity of 600 g composed of 20% hydrogenated jojoba oil and 80% refined jojoba oil (by weight) was placed in the flask along with 2% w/w of the lipase enzyme marketed under the tradename LIPOZYME TL-IM by Novozymes A/S of Bagsvaerd, Denmark. The feedstock material was then mixed under vacuum at 70 C for a period of four hours. Once reaction equilibrium among chain length distribution in the forming product was observed using gas chromatography with a flame ionization detector (GC-FID), the reacted product material was filtered and cooled under nitrogen in sealed glass jars.

Experimental Procedure: Chemically Catalyzed Process

4. A 3-Neck, 1 L jacketed reaction flask equipped with an overhead agitator, vacuum, and nitrogen sparge was used as the reaction system. A total quantity of 600 g composed of 20% hydrogenated jojoba oil and 80% refined jojoba oil (by weight) was placed in the flask to form the feedstock material. A chemical transesterification process following the general industrial processes employed in the industry was then carried out. The feedstock was brought to 120 C under vacuum and dried until moisture content was <0.03% by weight. Anhydrous sodium methoxide (0.4% w/w) was added and the mixture was allowed to react under vacuum until equilibrium was detected using GC-FID. Following detection of equilibrium, 60 g of saturated brine water was then charged into the flask and mixed for 10 minutes at subtle agitation then decanted to remove sodium generated

soaps and salts from the product. The washed product was then treated with 0.5% by weight of synthetic amorphous silica dioxide marketed under the tradename SORBSIL R92 by PQ Corporation of Valley Forge, PA along with 2.5% by weight of bleaching clay marketed under the tradename PERFORM6000 by Oil-Dri Corporation of America of Chicago, IL. The treated product was then placed under vacuum for 30 minutes then subsequently filtered and cooled under nitrogen in sealed glass jars.

Results:

5. The input feedstock and the products of both experiments were analyzed for the physical properties of acid value (AV), peroxide value (PV), dropping point (DP), color measurement using Lovibond (Lovi), OSI, and Iodine value (IV). The Lovi testing was done using a Lovibond PFX880 tintometer. Additional testing was done to determine the comparative wax-ester carbon chain length distribution of the two products. The specific tests used to calculate each physical property for both products identified in Table 3 and are all developed by the American Oil Chemist's Society (AOCS). Table 1 lists the physical property results:

Type	AV	PV	DP	Lovi	OSI	IV
Feedstock	0.5	0.4	N/A	1.0R 3.4Y	33.8	66.3
Enzymatic	0.19	0.9	48	0.9R, 2.9Y	117	65.7
Chemical	0.04	0.2	47.3	0.3R, 1.3Y	38	66.3

Table 1 – Physical Properties

Ester	Enzymatic	Chemical
C36.0	0.10	0.11
C36.1	0.51	0.48
C36.2	0.23	0.16
C38.0	0.25	0.33
C38.1	1.89	1.74
C38.2	3.58	3.20

C40.0	1.27	1.65
C40.1	9.87	10.40
C40.2	19.44	22.20
C42.0	1.95	2.45
C42.1	14.30	12.68
C42.2	27.30	28.36
C44.0	0.75	0.68
C44.1	5.64	4.40
C44.2	10.33	9.19
C46.0	0.12	0.09
C46.1	0.89	0.60
C46.2	1.54	1.24

Table 2. Wax Ester Chain Length Distribution

Parameter	Method
Acid Value	AOCS Ci 4-91
Peroxide Value	AOCS Cd 8b-90
Dropping point	AOCS Cc 18-80
Lovibond	AOCS Cc 13e-92
OSI	AOCS Cd 12b-92
Iodine Value	AOCS Cd 1d-92

Table 3. Tests Used.

6. The enzymatic process showed significantly higher oxidative stability compared to the chemically modified variant despite originating from the same raw input materials and feedstock ratio. Consistent with the other experiments detailed in the present specification, the documented high increase in OSI of the wax ester product observed using the disclosed enzymatic transesterification method was an unexpected result. While the chemically catalyzed material showed a small increase in OSI relative to the feedstock, due to the imprecision present in OSI

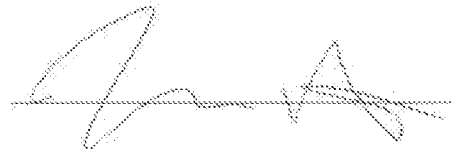
measurements, I regard the 4.7 hour difference in the measurements as being a result that is functionally the same (i.e., the OSI data shows essentially that the OSI did not practically change between the feedstock and the chemically catalyzed product). That the enzymatically catalyzed product demonstrated a nearly 2.5 time increase in OSI represents an actual, statistically significant difference demonstrating a surprising result. Because of this, the results of this present experiment are yet unexpected to me in view of the teachings of Austic and Arquette which each fail to disclose any actual OSI data values and any comparative OSI data between OSI from chemically catalyzed and enzymatically catalyzed transesterification processes.

7. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

FURTHER AFFIANT SAYETH NOT.

20 May 2022

Date


Jeff Addy

Electronic Patent Application Fee Transmittal

Application Number:	14578075			
Filing Date:	19-Dec-2014			
Title of Invention:	Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives			
First Named Inventor/Applicant Name:	Jeff Addy			
Filer:	Adam Reid Stephenson/Dee Wilson			
Attorney Docket Number:	FloraTech002			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
RCE- 2ND AND SUBSEQUENT REQUEST	1820	1	2000	2000
Total in USD (\$)				2000

Electronic Acknowledgement Receipt

EFS ID:	43299179
Application Number:	14578075
International Application Number:	
Confirmation Number:	2053
Title of Invention:	Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives
First Named Inventor/Applicant Name:	Jeff Addy
Customer Number:	93756
Filer:	Adam Reid Stephenson
Filer Authorized By:	
Attorney Docket Number:	FloraTech002
Receipt Date:	20-JUL-2021
Filing Date:	19-DEC-2014
Time Stamp:	16:14:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$2000
RAM confirmation Number	E20217JG15073083
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Vantage Exhibit 1002

Page 1082 of 1215

CARGILL 00001107

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	RCE2Form002.pdf	1349936	no	3
			38cd7e22f8c9dab8941c428248172a9539581d93		
Warnings:					
Information:					
2	Amendment Submitted/Entered with Filing of CPA/RCE	RCE2.pdf	78862	no	13
			6f7e416fbefbfe797e3fa4c198c31412652e29fb		
Warnings:					
Information:					
3	Affidavit-traversing rejectns or objectns rule 132	132Affidavit4thfiled.pdf	229828	no	6
			b10f21883235a036a71c112ccfa0f53336ff2ed2		
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30512	no	2
			3bd81ab79aa968d91dbff45560fb515f4b4fa343		
Warnings:					
Information:					
Total Files Size (in bytes):			1689138		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AMENDMENT/REPLY

Applicant: Jeff Addy

Docket No: FLORATECH002

Examiner: Patury, Srikanth

Ser. No: 14578075

Filed: December 19, 2014

Group Art Unit: 1657

Conf. No.: 2053

Title: Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

**AMENDMENT ACCOMPANYING REQUEST FOR
CONTINUED EXAMINATION UNDER 37 C.F.R. 1.114**

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

Sir/Madam:

The following is responsive to the Office Action mailed April 23, 2021. Applicant respectfully requests reconsideration of the application in view of the following:

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

Remarks/Arguments begin on page 4 of this paper.

AMENDMENTS TO THE CLAIMS

Please cancel claims 1, 3, 4, 6, 7, and 21-23 as indicated among the following complete set of pending claims:

1-23. (Canceled).

24. (Previously presented) A process for transesterifying wax esters, the process comprising:

providing a feedstock comprising 50% to 80% by weight jojoba wax esters,

wherein some of the jojoba wax esters are hydrogenated and the amount of

hydrogenated jojoba wax esters is 20% to 50% by weight;

contacting the feedstock with a lipase; and

transesterifying the jojoba wax esters and the hydrogenated jojoba wax esters in the feedstock with the lipase to form a transesterified product;

wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock.

25. (Previously presented) The process of claim 24, wherein the feedstock consists essentially of the jojoba wax esters and the hydrogenated jojoba wax esters.

26. (Canceled).

27. (Previously presented) The process of claim 24, wherein the feedstock does not comprise any free fatty alcohols.

28. (Previously presented) The process of claim 24, wherein the transesterified product does not comprise any methyl esters.
29. (Previously presented) The process of claim 24, wherein the feedstock does not comprise any methyl esters.

REMARKS

Claims 1, 3-4, 6-7, and 21-25 and 27-29 are currently pending in the application. Applicant has canceled claims 1, 3, 4, 6, 7, and 21-23. Applicant requests reconsideration of the application in light of the following remarks.

Telephone Interview

Applicant's attorney wishes to thank the Examiner for his courtesy and time during a telephone interview that was held on 6/4/2021 which discussed the outstanding rejections in the 4/23/2021 Final Action and the Amendment After Final filed 6/3/2021. The Examiner's comments and insight were very helpful in preparing this response. It is hoped that the comments below reflect the spirit of the interview.

Rejections under 35 U.S.C. 112

The Advisory Action issued 6/11/21 indicates that due to the cancellation of claim 26 in the Amendment After Final the 35 U.S.C. 112(a) rejection of that claim is rendered moot and the amendments to claims 24 and 29 overcame the 35 U.S.C. 112(b) rejections of the same. The cancellation of claims 1, 3, 4, 6, and 7 in the present amendment rendered the 35 U.S.C. 112(b) rejections of the same moot. The cancellation of claims 1, 3, 4, 5, and 7 should be considered acquiescence to the rejection made in the 4/23/21 Final Action in any way. Given that there are no remaining claims rejected under 35 U.S.C. 112, Applicant submits that the rejections made in the 4/23/21 Final Action are now moot.

Rejections under 35 U.S.C. 102

“To anticipate a claim, a single prior art reference must expressly or inherently disclose each claim limitation. *Celeritas Techs v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998). But disclosure of each element is not quite enough—this court has long held that ‘[a]nticipation requires the presence in a single prior art disclosure of all elements of a claimed invention *arranged as in the claim.*’ *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983) (citing *Soundsciber Corp. v United States*, 360 F.2d 954, 960, 175 Ct. Cl.

644 (Ct. Cl. 1966) (emphasis added).” *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323 (Fed. Cir. 2008).

Claims 1 and 21 were rejected under 35 U.S.C. 102(a)(1) and (a)(2) as being anticipated by Austic (WO2012106701 “Austic”). Claims 3 and 4 were rejected as being anticipated over Austic in light of Busson-Breyse (JAOCS, 1994) and Fucosterol (Cayman Chemical, CAS Entry, 2019). As claims 1, 3, 4, and 21 have been canceled the rejection of these claims is therefore obviated. However, Applicant disagrees with the Examiner’s assertions regarding Austic and the anticipation rejections made in the 4/23/21 Final Action and cancellation of these claims cannot be regarded as conceding the validity of the same.

Rejections under 35 U.S.C. 103

Claims 6, 7, 22-25, and 27-29 were rejected under 35 U.S.C. 103 as being unpatentable over Austic over Arquette (U.S. Pat. No. 5968530, hereinafter “Arquette”). Applicant respectfully traverses this rejection and requests reconsideration of the claims.

Referring to the legal standards set forth in Appendix A, Applicant observes that the Examiner has not explicitly stated which of the obviousness rationales endorsed in *KSR International Co. v. Teleflex Inc.* 550 U.S. 398, 127 S.Ct. 1727, 167 L.Ed.2d 705 (2007) are being used. The Applicant believes the rationale being used is B:

“(B) Simple substitution of one known element for another to obtain predictable results;” MPEP § 2141(II), (III) and 72 Federal Register 57527 (October 10, 2007).

Claim 6, 7, and 22-23 have been canceled and the obviousness rejection of these claims is therefore moot.

Independent claim 24 was rejected under 35 U.S.C. 103 as being unpatentable over Austic in view of Arquette. In making the 103 rejection of claim 24 the Examiner admits, and the Applicant agrees, on p. 12 of the 4/23/21 Final Action that “Austic does not teach the feedstock comprising jojoba wax esters further comprises hydrogenated wax esters.” The Examiner then turns to Arquette to teach hydrogenated jojoba wax esters. Unfortunately, it is

clear that the process used in Arquette is a chemically catalyzed process only. Because of this, attempting to predict what would happen when processing hydrogenated jojoba wax using the teachings of Arquette and the actual teachings of Austic on this point (non-existent) is quite speculative. This is particularly so when physical properties of the product like oxidative stability index (OSI) are involved for which Austic has no data at all and all Arquette teaches on this subject is the ambiguously worded statement in col. 17 lines 25-29: “Observations: HIPJ forms an occlusive, emollient moisture barrier on the lips that helps keep them soft and supple when exposed to the elements (wind, sun, cold and dry heat). Each of the natural botanical emollients exhibits excellent oxidative stability.” At the bottom of the table in Example X in Arquette HIPJ is identified as “HIPJ: 25% saturated jojoba wax esters; 37% saturated isopropyl esters; and 38% saturated jojoba alcohols.” It is unclear from this language from Arquette whether the stated “excellent oxidative stability” is actually being attributed to HIPJ by itself or to the fully formed lip balm wax. However, resolving this ambiguity is not that relevant as Arquette simply provides one of ordinary skill with no idea what “excellent” OSI would be or what its “excellent” OSI actually is in hours.

Because of this, the result on OSI of processing Arquette’s materials in Austic’s process is entirely unknown based on the teachings of the references themselves. As discussed at length in the Declaration of Jeff Addy previously filed on 3/22/21, observing a jojoba wax ester product with a higher OSI than the OSI of the original feedstocks is extremely unlikely because of the processing conditions taught in Austic (see para. 17 of the 3/22/21 Addy Declaration). The present specification establishes that the increase in OSI in the enzymatically transesterified products versus the OSI of the feedstock material was unexpected: “Surprising, however, the OSI of the enzymatically catalyzed transesterified product is greater than that of the feedstock. This result indicates that the enzymatic catalysis has an unexpected positive effect on OSI that is not explainable simply by the enzymatic catalyst preserving the natural tocopherols originally present in the feedstock during the reaction.”

The additional Declaration of Jeff Addy filed herewith outlines an experiment conducted with a mixture of 20% hydrogenated jojoba wax esters and 80% jojoba wax esters contained in refined jojoba oil. This experiment was consistent with the percentages found in the experimental results outlined in para. [0065] – [0070] in the present specification. The experimental results indicate that the OSI of the enzymatically transesterified product was again, consistent with all of the surprising experimental evidence in the present specification, significantly higher than the OSI of the feedstock and the OSI of the chemically transesterified product. As stated in the Declaration, the fact that a small increase in OSI was observed for the chemically catalyzed material does not represent a likely real improvement due to the imprecision inherent in OSI measurements. Thus, the increase shows, at best, that for the feedstock employed in the experiments in the Declaration, the chemically catalyzed product had, as a practical matter, the same OSI as the feedstock. As stated in the Declaration, the observed nearly 2.5 time increase in OSI for a hydrogenated jojoba wax ester containing composition using enzymatically catalyzed transesterification is a surprising and unexpected result in view of the teachings of Austic and Arquette.

The Applicant believes that the evidence present in the specification as filed and the series of declarations filed throughout the prosecution of this case, including the Declaration filed herewith provide **overwhelming evidence of unexpected results** of what happens when jojoba wax ester feedstocks are enzymatically transesterified. Austic provides zero OSI evidence at all, and Arquette's single statement regarding OSI provides no data value nor any comparison and involves only a chemically catalyzed process. The Examiner has no data or evidence, only speculation, upon which to base the obviousness arguments in this case.

The Examiner's arguments that the amount of "esters is a result effective variable and finding the optimum concentration would be within the purview of routine experimentation for one of ordinary skill" on p. 13 of the 4/23/21 does violence to the doctrine of result effective variables laid out in the case law. The ratio of jojoba wax esters and hydrogenated wax esters is simply not a result-effective variable because it is not this ratio is that is the result to be optimized—rather the Examiner has to show **some other physical property of the product**

that is optimized by changing that ratio to show that one of ordinary skill would be led to change the ratio.

The Examiner citing the Table in Col. 7 of Arquette to show that changing wax ester percentages changes viscosity is irrelevant because viscosity is not a parameter identified in the present claim 24 that is a result/property of the product that the ratio could affect. Arquette actually teaches in col. 7 in reference to the table in Col. 7 that “As the proportion of isopropyl esters and/or the fatty alcohols is increased, the emollient becomes more polar and of a lower viscosity...” This statement says nothing about how the addition or subtraction of **hydrogenated wax esters to the wax esters** of Arquette would affect viscosity. This statement indicates that the wax esters themselves actually have NO EFFECT on viscosity—it is moving the percentages of isopropyl esters and fatty alcohols that produce the observed effect of Arquette. Accordingly, Arquette teaches nothing about how the ratio of the jojoba wax esters and the hydrogenated wax esters can affect the viscosity of the mixture—indeed, it suggests that the wax esters are unimportant to affecting the viscosity of its emollients.

Finally, the percentage of hydrogenated jojoba wax esters to jojoba wax esters cannot itself be the result effective variable because this percentage is just of the feedstock to the enzymatic transesterification process itself. Claim 24 claims a difference between the properties of the product (OSI of the product) versus the properties of the feedstock (OSI of the feedstock). This is the result, not the percentage of hydrogenated jojoba wax esters. Arquette does not teach anything about how adjusting a percentage of hydrogenated jojoba wax esters to jojoba wax esters affects OSI at all. What Arquette actually states is that a product that contains 100% hydrogenated jojoba wax esters has “excellent” OSI. The HIPJ product disclosed in Arquette has saturated jojoba wax esters, 37% saturated isopropyl esters, and 38% saturated jojoba alcohols. Since these percentages add up to 100%, the HIPJ product actually contains 100% saturated jojoba esters (hydrogenated jojoba wax esters) **and 0% unsaturated jojoba wax esters**. Because of this, Arquette fails to recognize that any ratio between hydrogenated (saturated) jojoba wax esters and jojoba wax esters **has any effect** on the OSI of any product disclosed in this reference. Nor does Arquette indicate that any change

in the ratio of hydrogenated jojoba wax esters and jojoba wax esters results in a change in viscosity of the emollients disclosed herein.

Recognizing this failure in the teachings of Arquette is important because the case law on result effective variables requires that **the art being cited must actually teach that the variable being adjusted does affect the property of interest**. MPEP 2144.05(III)(C) states:

Applicants may rebut a *prima facie* case of obviousness based on optimization of a variable disclosed in a range in the prior art by showing that the claimed variable was **not recognized in the prior art to be a result-effective variable**. *E.I. Dupont de Nemours & Company v. Synvina C.V.*, 904 F.3d 996, 1006 (Fed. Cir. 2018). ("The idea behind the 'result-effective variable' analysis is straightforward. Our predecessor court reasoned that a person of ordinary skill would not always be motivated to optimize a parameter 'if there is no evidence in the record that the prior art recognized that [that] particular parameter affected the result.' *Antonie*, 559 F.2d at 620. For example, in *Antonie* the claimed device was characterized by a certain ratio, and the prior art did not disclose that ratio and was silent regarding one of the variables in the ratio. *Id.* at 619. Our predecessor court thus reversed the Board's conclusion of obviousness. *Id.* at 620. *Antonie* described the situation where a 'parameter optimized was not recognized to be a result-effective variable' as an 'exception' to the general principle in *Aller* that 'the discovery of an optimum value of a variable in a known process is normally obvious.' *Id.* at 620. Our subsequent cases have confirmed that this exception is a narrow one. ... In summarizing the relevant precedent from our predecessor court, we observed in *Applied Materials* that '[i]n cases in which the disclosure in the prior art was insufficient to find a variable result-effective, there was essentially no disclosure of the relationship between the variable and the result in the prior art.' 692 F.3d at 1297. Likewise, if the prior art does recognize that the variable affects the relevant property or result, then the variable is result-effective. *Id.* ('A recognition in the prior art that a property is affected by the variable is sufficient to find the variable result-effective.')). Emphasis added.

It is plain that the teachings of Arquette regarding viscosity and its limited teachings regarding OSI fail entirely to establish a connection between the ratio of hydrogenated jojoba wax esters and jojoba wax esters and the OSI of an enzymatically transesterified product (Arquette itself teaches only chemically transesterified products).

In view of the foregoing, the Examiner's obviousness rejection of independent claim 24 1) fails to establish a *prima facie* case, and 2) is overcome by the overwhelming evidence on

this record of unexpected results. The rejection is therefore error, and the Applicant respectfully requests that it be withdrawn.

Dependent claims 25, and 27-29 are allowable, among other reasons, for depending from otherwise allowable independent claim 24.

In view of the foregoing, the Applicant respectfully requests that the obviousness rejections of claims 24-25 and 27-29 be withdrawn.

Regarding Doctrine of Equivalents

Applicant hereby declares that any amendments herein that are not specifically made for the purpose of patentability are made for other purposes, such as clarification, and that no such changes shall be construed as limiting the scope of the claims or the application of the Doctrine of Equivalents.

CONCLUSION

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

If any fees, including extension of time fees or additional claims fees, are due as a result of this response, please charge Deposit Account No. 60-1853. This authorization is intended to act as a constructive petition for an extension of time, should an extension of time be needed as a result of this response. The examiner is invited to telephone the undersigned if this would in any way advance the prosecution of this case.

Respectfully submitted,

Date: 7/20/2021

By: /Adam Stephenson/
Adam R. Stephenson
Reg. No. 58,349

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Appendix A:
Legal Standard for Finding Obviousness under 35 U.S.C. 103

The most recent guidelines published by the USPTO regarding the implementation of the Supreme Court's decision in *KSR International Co. v. Teleflex Inc.* 550 U.S. 398, 127 S.Ct. 1727, 167 L.Ed.2d 705 (2007) state that:

An invention that would have been obvious to a person of ordinary skill at the time of the invention is not patentable. See 35 U.S.C. 103(a). As reiterated by the Supreme Court in *KSR*, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the Court are as follows:

- (A) Determining the scope and content of the prior art;
- (B) Ascertaining the differences between the claimed invention and the prior art; and
- (C) Resolving the level of ordinary skill in the pertinent art...

Office personnel fulfill the critical role of fact-finder when resolving the *Graham* inquiries...When making an obviousness rejection, Office personnel must therefore ensure that the written record includes findings of fact concerning the state of the art and the teachings of the references applied. In certain circumstances, it may also be important to include explicit findings as to how a person of ordinary skill would have understood prior art teachings, or what a person of ordinary skill would have known or could have done. Factual findings made by Office personnel are the necessary underpinnings to establish obviousness...

In short, the focus when making a determination of obviousness should be on what a person of ordinary skill in the pertinent art would have known at the time of the invention, and on what such a person should reasonably have been able to do in view of that knowledge. This is so regardless of whether the source of that knowledge and ability was documentary prior art, general knowledge in the art, or common sense...

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) stated

that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*... Exemplary rationales that may support a conclusion of obviousness include:

(A) Combining prior art elements according to known methods to yield predictable results;

(B) Simple substitution of one known element for another to obtain predictable results;

(C) Use of known technique to improve similar devices (methods, or products) in the same way;

(D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

(E) “Obvious to try”-choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. MPEP § 2141(II), (III) and 72 Federal Register 57527 (October 10, 2007).

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	14578075
	Filing Date	2014-12-19
	First Named Inventor	Jeff Addy
	Art Unit	1657
	Examiner Name	Patury, Srikanth
	Attorney Docket Number	FLORATECH002

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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

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

Application Number	14578075
Filing Date	2014-12-19
First Named Inventor	Jeff Addy
Art Unit	1657
Examiner Name	Patury, Srikanth
Attorney Docket Number	FLORATECH002

1	SCHUCHARDT, Transesterification of Vegetable Oils: a Review, J. Braz. Chem. Soc. Vol. 9, No. 1, 199-210, 1998 (Year: 1998)
2	Oleyl-Alcohol, Oleyl Alcohol, CAS Number: 143-28-2, Cayman Chemical Data Sheet, 2021, (Year: 2021)
3	DE GREYT et al., Developments in Edible Oil Modification for the Production of Trans-free Food Fats, OIL PALM BULLETIN, Vol. 61, 1 November 2010 (2010-11-01), pages 38-44
4	WOLFMEIER et al., Waxes, Ullmann's Encyclopedia of Industrial Chemistry, 15 June 2000 (2000-06-15), Wiley-VCH Verlag, Weinheim, XP055033858, pages 111-172

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

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*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	14578075
Filing Date	2014-12-19
First Named Inventor	Jeff Addy
Art Unit	1657
Examiner Name	Patury, Srikanth
Attorney Docket Number	FLORATECH002

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	/Adam Stephenson/	Date (YYYY-MM-DD)	2021-08-11
Name/Print	Adam R. Stephenson	Registration Number	58349

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.
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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.



ELECTRONIC PAYMENT RECEIPT

APPLICATION #
14/578,075

RECEIPT DATE / TIME
08/11/2021 10:26:09 PM ET

ATTORNEY DOCKET #
FloraTech002

Title of Invention

Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 2053

FILED BY Dee Wilson

PATENT CENTER # 60278655

AUTHORIZED BY Adam Stephenson

CUSTOMER # 93756

FILING DATE 12/19/2014

CORRESPONDENCE
ADDRESS -

FIRST NAMED
INVENTOR Jeff Addy

Payment Information

PAYMENT METHOD
DA / 601853

PAYMENT TRANSACTION ID
E20218AM27344536

PAYMENT AUTHORIZED BY
Adam Stephenson

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
1806	SUBMISSION OF AN INFORMATION DISCLOSURE STATEMENT	260.00	1	260.00
TOTAL AMOUNT:				\$260.00

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National Stage of an International Application under 35 U.S.C. 371

Vantage Exhibit 1002

Page 1102 of 1215

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New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
14/578,075

RECEIPT DATE / TIME
08/11/2021 10:26:09 PM ET

ATTORNEY DOCKET #
FloraTech002

Title of Invention

Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

Application Information

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PATENT CENTER # 60278655

FILING DATE 12/19/2014

CUSTOMER # 93756

FIRST NAMED
INVENTOR Jeff Addy

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY Adam Stephenson

Documents

TOTAL DOCUMENTS: 5

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
NPI2.pdf	3	Non Patent Literature	247 KB
NPL3.pdf	7	Non Patent Literature	761 KB
NPL4.pdf	62	Non Patent Literature	5868 KB
NPL1.pdf	12	Non Patent Literature	730 KB
SIDS002_5.pdf	4	Information Disclosure Statement (IDS) Form (SB08)	1010 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
NPI2.pdf	9256AA42DCADEAA25D645719206377D406C9A04DF6F4BAB75 6DB167D6A18F6C5D0C7CE8A6B85937BD12B9D7EE4D0F7937 14A0EAE83C055EBFE874E50113E50B8
NPL3.pdf	5FA3E7DA5F97E28C0E2FF7D4E1DC7C957C8AF54FEF0450422 2F1ED36EE803AA8B626E5FDE49874573EEBA08353E52884B4 913562E1CFECEDAACC74CB6E399CC6
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SIDS002_5.pdf	13F2A1F6884557151BD8214785DD8400FF62E8496C53C89162 4C10FE3CAF8F8AD5151889664BBAADD05F5A5B4134438CFE CC47CD56D26782F3C5360AF84EEA19

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
14/578,075

RECEIPT DATE / TIME
08/26/2021 03:45:54 PM ET

ATTORNEY DOCKET #
FloraTech002

Title of Invention

Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 2053

FILED BY Dee Wilson

PATENT CENTER # 60293735

FILING DATE 12/19/2014

CUSTOMER # 93756

FIRST NAMED
INVENTOR Jeff Addy

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY Adam Stephenson

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
SuppAmdttoRCE2.pdf	6	Supplemental Response or Supplemental Amendment	112 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
SuppAmdttoRCE2.pdf	470A6814A5A29534DDFC37EED864FC9CA3B60377227A634F7 BCF36B56A8CD4D00F14F62FBD7A8461A748F0F976C7D1E3D6 A618AAF815D56F831A861E90847216

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FLORATECH002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AMENDMENT/REPLY

Applicant: Jeff Addy

Docket No: FLORATECH002

Examiner: Patury, Srikanth

Ser. No: 14578075

Filed: December 19, 2014

Group Art Unit: 1657

Conf. No.: 2053

Title: Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

SUPPLEMENTAL AMENDMENT

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

Sir/Madam:

The following is a supplemental amendment to the amendment filed with the request for continued examination filed on 7/20/2021 which was responsive to the Office Action mailed April 23, 2021. Applicant respectfully requests reconsideration of the application in view of the following:

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

Remarks/Arguments begin on page 4 of this paper.

AMENDMENTS TO THE CLAIMS

Please amend claim 24 as indicated among the following complete set of pending claims:

- 1-23. (Canceled).
24. (Currently amended) A process for transesterifying wax esters, the process comprising:
- providing a feedstock comprising ~~50% to 80% by weight~~ jojoba wax esters,
- wherein some of the jojoba wax esters are hydrogenated and the amount of
- hydrogenated jojoba wax esters is 20% to 50% by weight of the jojoba wax esters;
- contacting the feedstock with a lipase; and
- transesterifying the jojoba wax esters and the hydrogenated jojoba wax esters in
- the feedstock with the lipase to form a transesterified product;
- wherein an oxidative stability index (OSI) of the transesterified product is
- greater than an OSI of the feedstock.
25. (Previously presented) The process of claim 24, wherein the feedstock consists essentially of the jojoba wax esters and the hydrogenated jojoba wax esters.
26. (Canceled).
27. (Previously presented) The process of claim 24, wherein the feedstock does not comprise any free fatty alcohols.

28. (Previously presented) The process of claim 24, wherein the transesterified product does not comprise any methyl esters.
29. (Previously presented) The process of claim 24, wherein the feedstock does not comprise any methyl esters.

REMARKS

Claims 24-25 and 27-29 are currently pending in the application. Applicant has amended claim 24. Applicant requests reconsideration of the application in light of the following remarks.

Telephone Interview

Applicant's attorney wishes to thank the Examiner for his courtesy and time during a telephone interview that was held on 8/26//2021 which discussed a clarity issue with the claims that inadvertently resulted from entry of the amendments filed in the Amendment After Final filed 6/3/2021. The Examiner's comments and insight were very helpful in preparing this response. It is hoped that the comments below reflect the spirit of the interview.

Claim Amendments:

After further consideration of the claim language, Applicant realized that the language "50% to 80% by weight jojoba wax esters" in line 2 of claim 24 no longer correlated with the element "20% to 50% by weight" referring to the hydrogenated jojoba wax esters recited in line 4. Applicant also realized that his language also conflicted with the language of dependent claim 25, where the feedstock is recited as "consist[ing] essentially of the jojoba wax esters and the hydrogenated jojoba wax esters." Under the current language, the weight percent of total jojoba wax esters (hydrogenated and otherwise) would only be as high as 80%, leaving 20% something else in the feedstock which likely would not be a range sufficient to support the "consisting essentially of" preamble of claim 25.

Accordingly the amendments to delete the element "50% to 80% by weight" serves to remove this language inconsistency. The amendment also clarifies that the feedstock contains jojoba wax esters and that, of those jojoba wax esters in the feedstock, 20%- 50% by weight are recited to be hydrogenated jojoba wax esters. Support for this amendment can be found throughout the specification and in at least Table 7 of the present specification where the wax ester percentages used in the reacted material were 98% including where various percentages of hydrogenated wax esters were used in the transesterification reaction.

Regarding Doctrine of Equivalents

Applicant hereby declares that any amendments herein that are not specifically made for the purpose of patentability are made for other purposes, such as clarification, and that no such changes shall be construed as limiting the scope of the claims or the application of the Doctrine of Equivalents.

CONCLUSION

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

If any fees, including extension of time fees or additional claims fees, are due as a result of this response, please charge Deposit Account No. 60-1853. This authorization is intended to act as a constructive petition for an extension of time, should an extension of time be needed as a result of this response. The examiner is invited to telephone the undersigned if this would in any way advance the prosecution of this case.

Respectfully submitted,

Date: 8/26/2021

By: /Adam Stephenson/
Adam R. Stephenson
Reg. No. 58,349

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480.264.6075
480.718.8336 fax
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/578,075	Filing Date 12/19/2014	☐ To be Mailed
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ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE (\$)	FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 = *		x \$80 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 = *		x \$420 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED - PART II

	(Column 1)		(Column 2)	(Column 3)	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	08/26/2021		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	
	Total (37 CFR 1.16(i))	* 5	Minus	** 20	= 0	x \$100 = 0
	Independent (37 CFR 1.16(h))	* 1	Minus	*** 3	= 0	x \$480 = 0
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
TOTAL ADD'L FEE						0
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	
	Total (37 CFR 1.16(i))	*	Minus	**	=	x \$0 =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x \$0 =
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
TOTAL ADD'L FEE						
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/LINDA HUMES/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".						
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.						

This collection of information is required by 37 CFR 1.16. 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 12 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, 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.**

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Adam R. Stephenson, LTD. 8350 E Raintree Dr., Ste 245 Scottsdale, AZ 85260			PATURY, SRIKANTH	
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Please find below and/or attached an Office communication concerning this application or proceeding.

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DETAILED ACTION

Notice of Pre-AIA or AIA Status

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

Continued Examination Under 37 CFR 1.114

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 final rejection. 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, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/20/2021 and 08/26/2021 has been entered.

The amendments and remarks filed on 07/20/2021 and 08/26/2021 are acknowledged and have been fully considered. Claims 24-25 and 27-29 are pending. Claim 24 is amended. Claims 1, 3-4, 6-7, 21-23 and 26 are cancelled. Claims 2, 5 and 8-20 were previously cancelled. Claims 24-25 and 27-29 are now under consideration and the subject of this office action.

Response to Amendment

The previous rejections of claims 1, 3-4, 6-7, 21-23 and 26 are moot in light of the cancellation of the claims in the amendments filed on 07/20/2021.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 08/11/2021 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112(a) (New Matter)

The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 24-25 and 27-29 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amendments filed 08/26/2021 have introduced NEW MATTER into the claims. Claim 24 currently recites limitations which were not disclosed in the original disclosure. Claim 24 has been amended to recite the feedstock comprises jojoba wax esters wherein some of the wax esters are hydrogenated and the amount of hydrogenated jojoba wax esters is 20% to 50% by weight of the jojoba wax esters and this limitation constitutes new matter.

The original disclosure as filed describes feedstock comprising jojoba wax esters and hydrogenated jojoba wax esters (Example 3, [0064-0070] on pages 21-24 of instant specification). The original disclosure discloses the feedstock containing 20%, 30% and 50% by weight hydrogenated jojoba wax esters (see [0067], Table 8, Fig. 5-7). The original disclosure at [0070] of the specification discloses that HWJ0 is pure jojoba oil with no hydrogenated jojoba wax esters, HWJ20 is a feedstock with 20% by weight of hydrogenated jojoba wax ester (see [0032],[0070], Fig. 5), HWJ30 is a feedstock with 30% by weight of hydrogenated jojoba wax ester (see [0033],[0070], Fig. 6) and HWJ500 is a feedstock with 50% by weight of hydrogenated jojoba wax ester (see [0034],[0070], Fig. 7). The original disclosure supports the amount of hydrogenated jojoba wax esters is 20% to 50% by weight of the feedstock. The original disclosure does not disclose “the amount of hydrogenated jojoba wax esters is 20% to 50% by weight of the jojoba wax esters” as recited in instant claim 24. The new limitation in claim 24 is hence not supported by the original disclosure.

In amended cases, subject matter not disclosed in the original application is sometimes added and a claim directed thereto. Such a claim is rejected on the ground that it recites elements without support in the original disclosure under 35 U.S.C. 112, first paragraph, *Waldemar Link, GmbH & Co. v. Osteonics Corp.* 32 F.3d 556, 559, 31 USPQ2d 1855, 1857 (Fed. Cir. 1994); *In re Rasmussen*, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981). See MPEP § 2163.06 - § 2163.07(b) for a discussion of the relationship of new matter to 35 U.S.C. 112, first paragraph. New matter includes not only the addition of wholly unsupported subject matter, but may also include adding specific percentages or compounds after a broader original disclosure, or even the

omission of a step from a method. See MPEP § 608.04 to § 608.04(c). See *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976) and MPEP § 2163.05 for guidance in determining whether the addition of specific percentages or compounds after a broader original disclosure constitutes new matter.

Instant claim 24 now recites limitations, which are not clearly disclosed in the specification as filed, and now change the scope of the instant disclosure as filed. Such limitations recited in amended claim 24, which did not appear in the specification or original claims, as filed, introduce new concepts and violate the description requirement of the first paragraph of 35 U.S.C 112. Applicant is required to provide sufficient written support for the limitations recited in present claim 24 in the specification or claims as-filed, or remove these limitations from the claims in response to this Office Action.

Dependent claims 25 and 27-29 are rejected for the same reason.

It is suggested to amend claim 24 first step to “providing a feedstock comprising hydrogenated jojoba wax esters at 20% to 50% by weight of the feedstock” to obviate the rejection.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims the examiner presumes that the subject matter of the various claims was commonly owned as of the effective filing date of the claimed invention(s) absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and effective filing dates of each claim that was not commonly owned as of the effective filing date of the later invention in order for the examiner to consider the applicability of 35 U.S.C. 102(b)(2)(C) for any potential 35 U.S.C. 102(a)(2) prior art against the later invention.

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

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 24-25 and 27-29 are rejected under 35 U.S.C. 103 as being unpatentable over **Arquette** (US 5,968,530; Iss. Oct. 19, 1999; Applicant IDS) **in view of Steinke** (Lipase-Catalyzed Alcoholysis of Crambe Oil and Camelina Oil for the preparation of Long-Chain Esters; JAOCS, Vol. 77, no. 4, 2000; Applicant IDS) **as evidenced by Schuchardt** (Transesterification of Vegetable Oils: a Review, J. Braz. Chem. Soc. Vol. 9, No. 1, 199-210, 1998; Applicant IDS).

Regarding claim 24, Arquette teaches a process to produce an emollient comprising the steps of providing a composition comprising jojoba oil, adding an alcohol and effecting alcoholysis on said jojoba oil mixed with said alcohol to produce an emollient (see col. 8 lines 49-56). Arquette teaches a base catalyzed alcoholysis (see col. 2 lines 35-39, Example 1 in col. 8-9). Arquette teaches adding the refined jojoba oil and isopropyl alcohol first into the reactor (see Example 1 in col. 8 lines 57-65) and then

adding the catalyst for the alcoholysis reaction to the reactor (see Example 1 in col. 9 lines 2-6). Arquette teaches jojoba oil comprises wax esters (see col. 5 lines 1-20, Table – Wax Esters). Alcoholysis is a transesterification reaction when an ester is reacted with an alcohol (for evidence – see *Schuchardt col. 1 para. 1, Scheme 1*). The instant specification also discloses the same reaction to be a transesterification (see specification in PGPB [0037]) and discloses jojoba oil as a feedstock (Ex. 3). Therefore, Arquette teaches transesterification reaction of a feedstock comprising jojoba wax esters to form a transesterified product (the emollient). Arquette teaches amounts of the jojoba esters in the feedstock in the alcoholysis reaction to be about 80% or lower (col. 6 lines 55-60). Arquette teaches the feedstock to comprise refined jojoba oil or hydrogenated jojoba oil or a mixture of the oil and hydrogenated oil (see col. 8 lines 56-59, Example 1 – 80% by weight of jojoba oil, Example 3 – 66% by weight hydrogenated jojoba oil). Arquette teaches the viscosity of the emollient (the transesterified product) is a function of the ester content (see col. 7 lines 6-25, second Table in col. 7). Therefore, Arquette is teaching the amount of jojoba wax esters in the feedstock is a result effective variable and finding the optimum concentration would be within the purview of routine experimentation for one of ordinary skill. Since Arquette teaches the feedstock can be a mixture of jojoba wax esters and hydrogenated jojoba wax esters finding the optimum amount of the hydrogenated jojoba wax esters in the mixture of jojoba wax esters and hydrogenated jojoba wax esters would also be within the purview of routine experimentation for one of ordinary skill. The amount of hydrogenated jojoba wax esters to be 20% to 50% by weight is rendered obvious by the teachings of Arquette,

absent any evidence that the amount of hydrogenated jojoba wax esters in the feedstock is critical. See MPEP 2144.05 II.

Arquette does not teach contacting the feedstock with a lipase (the alcoholysis catalyst) to catalytically transesterify the wax esters in the feedstock to form a transesterified product and does not teach the oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock.

Steinke teaches lipase-catalyzed alcoholysis of oils (feedstocks) for the preparation of esters (see Title). Steinke teaches that lipase-catalyzed alcoholysis led to higher conversions as compared to a base catalyzed alcoholysis. Steinke teaches treatment of the reaction products was simpler in the lipase-catalyzed alcoholysis because no potassium soaps were formed (see pg. 365 col. 2). Steinke teaches the ester composition in the lipase catalyzed product is similar to the base catalyzed product (see pg. 365, col.1 last para, last sentence). Steinke teaches the alcoholysis is performed by adding oleyl alcohol to the feedstock oil and adding the lipase catalyst, Lipozyme IM, to produce the esters (see pg. 362 col. 1 Alcoholysis, Fig. 1).

It would have been obvious to one of ordinary skill in the art before the effective filing date of the instant invention to modify the transesterification method of Arquette by catalyzing the alcoholysis (transesterification) with a lipase as taught by Steinke instead of base catalysis. One of ordinary skill in the art would be motivated to do so because Steinke teaches lipase-catalyzed alcoholysis (transesterification) led to higher conversions as compared to a base-catalyzed alcoholysis.

Arquette and Steinke are silent regarding the oxidative stability index (OSI) of the transesterified product. However, the limitations “wherein an oxidative stability index

(OSI) of the transesterified product is greater than an OSI of the feedstock” is the intended result of the method of claim 24 and would inherently be met in the transesterification process of Arquette in view of Steinke. As discussed above, Arquette in view of Steinke teaches a process for transesterifying a feedstock comprising a mixture of jojoba wax esters and hydrogenated jojoba wax esters by contacting with a lipase (Lipozyme IM) and oleyl alcohol and in such a transesterification process the OSI of the product is greater than the OSI of the feedstock. For evidence, see the declaration under 37 CFR 1.132 submitted by applicants on 12/06/2018 at page 3 sections 5-8, see Table. The declaration provides evidence that when a mixture comprising jojoba oil/hydrogenated jojoba oil is contacted with a lipase (Lipozyme IM) and oleyl alcohol (the same lipase and alcohol taught by Steinke), the transesterified product has an OSI which is 384% of the feedstock (see Table on page 3 of the declaration).

Regarding claim 25, the claim recites “the feedstock consists essentially of the jojoba wax esters and the hydrogenated wax esters”. The transitional phrase “consisting essentially of” limits the scope of a claim to the specified materials and steps “those that do not materially affect the basic and novel characteristics” of the claimed invention. The instant disclosure does not clearly indicate what the basic and novel characteristics actually are, therefore “consisting essentially of” will be construed as equivalent to “comprising”. Arquette teaches the alcoholysis (transesterification) reaction is performed using refined jojoba oil or a mixture of jojoba oil and hydrogenated jojoba oil (containing a mixture of jojoba wax esters and hydrogenated wax esters).

Regarding claims 27-29, the instant specification states refined jojoba oil as the feedstock (see line 2 of [0055] on page 16 of the specification) and that it contains wax esters and no free fatty alcohols or fatty acid methyl esters therein (see Table 3 on page 17 of the specification). Since Arquette in view of Steinke also teaches a mixture of refined jojoba oil and hydrogenated jojoba oil as the feedstock and contacting with a lipase as recited in claim 24, it would inherently meet the limitations “feedstock does not comprise any free fatty alcohols therein” (claim 27), “the transesterified product does not comprise any methyl esters” (claim 28) and “the feedstock does not comprise any methyl esters” (claim 29).

The teachings of Arquette and Steinke would render claims 24-25 and 27-29 obvious.

Response to Arguments

Applicant's arguments filed 07/20/2021 and 08/26/2021 have been fully considered but are not persuasive. Applicants traverse the rejection of claims 24-25 and 27-29 under 35 USC 103 and argue that the transesterification process of Arquette is a chemically catalyzed process. Applicants argue that Arquette only teaches its emollient compositions have excellent oxidative stability and does not teach that the OSI of the transesterified product (see pages 5-6 of remarks filed on 07/20/2021). Applicants reiterate arguments that increase in OSI of the enzymatically transesterified product as compared to the OSI of the feedstock is unexpected (see page 6 of remarks filed on 07/20/2021). Applicants have also submitted a declaration under 37 C.F.R §1.132 by inventor Jeff Addy on 07/20/2021 which discloses experiments comparing chemical vs enzymatic transesterification of a mixture of 20% hydrogenated jojoba wax esters and

80% jojoba wax esters (see pages 2-4 of the declaration). Applicants argue that the 2.5 time increase in OSI under enzymatic transesterification is a surprising and unexpected result (see page 7 of remarks filed on 07/20/2021).

These arguments are not persuasive because it is reiterated that the limitations “wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock” in claim 24 and “the transesterified product does not comprise any methyl esters” in claim 28 is the intended result of the method and would inherently be met if the prior art process comprises the same active method steps. The only active method steps in instant claim 24 is providing a feedstock comprising jojoba wax esters, wherein some of the jojoba wax esters are hydrogenated and the amount of hydrogenated wax esters is 20%-50% by weight, contacting the feedstock with a lipase and catalytically transesterifying the jojoba wax esters/hydrogenated jojoba wax esters in the feedstock with the lipase to form a transesterified product. The claimed method does not recite any additional limitations (process conditions) that are necessary and/or critical to achieve the result that an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock. It is also noted the instant claims recite a method using the transitional phrase “comprising” which does not preclude any additional process steps. See MPEP 2111.03.

As discussed above, the combined teachings of Arquette in view of Steinke renders obvious the claimed process. Arquette in view of Steinke teaches a process for transesterifying a feedstock comprising a mixture of jojoba wax esters and hydrogenated jojoba wax esters by contacting with a lipase (Lipozyme IM) and oleyl alcohol and in such a transesterification process the OSI of the product is greater than

the OSI of the feedstock. For evidence, see the declaration under 37 CFR 1.132 submitted by applicants on 12/06/2018 at page 3 sections 5-8, see Table. The declaration provides evidence that when a mixture comprising jojoba oil/hydrogenated jojoba oil is contacted with a lipase (Lipozyme IM) and oleyl alcohol (the same lipase and alcohol taught by Steinke), the transesterified product has an OSI which is 384% of the feedstock (see Table on page 3 of the declaration). Steinke expressly teaches a motivation to substitute base catalyst with a lipase catalyst because it teaches lipase-catalyzed alcoholysis (transesterification) led to higher conversions as compared to a base-catalyzed alcoholysis. Therefore, the transesterification process of Arquette in view of Steinke would also form a transesterified product whose OSI is greater than the OSI of the feedstock.

In response to applicant's argument that OSI of the product is greater than the OSI of the feedstock and that this result is unexpected, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Applicants also argue that Arquette does not recognize that ratio of jojoba wax esters and hydrogenated wax esters is a result effective variable. Applicants argue that based on the teachings of Arquette in col. 7, it indicates that wax esters themselves have no effect on viscosity. Applicants argue that Arquette does not teach anything about how adjusting a percentage of hydrogenated jojoba wax esters to jojoba wax esters affects OSI at all (see page 8). Applicants argue that since the prior art being

cited does not actually teach the variable being adjusted does affect the property of interest (OSI of the transesterified product), the obviousness rejections of claims 24-25 and 27-29 should be withdrawn.

These arguments are not persuasive because it is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant. See MPEP 2144 IV. The prior art need not recognize that amount of esters affects OSI of the product. The examiner disagrees with applicant assertion that Arquette indicates that wax esters themselves have no effect on viscosity based on the disclosure of Arquette in col. 7 which discloses "As the proportion of isopropyl esters and/or the fatty alcohols is increased, the emollient becomes more polar and of lower viscosity". The examiner disagrees because the jojoba oil of Arquette comprises isopropyl esters, fatty alcohols and jojoba wax esters and if amounts of isopropyl esters and/or the fatty alcohols is changed, the amount of jojoba wax esters is also changed (see second Table in col. 7). Arquette teaches the viscosity of the emollient (the transesterified product) is a function of the ester content (see col. 7 lines 6-25, second Table in col. 7). Therefore, Arquette is teaching the amount of jojoba wax esters in the feedstock is a result effective variable and finding the optimum concentration would be within the purview of routine experimentation for one of ordinary skill. Arquette teaches the feedstock in its base catalyzed alcoholysis reaction to comprise refined jojoba oil or hydrogenated jojoba oil or a mixture of the oil and hydrogenated oil (see col. 8 lines 56-59, Example 1 – 80% by weight of jojoba oil, Example 3 – 66% by weight hydrogenated jojoba oil). Since Arquette teaches the feedstock can be a mixture of jojoba wax esters and hydrogenated jojoba wax esters finding the optimum amount of the hydrogenated

jojoba wax esters in the mixture of jojoba wax esters and hydrogenated jojoba wax esters would also be within the purview of routine experimentation for one of ordinary skill. The amount of hydrogenated jojoba wax esters to be 20% to 50% by weight is rendered obvious by the teachings of Arquette, absent any evidence that the amount of hydrogenated jojoba wax esters in the feedstock is critical. See MPEP 2144.05 II.

Therefore, the arguments presented on 07/20/2021 and the declaration under 37 CFR 1.132 filed 07/20/2021 are insufficient to overcome the obviousness rejections of the claims 24-25 and 27-29.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file

provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-l.jsp.

US App. No. 16/560,175

Claims 24-25, 27-29 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 5-7, 11-13 and 17-18 of co-pending Application No. **16/560,175** (reference application) in view of Arquette (US 5,968,530; Iss. Oct. 19, 1999; Applicant IDS) as evidenced by Addy Declaration filed on 12/06/2018.

Regarding instant claim 1, reference claims 5, 11, 17 recite a process for modifying the viscosity of a product comprising: providing a feedstock comprising wax esters; wherein the wax esters of the feedstock comprise jojoba wax esters and hydrogenated jojoba wax esters;

contacting the feedstock with a lipase;

catalytically transesterifying the wax esters in the feedstock with the lipase to form a transesterified product. Reference claims 6, 12, 17 recite oleyl alcohol is

introduced into the feedstock and reference claims 7, 13, 18 recite the concentration of the alcohol is 0.01% to 2.5% of the feedstock.

The reference claims do not recite the amount of the hydrogenated jojoba wax esters to be 20% to 50% by weight and the reference claims are silent regarding the OSI of the transesterified product.

Arquette teaches a process to produce an emollient comprising the steps of providing a composition comprising jojoba oil, adding an alcohol and effecting alcoholysis on said jojoba oil mixed with said alcohol to produce an emollient (see col. 8 lines 49-56). Arquette teaches jojoba oil comprises wax esters (see col. 5 lines 1-20, Table – Wax Esters). Alcoholysis is a transesterification reaction when an ester is reacted with an alcohol (for evidence – see *Schuchardt col. 1 para. 1, Scheme 1*). The instant specification also discloses the same reaction to be a transesterification (see specification in PGPB [0037]) and discloses jojoba oil as a feedstock (Ex. 3). Therefore, Arquette teaches transesterification reaction of a feedstock comprising jojoba wax esters to form a transesterified product (the emollient). Arquette teaches the feedstock to comprise refined jojoba oil or hydrogenated jojoba oil or a mixture of the oil and hydrogenated oil (see col. 8 lines 56-59, Example 1 – 80% by weight of jojoba oil, Example 3 – 66% by weight hydrogenated jojoba oil). Arquette teaches the viscosity of the emollient (the transesterified product) is a function of the ester content (see col. 7 lines 6-25, second Table in col. 7). Therefore, Arquette is teaching the amount of jojoba wax esters in the feedstock is a result effective variable and finding the optimum concentration would be within the purview of routine experimentation for one of ordinary skill. Since Arquette teaches the feedstock can be a mixture of jojoba wax esters and

hydrogenated jojoba wax esters finding the optimum amount of the hydrogenated jojoba wax esters in the mixture of jojoba wax esters and hydrogenated jojoba wax esters would also be within the purview of routine experimentation for one of ordinary skill.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the instant invention to modify the methods of the reference claims and find the optimum amounts of hydrogenated jojoba wax esters in the feedstock comprising jojoba oil in the transesterification reaction. One of ordinary skill in the art would be motivated to do so because Arquette teaches the viscosity of the emollient (the transesterified product) is a function of the jojoba ester content and the reference claims are directed to a process for modifying the viscosity of a product. The amount of hydrogenated jojoba wax esters to be 20% to 50% by weight is rendered obvious by the teachings of Arquette, absent any evidence that the amount of hydrogenated jojoba wax esters in the feedstock is critical. See MPEP 2144.05 II.

The reference claims in view of Arquette are silent regarding the OSI of the transesterified product. However, the reference claims in view of Arquette teaches a process for transesterifying a feedstock comprising a mixture of jojoba wax esters and hydrogenated jojoba wax esters by contacting with a lipase and oleyl alcohol and in such a transesterification process the OSI of the product is greater than the OSI of the feedstock. For evidence, see the declaration under 37 CFR 1.132 submitted by applicants on 12/06/2018 at page 3 sections 5-8, see Table. The declaration provides evidence that when a mixture comprising jojoba oil/hydrogenated jojoba oil is contacted with a lipase and oleyl alcohol, the transesterified product has an OSI which is 384% of the feedstock (see Table on page 3 of the declaration). Therefore, the transesterification

process of reference claims in view of Arquette would also form a transesterified product whose OSI is greater than the OSI of the feedstock.

Regarding instant claim 25, the claim recites “the feedstock consists essentially of the jojoba wax esters and the hydrogenated wax esters”. The transitional phrase “consisting essentially of” limits the scope of a claim to the specified materials and steps “those that do not materially affect the basic and novel characteristics” of the claimed invention. The instant disclosure does not clearly indicate what the basic and novel characteristics actually are, therefore “consisting essentially of” will be construed as equivalent to “comprising”. As discussed above, reference claim 5 teaches a feedstock comprising jojoba wax esters and hydrogenated jojoba wax esters.

Regarding instant claims 27-29, the instant specification teaches refined jojoba oil as the feedstock (see line 2 of [0055] on page 16 of the specification) and teaches it contains wax esters and no free fatty alcohols or fatty acid methyl esters therein (see Table 3 on page 17 of the specification). Since the reference claims in view of Arquette also teaches a mixture of refined jojoba oil and hydrogenated jojoba oil as the feedstock and contacting with a lipase, it would inherently meet the limitations “feedstock does not comprise any free fatty alcohols therein” (claim 27), “the transesterified product does not comprise any methyl esters” (claim 28) and “the feedstock does not comprise any methyl esters” (claim 29).

This is a provisional nonstatutory double patenting rejection.

US App. No. 16/560,216

Claims 24-25, 27-29 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 4-6, 7, 10-12 and 15-16 of co-pending Application No. **16/560,216** (reference application) in view of Arquette (US 5,968,530; Iss. Oct. 19, 1999; Applicant IDS) as evidenced by Addy Declaration filed on 12/06/2018.

Regarding instant claim 1, reference claims 4, 10, 15 recite a process for modifying the viscosity of a product comprising: providing a feedstock comprising wax esters;

wherein the wax esters of the feedstock comprise jojoba wax esters and hydrogenated jojoba wax esters;

contacting the feedstock with a lipase;

catalytically transesterifying the wax esters in the feedstock with the lipase to form a transesterified product. Reference claims 5, 11, 12 recite oleyl alcohol is introduced into the feedstock and reference claims 6, 7, 16 recite the concentration of the alcohol is 0.01% to 2.5% of the feedstock.

The reference claims do not recite the amount of the hydrogenated jojoba wax esters to be 20% to 50% by weight and the reference claims are silent regarding the OSI of the transesterified product.

Arquette teaches a process to produce an emollient comprising the steps of providing a composition comprising jojoba oil, adding an alcohol and effecting alcoholysis on said jojoba oil mixed with said alcohol to produce an emollient (see col. 8 lines 49-56). Arquette teaches jojoba oil comprises wax esters (see col. 5 lines 1-20, Table – Wax Esters). Alcoholysis is a transesterification reaction when an ester is

reacted with an alcohol (for evidence – see *Schuchardt col. 1 para. 1, Scheme 1*). The instant specification also discloses the same reaction to be a transesterification (see specification in PGPB [0037]) and discloses jojoba oil as a feedstock (Ex. 3). Therefore, Arquette teaches transesterification reaction of a feedstock comprising jojoba wax esters to form a transesterified product (the emollient). Arquette teaches the feedstock to comprise refined jojoba oil or hydrogenated jojoba oil or a mixture of the oil and hydrogenated oil (see col. 8 lines 56-59, Example 1 – 80% by weight of jojoba oil, Example 3 – 66% by weight hydrogenated jojoba oil). Arquette teaches the viscosity of the emollient (the transesterified product) is a function of the ester content (see col. 7 lines 6-25, second Table in col. 7). Therefore, Arquette is teaching the amount of jojoba wax esters in the feedstock is a result effective variable and finding the optimum concentration would be within the purview of routine experimentation for one of ordinary skill. Since Arquette teaches the feedstock can be a mixture of jojoba wax esters and hydrogenated jojoba wax esters finding the optimum amount of the hydrogenated jojoba wax esters in the mixture of jojoba wax esters and hydrogenated jojoba wax esters would also be within the purview of routine experimentation for one of ordinary skill.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the instant invention to modify the methods of the reference claims and find the optimum amounts of hydrogenated jojoba wax esters in the feedstock comprising jojoba oil in the transesterification reaction. One of ordinary skill in the art would be motivated to do so because Arquette teaches the viscosity of the emollient (the transesterified product) is a function of the jojoba ester content and the reference claims are directed to a process for modifying the viscosity of a product. The amount of

hydrogenated jojoba wax esters to be 20% to 50% by weight is rendered obvious by the teachings of Arquette, absent any evidence that the amount of hydrogenated jojoba wax esters in the feedstock is critical. See MPEP 2144.05 II.

The reference claims in view of Arquette are silent regarding the OSI of the transesterified product. However, the reference claims in view of Arquette teaches a process for transesterifying a feedstock comprising a mixture of jojoba wax esters and hydrogenated jojoba wax esters by contacting with a lipase and oleyl alcohol and in such a transesterification process the OSI of the product is greater than the OSI of the feedstock. For evidence, see the declaration under 37 CFR 1.132 submitted by applicants on 12/06/2018 at page 3 sections 5-8, see Table. The declaration provides evidence that when a mixture comprising jojoba oil/hydrogenated jojoba oil is contacted with a lipase and oleyl alcohol, the transesterified product has an OSI which is 384% of the feedstock (see Table on page 3 of the declaration). Therefore, the transesterification process of reference claims in view of Arquette would also form a transesterified product whose OSI is greater than the OSI of the feedstock.

Regarding instant claim 25, the claim recites “the feedstock consists essentially of the jojoba wax esters and the hydrogenated wax esters”. The transitional phrase “consisting essentially of” limits the scope of a claim to the specified materials and steps “those that do not materially affect the basic and novel characteristics” of the claimed invention. The instant disclosure does not clearly indicate what the basic and novel characteristics actually are, therefore “consisting essentially of” will be construed as equivalent to “comprising”. As discussed above, reference claim 5 teaches a feedstock comprising jojoba wax esters and hydrogenated jojoba wax esters.

Regarding instant claims 27-29, the instant specification teaches refined jojoba oil as the feedstock (see line 2 of [0055] on page 16 of the specification) and teaches it contains wax esters and no free fatty alcohols or fatty acid methyl esters therein (see Table 3 on page 17 of the specification). Since the reference claims in view of Arquette also teaches a mixture of refined jojoba oil and hydrogenated jojoba oil as the feedstock and contacting with a lipase, it would inherently meet the limitations “feedstock does not comprise any free fatty alcohols therein” (claim 27), “the transesterified product does not comprise any methyl esters” (claim 28) and “the feedstock does not comprise any methyl esters” (claim 29).

This is a provisional nonstatutory double patenting rejection.

US App. No. 16/560,241

Claims 24-25, 27-29 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 5-7, 11-13 of co-pending Application No. **16/560,241** (reference application) in view of Arquette (US 5,968,530; Iss. Oct. 19, 1999; Applicant IDS) as evidenced by Addy Declaration filed on 12/06/2018.

Regarding instant claim 1, reference claims 5, 11, recite a process for modifying the viscosity of a product comprising: providing a feedstock comprising wax esters;

wherein the wax esters of the feedstock comprise jojoba wax esters and hydrogenated jojoba wax esters;

contacting the feedstock with a lipase;

catalytically transesterifying the wax esters in the feedstock with the lipase to form a transesterified product. Reference claims 6, 12, recite oleyl alcohol is introduced into the feedstock and reference claims 7, 13, recite the concentration of the alcohol is 0.01% to 2.5% of the feedstock.

The reference claims do not recite the amount of the hydrogenated jojoba wax esters to be 20% to 50% by weight and the reference claims are silent regarding the OSI of the transesterified product.

Arquette teaches a process to produce an emollient comprising the steps of providing a composition comprising jojoba oil, adding an alcohol and effecting alcoholysis on said jojoba oil mixed with said alcohol to produce an emollient (see col. 8 lines 49-56). Arquette teaches jojoba oil comprises wax esters (see col. 5 lines 1-20, Table – Wax Esters). Alcoholysis is a transesterification reaction when an ester is reacted with an alcohol (for evidence – see *Schuchardt col. 1 para. 1, Scheme 1*). The instant specification also discloses the same reaction to be a transesterification (see specification in PGPB [0037]) and discloses jojoba oil as a feedstock (Ex. 3). Therefore, Arquette teaches transesterification reaction of a feedstock comprising jojoba wax esters to form a transesterified product (the emollient). Arquette teaches the feedstock to comprise refined jojoba oil or hydrogenated jojoba oil or a mixture of the oil and hydrogenated oil (see col. 8 lines 56-59, Example 1 – 80% by weight of jojoba oil, Example 3 – 66% by weight hydrogenated jojoba oil). Arquette teaches the viscosity of the emollient (the transesterified product) is a function of the ester content (see col. 7 lines 6-25, second Table in col. 7). Therefore, Arquette is teaching the amount of jojoba wax esters in the feedstock is a result effective variable and finding the optimum

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It would have been obvious to one of ordinary skill in the art before the effective filing date of the instant invention to modify the methods of the reference claims and find the optimum amounts of hydrogenated jojoba wax esters in the feedstock comprising jojoba oil in the transesterification reaction. One of ordinary skill in the art would be motivated to do so because Arquette teaches the viscosity of the emollient (the transesterified product) is a function of the jojoba ester content and the reference claims are directed to a process for modifying the viscosity of a product. The amount of hydrogenated jojoba wax esters to be 20% to 50% by weight is rendered obvious by the teachings of Arquette, absent any evidence that the amount of hydrogenated jojoba wax esters in the feedstock is critical. See MPEP 2144.05 II.

The reference claims in view of Arquette are silent regarding the OSI of the transesterified product. However, the reference claims in view of Arquette teaches a process for transesterifying a feedstock comprising a mixture of jojoba wax esters and hydrogenated jojoba wax esters by contacting with a lipase and oleyl alcohol and in such a transesterification process the OSI of the product is greater than the OSI of the feedstock. For evidence, see the declaration under 37 CFR 1.132 submitted by applicants on 12/06/2018 at page 3 sections 5-8, see Table. The declaration provides evidence that when a mixture comprising jojoba oil/hydrogenated jojoba oil is contacted

with a lipase and oleyl alcohol, the transesterified product has an OSI which is 384% of the feedstock (see Table on page 3 of the declaration). Therefore, the transesterification process of reference claims in view of Arquette would also form a transesterified product whose OSI is greater than the OSI of the feedstock.

Regarding instant claim 25, the claim recites “the feedstock consists essentially of the jojoba wax esters and the hydrogenated wax esters”. The transitional phrase “consisting essentially of” limits the scope of a claim to the specified materials and steps “those that do not materially affect the basic and novel characteristics” of the claimed invention. The instant disclosure does not clearly indicate what the basic and novel characteristics actually are, therefore “consisting essentially of” will be construed as equivalent to “comprising”. As discussed above, reference claim 5 teaches a feedstock comprising jojoba wax esters and hydrogenated jojoba wax esters.

Regarding instant claims 27-29, the instant specification teaches refined jojoba oil as the feedstock (see line 2 of [0055] on page 16 of the specification) and teaches it contains wax esters and no free fatty alcohols or fatty acid methyl esters therein (see Table 3 on page 17 of the specification). Since the reference claims in view of Arquette also teaches a mixture of refined jojoba oil and hydrogenated jojoba oil as the feedstock and contacting with a lipase, it would inherently meet the limitations “feedstock does not comprise any free fatty alcohols therein” (claim 27), “the transesterified product does not comprise any methyl esters” (claim 28) and “the feedstock does not comprise any methyl esters” (claim 29).

This is a provisional nonstatutory double patenting rejection.

Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Basheer (US 2013/0052701; Applicant IDS) teaches an enzymatic batchwise or continuous process for transesterification of fatty acid alkyl esters (abstract). Basheer teaches the fatty acid source to be oils derived from plant sources ([0083]), contacting the oil with a lipase ([0086]) in the presence of an alcohol with 1-6 carbons ([0100]) (see Example 1).

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SRIKANTH PATURY whose telephone number is (571)270-1020. The examiner can normally be reached on Monday-Friday, 9:30 - 6:30 EST.

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

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Louise W Humphrey can be reached on 571-272-5543. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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/Srikanth Patury/
Examiner, Art Unit 1657

/LOUISE W HUMPHREY/
Supervisory Patent Examiner, Art Unit 1657

<i>Search Notes</i> 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

CPC - Searched*		
Symbol	Date	Examiner
Please see Partial text search in WEST appended hereto	3/20/2017	KCS
Please see Updated Partial text search in WEST appended hereto	10/19/2017	KCS
Please see Re-updated Partial text search in WEST appended hereto	06/23/2018	KCS
C12P7/6436 or C11C3/003 or C11C3/10 - text limited	05/28/2019	/sp/

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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Search Notes 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

US Classification - Searched*			
Class	Subclass	Date	Examiner
Partial text search in WEST	Partial text search in WEST	3/20/2017	KCS
CPC	C12P7/6436 C11C3/003	3/20/2017	KCS
IPC	C12P7/64)	3/20/2017	KCS
USPC	435/134	3/20/2017	KCS
Updated Partial text search in WEST	Updated Partial text search in WEST	10/19/2017	KCS
CPC	C12P7/6436, C11C3/003	10/19/2017	KCS
IPC	C12P7/64	10/19/2017	KCS
USPC	435/134	10/19/2017	KCS
Re-updated Partial text search in WEST	Re-updated Partial text search in WEST	06/23/2018	KCS
CPC	C12P7/6436 C11C3/003 C11C3/10	06/23/2018	KCS
IPC	C12P7/64	06/23/2018	KCS
USPC	435/134	06/23/2018	KCS

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

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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<i>Search Notes</i> 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

Search Notes		
Search Notes	Date	Examiner
Inventor name search in PE2E & PALMsearch in	3/1/2017	KCS
Assignee name search in PE2E & PALM	3/1/2017	KCS
Verified Application priority data in PE2E & PALM	3/1/2017	KCS
Partial Text Search in WEST:DWPI, EPAB, FPRS, JPAB, USOC, USPT according to search strtrgy and terms in WEST search history appende hereto	3/20/2017	KCS
STN Search	09/20/2016	KCS
Updated Inventor name search in PE2E, WEST & PALM	10/19/2017	KCS
Updated Assignee name search in PE2E & PALM	10/19/2017	KCS
Reverified Application priority data in PE2E & PALM	10/19/2017	KCS
Updated Partial Text Search in WEST:DWPI, EPAB, FPRS, JPAB, USOC, USPT according to search strtrgy and terms in WEST search history appende hereto	10/19/2017	KCS
14578075 Google Search Transesterification oil OI20171019	10/19/2017	KCS
Re-updated Inventor name search in PE2E, WEST & PALM	06/23/2018	KCS
Re-updated Assignee name search in WEST, PE2E & PALM	06/23/2018	KCS
Reverified Application priority data in WEST PE2E & PALM	06/23/2018	KCS
Updated Partial Text Search in WEST:DWPI, EPAB, FPRS, JPAB, USOC, USPT according to search strtrgy and terms in WEST search history appende hereto	06/23/2018	KCS
Google Search	07/31/2018	KCS
updated inventor search, see EAST search history	05/28/2019	/sp/
updated inventor search, see EAST search history	11/25/2019	/sp/
updated inventor, assignee search, see EAST search history	02/05/2021	/sp/
updated inventor, assignee search	03/30/2021	/sp/
updated inventor, assignee search	08/28/2021	/sp/
child applications - 15/560175; 15/560216; 15/56241	08/28/2021	/sp/

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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<i>Search Notes</i> 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)

Approved for use through 11/30/2020. 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	14578075
Filing Date	2014-12-19
First Named Inventor	Jeff Addy
Art Unit	1657
Examiner Name	Patury, Srikanth
Attorney Docket Number	FLORATECH002

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Page 1147 of 1215

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

Application Number	14578075
Filing Date	2014-12-19
First Named Inventor	Jeff Addy
Art Unit	1657
Examiner Name	Patury, Srikanth
Attorney Docket Number	FLORATECH002

1	SCHUCHARDT, Transesterification of Vegetable Oils: a Review, J. Braz. Chem. Soc. Vol. 9, No. 1, 199-210, 1998 (Year: 1998)
2	Oleyl-Alcohol, Oleyl Alcohol, CAS Number: 143-28-2, Cayman Chemical Data Sheet, 2021, (Year: 2021)
3	DE GREYT et al., Developments in Edible Oil Modification for the Production of Trans-free Food Fats, OIL PALM BULLETIN, Vol. 61, 1 November 2010 (2010-11-01), pages 38-44
4	WOLFMEIER et al., Waxes, Ullmann's Encyclopedia of Industrial Chemistry, 15 June 2000 (2000-06-15), Wiley-VCH Verlag, Weinheim, XP055033858, pages 111-172

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EXAMINER SIGNATURE

Examiner Signature	/SRIKANTH PATURY/	Date Considered	08/25/2021
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*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	14578075
Filing Date	2014-12-19
First Named Inventor	Jeff Addy
Art Unit	1657
Examiner Name	Patury, Srikanth
Attorney Docket Number	FLORATECH002

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	/Adam Stephenson/	Date (YYYY-MM-DD)	2021-08-11
Name/Print	Adam R. Stephenson	Registration Number	58349

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.**

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

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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.

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**Courtesy Reminder for
Application Serial No: 14/578,075**

Attorney Docket No: FloraTech002

Customer Number: 93756

Date of Electronic Notification: 09/03/2021

This is a courtesy reminder that new correspondence is available for this application. If you have not done so already, please review the correspondence. The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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Vantage Exhibit 1002

Page 1151 of 1215

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NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	14/578,075
Filing Date	December 19, 2014
First Named Inventor	Jeff Addy
Title	Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives
Art Unit	1657
Examiner Name	SRIKANTH PATURY
Attorney Docket Number	

SIGNATURE of Applicant or Patent Practitioner

Signature	/Dorothy P. Whelan/	Date (Optional)	10-1-21
Name	Dorothy P. Whelan	Registration Number	33,814
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.



*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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, 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.**

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on the Transmittal.)

- ☒ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter, which may be an application filed after the date of this power of attorney, or identified above:

26171

OR

- ☐ I hereby appoint Practitioner(s) named in the attached list as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter, which may be an application filed after the date of this power of attorney, or identified above.

Please recognize or change the correspondence address for the application identified in the attached transmittal letter to:

- ☒ The address associated with the above-mentioned Customer Number

OR

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OR

Firm or Individual Name				
Address				
City	State	Zip		
Country				
Telephone	Email			

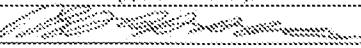
I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

International Flora Technologies Ltd.

- ☐ Inventor or Joint Inventor (title not required below)
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- ☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature		Date (Optional)	10/11/01
Name	Phillip Pierce		
Title	Finance Manager		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

- ☐ *Total of _____ forms are submitted.

Electronic Acknowledgement Receipt

EFS ID:	43929921
Application Number:	14578075
International Application Number:	
Confirmation Number:	2053
Title of Invention:	Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives
First Named Inventor/Applicant Name:	Jeff Addy
Customer Number:	93756
Filer:	Dorothy P. Whelan/Sharon Allen
Filer Authorized By:	Dorothy P. Whelan
Attorney Docket Number:	FloraTech002
Receipt Date:	01-OCT-2021
Filing Date:	19-DEC-2014
Time Stamp:	16:27:00
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	NewUpdatedPower.pdf	1862273	no	2
			560b428630eb145d5e7f96c25ddc60dceee6d214		

Warnings:

Vantage Exhibit 1002

Page 1154 of 1215

CARGILL 00001179

Information:	
Total Files Size (in bytes):	1862273
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	



UNITED STATES PATENT AND TRADEMARK OFFICE

USPTO Automated Interview Request (AIR)

Oct 4 2021

This paper requesting to schedule and/or conduct an interview is appropriate because:

This submission is requested to be accepted as an authorization for this interview to communicate via the internet. Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned concerning scheduling of the interview via video conference, instant messaging, or electronic mail, and to conduct the interview in accordance with office practice including video conferencing.

Name(s) :
Dorothy Whelan

S-signature:
/Dorothy Whelan/

Registration Number:
33814

U.S. Application Number:
14578075

Confirmation Number:
2053

E-mail Address:
whelan@fr.com

Phone Number:
+1 6512307163

Proposed Time of Interview:
10-13-2021 10:00 AM ET

Alternative Proposed Time(s) of Interview:
10-13-2021 2:00 PM ET

Alternative Proposed Time(s) of Interview:
10-20-2021 10:00 AM ET

Preferred Interview Type:
Telephonic

I am the applicant or applicant's representative for this application.

Topic for Discussion:
Discuss outstanding 103 rejection over Arquette plus Steinke. In light of the fact that this case has been pending for over 7 years and applicant previously distinguished a different Steinke reference that is substantively the same, applicant requests that Examiner Patury, SPE Humphries, and Technical Director Sullivan attend the interview. s for discussion will be submitted



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/578,075	12/19/2014	Jeff Addy	FloraTech002

93756
Adam R. Stephenson, LTD.
8350 E Raintree Dr., Ste 245
Scottsdale, AZ 85260

CONFIRMATION NO. 2053
POWER OF ATTORNEY NOTICE



Date Mailed: 10/06/2021

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/01/2021.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/tlulu/



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/578,075	12/19/2014	Jeff Addy	FloraTech002

26171
FISH & RICHARDSON P.C. (DC)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

CONFIRMATION NO. 2053
POA ACCEPTANCE LETTER



Date Mailed: 10/06/2021

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/01/2021.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/tlulu/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor :	Jeff Addy	Art Unit :	1657
Application No. :	14/578,075	Examiner :	Srikanth Patury
Filed :	December 19, 2014	Conf. No. :	2053
Title :	PROCESSES AND SYSTEMS FOR CATALYTIC MANUFACTURE OF WAX ESTER DERIVATIVES		

Mail Stop Amendment

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

REPLY TO ACTION OF SEPTEMBER 3, 2021

Please consider the following reply.

Amendments to Claims:

Listing of Claims.

- 1-23. (Canceled).
24. (Currently amended) A process for transesterifying wax esters, the process comprising:
providing a feedstock comprising jojoba wax esters and hydrogenated jojoba wax esters, wherein ~~some of the jojoba wax esters are hydrogenated and~~ the amount of hydrogenated jojoba wax esters is 20% to 50% by weight of the feedstock~~jojoba wax esters~~;
contacting the feedstock with a lipase; and
transesterifying the jojoba wax esters and the hydrogenated jojoba wax esters in the feedstock with the lipase to form a transesterified product;
wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock.
25. (Previously presented) The process of claim 24, wherein the feedstock consists essentially of the jojoba wax esters and the hydrogenated jojoba wax esters.
26. (Canceled).
27. (Previously presented) The process of claim 24, wherein the feedstock does not comprise any free fatty alcohols.

First Named Inventor : Jeff Addy
Application No. : 14/578,075
Filed : December 19, 2014
Page : 3 of 4

Attorney Docket: 47604-0020001

28. (Previously presented) The process of claim 24, wherein the transesterified product does not comprise any methyl esters.
29. (Previously presented) The process of claim 24, wherein the feedstock does not comprise any methyl esters.

First Named Inventor : Jeff Addy
Application No. : 14/578,075
Filed : December 19, 2014
Page : 4 of 4

Attorney Docket: 47604-0020001

REMARKS

Claims 24-25 and 27-29 are pending and stand rejected.

Summary of Interview Held October 13, 2021

The undersigned thanks Examiner Patury, Supervisory Examiner Humphrey, and Director Sullivan for the courtesies extended during a telephonic interview held on October 13, 2021. The outstanding rejections under §§ 112 and 103, as well as provisional obviousness-type double patenting rejections, were discussed. Examiner Patury stated that the outstanding rejections under § 103 and for obviousness-type double patenting had been overcome and would be withdrawn. Examiner Patury further proposed language for claim 24 that would address and overcome the outstanding § 112 rejection.

Response

Claim 24 has been amended as Examiner Patury suggested to address the outstanding § 112 rejection. Accordingly, claims 24-25 and 27-29 are in condition for allowance, and such action is requested.

No fees are believed due. Apply any necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: October 14, 2021

/Dorothy P. Whelan/

Dorothy P. Whelan, Reg. No. 33,814

Customer Number
Fish & Richardson P.C.
Telephone: +1 (612) 337-2509
Facsimile: (877) 769-7945

41551290.doc

Electronic Acknowledgement Receipt

EFS ID:	44031335
Application Number:	14578075
International Application Number:	
Confirmation Number:	2053
Title of Invention:	Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives
First Named Inventor/Applicant Name:	Jeff Addy
Customer Number:	26171
Filer:	Dorothy P. Whelan/April Saunders-Fuller
Filer Authorized By:	Dorothy P. Whelan
Attorney Docket Number:	47604-0020001
Receipt Date:	14-OCT-2021
Filing Date:	19-DEC-2014
Time Stamp:	14:38:34
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		47604-0020001-AMD.pdf	64984	yes	4
			7543fd74acc8c478472824ae950ee9abf668cc40		

Multipart Description/PDF files in .zip description			
Document Description	Start	End	
Amendment/Req. Reconsideration-After Non-Final Reject	1	1	
Claims	2	3	
Applicant Arguments/Remarks Made in an Amendment	4	4	

Warnings:

Information:

Total Files Size (in bytes):	64984
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/578,075	Filing Date 12/19/2014	☐ To be Mailed
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ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE (\$)	FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 = *		x \$80 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 = *		x \$420 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED - PART II

	10/14/2021	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	Total (37 CFR 1.16(i))	* 5	Minus	** 20	= 0	x \$100 =	0
	Independent (37 CFR 1.16(h))	* 1	Minus	*** 3	= 0	x \$480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0
AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x \$0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x \$0 =	
	☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
						TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						SLIE	
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/KATARA D SINGLETARY/	
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".							
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.							

This collection of information is required by 37 CFR 1.16. 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 12 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, 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.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/578,075	12/19/2014	Jeff Addy	47604-0020001	2053
26171	7590	10/21/2021		
FISH & RICHARDSON P.C. (DC)			EXAMINER	
P.O. BOX 1022			PATURY, SRIKANTH	
MINNEAPOLIS, MN 55440-1022				
			ART UNIT	PAPER NUMBER
			1657	
			NOTIFICATION DATE	DELIVERY MODE
			10/21/2021	ELECTRONIC

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

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

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

PATDOCTC@fr.com

<i>Applicant-Initiated Interview Summary</i>	Application No. 14/578,075	Applicant(s) Addy et al.		
	Examiner SRIKANTH PATURY	Art Unit 1657	AIA (First Inventor to File) Status Yes	Page 1 of 2

All Participants (applicant, applicants representative, PTO personnel)	Title	Type
SRIKANTH PATURY	Examiner	WebEx/Video Conference
LOUISE HUMPHREY	SPE	
DANIEL SULLIVAN	TC Director	
DOROTHY WHELAN	Attorney of Record	

Date of Interview: 13 October 2021

Issues Discussed:

35 U.S.C. 103

Applicant representative, attorney Whelan summarized that the instant invention is directed to a method comprising providing a feedstock comprising jojoba wax esters and hydrogenated jojoba wax esters and contacting the feedstock with a lipase to produce a transesterified product. Attorney Whelan argued that this increase of the OSI is unexpected and not suggested by the prior art. Attorney Whelan argued that the combination of Arquette and Steinke do not teach all of the elements of the method of claim 24, particularly that the feedstock comprises jojoba wax esters and hydrogenated jojoba wax esters and the amount of the hydrogenated jojoba wax esters is 20% to 50% by weight of the feedstock. Attorney Whelan argued that for the examiner to rely on inherency theory to support the obviousness rejection, the claimed property must necessarily result from combining the two references without modification and argued the 103 rejection should be withdrawn (also see attached interview agenda).

The examiners responded that the arguments are persuasive because the declaration filed on 07/20/2021 shows that the enzymatic transesterification of jojoba oil feedstock with a lipase results in significantly higher OSI even without the addition of an alcohol. The examiners agree that the increase in OSI is unexpected and not obvious over the prior art because Arquette and Steinke are silent about OSI and teach transesterification with a lipase with the addition of an alcohol to the feedstock. Therefore the rejections of claims 24-25 and 27-29 under 35 USC 103 over Arquette in view of Steinke will be withdrawn. The claims are free of the prior art.

Proposed Amendment(s)

However, claim 24 needs to be amended to overcome the rejection under 35 USC 112(a) for New Matter because of the limitation "by weight of the jojoba wax esters" in line 4.

Claim 24 is suggested to be amended as follows:

A process for transesterifying wax esters, the process comprising:
 providing a feedstock comprising jojoba wax esters and hydrogenated jojoba wax esters and the amount of hydrogenated jojoba wax esters is 20% to 50% by weight of the feedstock;
 contacting the feedstock with a lipase; and
 transesterifying the jojoba wax esters and the hydrogenated jojoba wax esters in the feedstock with the lipase to form a transesterified product;
 wherein an oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock.

<i>Applicant-Initiated Interview Summary</i>	Application No. 14/578,075	Applicant(s) Addy et al.		
	Examiner SRIKANTH PATURY	Art Unit 1657	AIA (First Inventor to File) Status Yes	Page 2 of 2

Other

If claim 24 is amended as suggested above to obviate the New Matter rejection, the provisional nonstatutory double patenting rejections over 16/560,175, 16/560,216 and 16/560,241 will be withdrawn since the instant application has an earlier effective filing date and the application will be allowable.

Attorney Whelan said that applicants would file a response with the suggested amendments to overcome the rejection under 35 USC 112(a) for New Matter.

☒ Attachment

/SRIKANTH PATURY/ Examiner, Art Unit 1657	/LOUISE W HUMPHREY/ Supervisory Patent Examiner, Art Unit 1657
Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04 Please further see: MPEP 713.04 Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b) 37 CFR § 1.2 Business to be transacted in writing	

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

PROPOSED AGENDA FOR EXAMINER INTERVIEW

- This case has been pending for over 7 years. The claims currently stand rejected over Arquette plus Steinke “as evidenced by Schuchardt.” Arquette was previously applied as a secondary reference in rejections that Applicants overcame. A related Steinke reference was also the subject of earlier rejections that the applicant overcame. Although combined with a different reference, the same arguments distinguishing Steinke earlier apply here.
- In an office action mailed 6/6/19, the Examiner stated that Applicants overcame rejections over the first Steinke reference on the basis of claim amendments requiring a 2.5 times increase in OSI relative to feedstock and a 132 declaration describing these results as surprising. The Examiner later, in his answer to Applicants’ appeal brief, raised a new matter rejection with respect to the 2.5 times increase limitation. In an amendment mailed 1/19/21, Applicants removed the limitation to overcome the new matter rejection. However, the point raised in the 132 declaration characterizing these results as surprising remained valid, as did the other arguments Applicants previously raised distinguishing Steinke.
- After Applicants removed the limitation, the Examiner did not resurrect rejections based on Steinke. Rather, the Examiner relied on a different combination of references that Applicants subsequently overcame. It was not until much later, in the present action mailed 9/3/21, that the Examiner included a second Steinke reference as a secondary reference in a new rejection. There is no dispute that the two Steinke references are not materially different.
- A POSA would not have been motivated to combine Arquette and Steinke. Arquette discloses a chemical process for transesterifying jojoba oil. Applicants would like to once again clarify how the processes of the cited references are simply not comparable to the pending claims. Jojoba oil is a fatty acid ester, also known as a wax ester. Steinke’s objective is to treat two different oils, crambe oil and camelina oil, so that they can act as *substitutes* for jojoba oil. A POSA would not have used a process designed to create a jojoba oil substitute having properties similar to jojoba oil on jojoba oil itself.
- Also, unlike jojoba oil, crambe oil and camelina oil are triglycerides. Steinke reacts them with alcohol to create a fatty acid ester. But jojoba oil already is a fatty acid ester. A POSA

would simply have no reason to apply Steinke's process requiring alcohol as a starting material to a mixture of jojoba oil and hydrogenated jojoba oil.

- In addition, Steinke's reaction of a triglyceride oil with an alcohol is the same general process described by the Austic reference, the shortcomings of which were detailed in the Applicants' previous office action response and overcome. The Examiner's justification for the combination is hindsight.

- Nowhere in any of the references is OSI even mentioned or recognized. Applicants have already shown that enzymatic-catalyzed transesterification of jojoba oil unexpectedly creates a molecule have significantly higher OSI than crambe oil. This evidence is unrebutted.
- Because neither reference even mentions OSI, the Examiner must rely on an inherency theory to support the obviousness rejection. However, the Examiner mis-applies the law and the rejection is contrary to the Federal Circuit's decision in *Honeywell* (865 F.3d 1348 (Fed. Cir. 2017)). As *Honeywell* makes clear, the claimed property must necessarily result from combining the two references. That is not the case here. Even if Arquette and Steinke were combined, the resulting combination would not have all of the elements of the claims. As the Examiner acknowledges, further modification of the feedstock is necessary. Because further modification is necessary, the claimed OSI improvement does not necessarily result from combining Arquette and Steinke. This fact alone precludes inherent obviousness.
- *Honeywell* also stresses the importance of unexpected results as rebutting obviousness based on inherency. The evidence of record demonstrates unexpected results related to OSI improvement. However, the Examiner ignores those results in the obviousness rejection.



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NOTICE OF ALLOWANCE AND FEE(S) DUE

26171 7590 10/28/2021
FISH & RICHARDSON P.C. (DC)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
PATURY, SRIKANTH	
ART UNIT	PAPER NUMBER

1657

DATE MAILED: 10/28/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/578,075	12/19/2014	Jeff Addy	47604-0020001	2053

TITLE OF INVENTION: Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	01/28/2022

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.

26171 7590 10/28/2021
FISH & RICHARDSON P.C. (DC)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

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.
14/578,075	12/19/2014	Jeff Addy	47604-0020001	2053

TITLE OF INVENTION: Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	01/28/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
PATURY, SRIKANTH	1657	435-134000

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. _____



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
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/578,075	12/19/2014	Jeff Addy	47604-0020001	2053
26171	7590	10/28/2021	EXAMINER	
FISH & RICHARDSON P.C. (DC)			PATURY, SRIKANTH	
P.O. BOX 1022			ART UNIT	
MINNEAPOLIS, MN 55440-1022			PAPER NUMBER	
			1657	
DATE MAILED: 10/28/2021				

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 a published 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 laws, regulations, or

Notice of Allowability	Application No. 14/578,075	Applicant(s) Addy et al.	
	Examiner SRIKANTH PATURY	Art Unit 1657	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 response after Non-Final filed on 10/14/2021.
☐ 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 24-25 and 27-29. 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 _____ 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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/SRIKANTH PATURY/ Examiner, Art Unit 1657	/LOUISE W HUMPHREY/ Supervisory Patent Examiner, Art Unit 1657
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Reasons for Allowance

Claims 24, 25 and 27-29 are allowed. The following is an examiner's statement of reasons for allowance:

The previous rejections of claims 24, 25 and 27-29 under 35 U.S.C §112 (a) for New Matter are withdrawn in light of the amendments to the claims filed on 10/14/2021. The limitation "by weight of the jojoba wax esters" which constituted new matter has been amended to "by weight of the feedstock".

The previous rejections of claims 24, 25 and 27-29 under 35 U.S.C §103 as being unpatentable over Arquette in view of Steinke are withdrawn in light of the declaration filed on 07/20/2021 which shows that enzymatic transesterification of jojoba oil feedstock with a lipase results in significantly higher OSI even without the addition of an alcohol.

The provisional nonstatutory double patenting rejections of claims 24, 25 and 27-29 under over co-pending applications US 16/560,175, US 16/560,216 and US 16/560,241 are withdrawn because the instant application has an earlier effective U.S. filing date.

The closest prior art is **Arquette** (US 5,968,530), **Steinke** (JAOCS, Vol. 77, no. 4, 2000) and **Basheer** (US 2013/0052701).

Arquette teaches a process to produce an emollient comprising the steps of providing a composition comprising jojoba oil, adding an alcohol and effecting alcoholysis on said jojoba oil mixed with said alcohol to produce an emollient (see col. 8 lines 49-56). Arquette teaches a base catalyzed alcoholysis (see col. 2 lines 35-39, Example 1 in col. 8-9). Arquette teaches adding the refined jojoba oil and isopropyl

alcohol first into the reactor (see Example 1 in col. 8 lines 57-65) and then adding the catalyst for the alcoholysis reaction to the reactor (see Example 1 in col. 9 lines 2-6). Arquette teaches jojoba oil comprises wax esters (see col. 5 lines 1-20, Table – Wax Esters). Alcoholysis is a transesterification reaction when an ester is reacted with an alcohol. The instant specification also discloses the same reaction to be a transesterification (see specification in PGPB [0037]) and discloses jojoba oil as a feedstock (Ex. 3). Therefore, Arquette teaches transesterification reaction of a feedstock comprising jojoba wax esters to form a transesterified product (the emollient). Arquette teaches amounts of the jojoba esters in the feedstock in the alcoholysis reaction to be about 80% or lower (col. 6 lines 55-60). Arquette teaches the feedstock to comprise refined jojoba oil or hydrogenated jojoba oil or a mixture of the oil and hydrogenated oil (see col. 8 lines 56-59, Example 1 – 80% by weight of jojoba oil, Example 3 – 66% by weight hydrogenated jojoba oil).

Arquette does not teach the feedstock comprises hydrogenated jojoba wax esters at an amount of 20% to 50% by weight of the feedstock. Arquette does not teach contacting the feedstock with a lipase to catalytically transesterify the wax esters in the feedstock to form a transesterified product and does not teach the oxidative stability index (OSI) of the transesterified product is greater than an OSI of the feedstock.

Steinke teaches lipase-catalyzed alcoholysis of oils (feedstock) for the preparation of esters (see Title). Steinke teaches that lipase-catalyzed alcoholysis led to higher conversions as compared to a base catalyzed alcoholysis. Steinke teaches treatment of the reaction products was simpler in the lipase-catalyzed alcoholysis because no potassium soaps were formed (see pg. 365 col. 2). Steinke teaches the

ester composition in the lipase catalyzed product is similar to the base catalyzed product (see pg. 365, col.1 last para, last sentence). Steinke teaches the alcoholysis is performed by adding oleyl alcohol to the feedstock oil and adding the lipase catalyst, Lipozyme IM, to produce the esters (see pg. 362 col. 1 Alcoholysis, Fig. 1).

Basheer (US 2013/0052701; Applicant IDS) teaches an enzymatic batchwise or continuous process for transesterification of fatty acid alkyl esters (abstract). Basheer teaches the fatty acid source to be oils derived from plant sources ([0083]), contacting the oil with a lipase ([0086]) in the presence of an alcohol with 1-6 carbons ([0100]) at an amount of 10% by weight (see Example 1).

However, the prior art is silent about the OSI of the transesterified product and teaches transesterification of the feedstock with a lipase with the addition of an alcohol to the feedstock. The instant method wherein a feedstock comprising jojoba wax esters and hydrogenated jojoba wax esters is enzymatically transesterified with a lipase results in an unexpected higher OSI of the transesterified product as compared to the OSI of the feedstock even without the addition of an alcohol. Therefore, the instant method as recited in claim 1 is non-obvious over the prior art.

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

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SRIKANTH PATURY whose telephone number is (571)270-1020. The examiner can normally be reached on Monday-Friday, 9:30 - 6:30 EST.

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

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Louise W Humphrey can be reached on 571-272-5543. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Srikanth Patury/
Examiner, Art Unit 1657

/LOUISE W HUMPHREY/
Supervisory Patent Examiner, Art Unit 1657

<i>Search Notes</i> 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

CPC - Searched*		
Symbol	Date	Examiner
Please see Partial text search in WEST appended hereto	3/20/2017	KCS
Please see Updated Partial text search in WEST appended hereto	10/19/2017	KCS
Please see Re-updated Partial text search in WEST appended hereto	06/23/2018	KCS
C12P7/6436 or C11C3/003 or C11C3/10 - text limited	05/28/2019	/sp/

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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Search Notes 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

US Classification - Searched*			
Class	Subclass	Date	Examiner
Partial text search in WEST	Partial text search in WEST	3/20/2017	KCS
CPC	C12P7/6436 C11C3/003	3/20/2017	KCS
IPC	C12P7/64)	3/20/2017	KCS
USPC	435/134	3/20/2017	KCS
Updated Partial text search in WEST	Updated Partial text search in WEST	10/19/2017	KCS
CPC	C12P7/6436, C11C3/003	10/19/2017	KCS
IPC	C12P7/64	10/19/2017	KCS
USPC	435/134	10/19/2017	KCS
Re-updated Partial text search in WEST	Re-updated Partial text search in WEST	06/23/2018	KCS
CPC	C12P7/6436 C11C3/003 C11C3/10	06/23/2018	KCS
IPC	C12P7/64	06/23/2018	KCS
USPC	435/134	06/23/2018	KCS

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

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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Search Notes 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

Search Notes		
Search Notes	Date	Examiner
Inventor name search in PE2E & PALMsearch in	3/1/2017	KCS
Assignee name search in PE2E & PALM	3/1/2017	KCS
Verified Application priority data in PE2E & PALM	3/1/2017	KCS
Partial Text Search in WEST:DWPI, EPAB, FPRS, JPAB, USOC, USPT according to search strtrgy and terms in WEST search history appende hereto	3/20/2017	KCS
STN Search	09/20/2016	KCS
Updated Inventor name search in PE2E, WEST & PALM	10/19/2017	KCS
Updated Assignee name search in PE2E & PALM	10/19/2017	KCS
Reverified Application priority data in PE2E & PALM	10/19/2017	KCS
Updated Partial Text Search in WEST:DWPI, EPAB, FPRS, JPAB, USOC, USPT according to search strtrgy and terms in WEST search history appende hereto	10/19/2017	KCS
14578075 Google Search Transesterification oil OI20171019	10/19/2017	KCS
Re-updated Inventor name search in PE2E, WEST & PALM	06/23/2018	KCS
Re-updated Assignee name search in WEST, PE2E & PALM	06/23/2018	KCS
Reverified Application priority data in WEST PE2E & PALM	06/23/2018	KCS
Updated Partial Text Search in WEST:DWPI, EPAB, FPRS, JPAB, USOC, USPT according to search strtrgy and terms in WEST search history appende hereto	06/23/2018	KCS
Google Search	07/31/2018	KCS
updated inventor search, see EAST search history	05/28/2019	/sp/
updated inventor search, see EAST search history	11/25/2019	/sp/
updated inventor, assignee search, see EAST search history	02/05/2021	/sp/
updated inventor, assignee search	03/30/2021	/sp/
updated inventor, assignee search	08/28/2021	/sp/
child applications - 15/560175; 15/560216; 15/56241	08/28/2021	/sp/
updated inventor, assignee search	10/18/2021	/sp/

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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<i>Search Notes</i> 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	C12P7/6436 or C11C3/003 or C11C3/10 - further limited by text keywords	10/18/2021	/sp/

	/SRIKANTH PATURY/ Examiner, Art Unit 1657
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Issue Classification 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

CPC						
Symbol					Type	Version
C12P	/	7	/	6436	F	2013-01-01
C11C	/	3	/	003	I	2013-01-01
C11C	/	3	/	10	I	2013-01-01

CPC Combination Sets					
Symbol				Type	Version
/	/				

/SRIKANTH PATURY/ Examiner, Art Unit 1657 (Assistant Examiner)	18 October 2021 (Date)	Total Claims Allowed: 5	
/LOUISE W HUMPHREY/ Supervisory Patent Examiner, Art Unit 1657 (Primary Examiner)	21 October 2021 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure NONE

Issue Classification 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

INTERNATIONAL CLASSIFICATION					
CLAIMED					
C12P	/	7	/	64	
C12P7/64	/	7	/	64	
C11C3/00	/	3	/	00	
C11C3/10	/	3	/	10	
NON-CLAIMED					
	/		/		

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
4435	134

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

/SRIKANTH PATURY/ Examiner, Art Unit 1657 (Assistant Examiner)	18 October 2021 (Date)	Total Claims Allowed: 5	
/LOUISE W HUMPHREY/ Supervisory Patent Examiner, Art Unit 1657 (Primary Examiner)	21 October 2021 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure NONE

Issue Classification 	Application/Control No. 14/578,075	Applicant(s)/Patent Under Reexamination Addy et al.
	Examiner SRIKANTH PATURY	Art Unit 1657

☒ 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

/SRIKANTH PATURY/ Examiner, Art Unit 1657 (Assistant Examiner)	18 October 2021 (Date)	Total Claims Allowed: 5	
/LOUISE W HUMPHREY/ Supervisory Patent Examiner, Art Unit 1657 (Primary Examiner)	21 October 2021 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure NONE

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	3,091	((("ADDY") near3 ("Jeff")) OR ((("DALY") near3 ("Clay")) OR ((("BROWN") near3 ("James")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/10/18 17:42
L3	930	"flora".as.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/10/18 17:44
L7	5,506	(C12P7/6436 or C11C3/003 or C11C3/10).cpc.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/10/18 17:50
L9	123	"I7" and (hydrogenat\$5 near3 jojoba)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/10/18 17:50
L10	1	"I7" and (hydrogenat\$5 near3 jojoba).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2021/10/18 17:51

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	40	(jojoba and lipase).clm.	US-PGPUB; USPAT	OR	ON	2021/10/18 17:42
L4	3,078	(C12P7/6436 or C11C3/003 or C11C3/10).cpc.	US-PGPUB; USPAT	OR	ON	2021/10/18 17:44
L5	10	I2 and I4	US-PGPUB; USPAT	OR	ON	2021/10/18 17:49
L6	15	I4 and (hydrogenat\$5 near3 jojoba)	US-PGPUB; USPAT	OR	ON	2021/10/18 17:50
L8	54	"I7" and (hydrogenat\$5 near3 jojoba)	US-PGPUB; USPAT	OR	ON	2021/10/18 17:50

10/18/2021 5:51:32 PM

C:\Users\spatry\Documents\EAST\Workspaces\14578075.wsp

Bibliographic Data

Application No: 14/578,075

Foreign Priority claimed: ☐ Yes ☒ No

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

Verified and Acknowledged:

/Srikanth Patury/

Examiner's Signature

Initials

Title:

Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/19/2014	435	1657	47604-0020001
RULE			

APPLICANTS

International Flora Technologies, Ltd., Chandler, AZ, UNITED STATES

INVENTORS

Jeff Addy, Chandler, AZ, UNITED STATES

Clay Daly, Chandler, AZ, UNITED STATES

James H. Brown, Chandler, AZ, UNITED STATES

CONTINUING DATA

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

01/08/2015

STATE OR COUNTRY

UNITED STATES

ADDRESS

FISH & RICHARDSON P.C. (DC)

P.O. BOX 1022

MINNEAPOLIS, MN 55440-1022

UNITED STATES

FILING FEE RECEIVED

\$730

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor :	Jeff Addy	Art Unit :	1657
Application No. :	14/578,075	Examiner :	Srikanth Patury
Filed :	December 19, 2014	Confirmation No. :	2053
		Notice of Allowance Date: October 28, 2021	
Title :	PROCESSES AND SYSTEMS FOR CATALYTIC MANUFACTURE OF WAX ESTER DERIVATIVES		

MAIL STOP ISSUE FEE

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

REPLY TO NOTICE OF ALLOWANCE

In response to the Notice of Allowance dated October 28, 2021, enclosed is a completed Part B - Fee(s) Transmittal.

The issue fee is being paid with this reply on the Electronic Filing System. Apply those fees and any other necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

COMMENTS ON EXAMINER'S REASONS FOR ALLOWANCE

It is recognized that in accordance with M.P.E.P. § 1302.14, the Examiner's reasons for allowance need not set forth all of the details as to why the claims are allowed. In the above-referenced application, it is not conceded that the Examiner's stated reasons for allowance are the only reasons for which the claims are allowable. The Examiner's reasons for allowance indicate that particular claim elements are not disclosed or suggested by the prior art of record, yet the claims may be patentable for other reasons as well, including the inventive combination of all of the recited claim elements. It is not conceded that the specific limitations identified by the Examiner are necessary to distinguish the art of record or to satisfy the requirements of 35 U.S.C. § 112. Moreover, the Examiner does not assert, and it would not be conceded, that the Examiner's reasons have any bearing on the patentability of claims in any other applications directed to the disclosed subject matter.

First Named Inventor : Jeff Addy
Application No. : 14/578,075
Filed : December 19, 2014
Page : 2 of 2

Attorney Docket: 47604-0020001

In addition, each dependent claim stands on its own and may be allowable on its own merits. In particular, each dependent claim may be allowable on the basis of a combination of some of the features recited in the dependent claim and its base claim(s), which combination of features may not include all of the limitations identified in the Examiner's reasons for allowance.

Respectfully submitted,

Date: November 2, 2021

/Dorothy P. Whelan/

Dorothy P. Whelan, Reg. No. 33,814

Customer Number
Fish & Richardson P.C.
Telephone: +1 (612) 337-2509
Facsimile: (877) 769-7945

41554274.doc

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 22314-1450

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)

26171 7590 10/28/2021

FISH & RICHARDSON P.C.
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

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.

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.
14/578,075	12/19/2014	Jeff Addy	47604-0020001	2053

TITLE OF INVENTION: PROCESSES AND SYSTEMS FOR CATALYTIC MANUFACTURE OF WAX ESTER DERIVATIVES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	large	\$1200	\$0	\$0	\$1200	01/28/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
PATURY, SRIKANTH	1657	435-134000

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 Fish & Richardson P.C.
- (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
International Flora Technologies, Ltd.

(B) RESIDENCE: (CITY and STATE OR COUNTRY)
Chandler, AZ

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government4a. 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. 06-1050

5. Change of 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 as a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken as 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 /Dorothy P. Whelan/Date Nov. 2, 2021Typed or printed name Dorothy P. WhelanRegistration No. 33,814

Electronic Patent Application Fee Transmittal

Application Number:	14578075			
Filing Date:	19-Dec-2014			
Title of Invention:	Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives			
First Named Inventor/Applicant Name:	Jeff Addy			
Filer:	Dorothy P. Whelan/Sharon Allen			
Attorney Docket Number:	47604-0020001			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	1200	1200

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1200

Electronic Acknowledgement Receipt

EFS ID:	44189321
Application Number:	14578075
International Application Number:	
Confirmation Number:	2053
Title of Invention:	Processes and Systems for Catalytic Manufacture of Wax Ester Derivatives
First Named Inventor/Applicant Name:	Jeff Addy
Customer Number:	26171
Filer:	Dorothy P. Whelan/Sharon Allen
Filer Authorized By:	Dorothy P. Whelan
Attorney Docket Number:	47604-0020001
Receipt Date:	03-NOV-2021
Filing Date:	19-DEC-2014
Time Stamp:	08:27:56
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 1200
RAM confirmation Number	E2021A3928262542
Deposit Account	061050
Authorized User	Sharon Allen

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.21 (Miscellaneous fees and charges)

Vantage Exhibit 1002

Page 1194 of 1215

CARGILL 00001219

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		47604-0020001-IssueFee.pdf	220008	yes	3
			a3cdb2daf46bdd60218e4f9783aa41b5099ec763		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Transmittal Letter		1	2	
	Issue Fee Payment (PTO-85B)		3	3	
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	37771	no	2
			53aa9f78355c57ca534ce4ca528049c17a334536		
Warnings:					
Information:					
Total Files Size (in bytes):			257779		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/578,075	12/19/2014	Jeff Addy	47604-0020001	2053
26171	7590	11/05/2021		
FISH & RICHARDSON P.C. (DC)			EXAMINER	
P.O. BOX 1022			PATURY, SRIKANTH	
MINNEAPOLIS, MN 55440-1022				
			ART UNIT	PAPER NUMBER
			1657	
			NOTIFICATION DATE	DELIVERY MODE
			11/05/2021	ELECTRONIC

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

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

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

PATDOCTC@fr.com

Supplemental Notice of Allowability	Application No. 14/578,075	Applicant(s) Addy et al.	
	Examiner SRIKANTH PATURY	Art Unit 1657	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 response after Non-Final filed on 10/14/2021.
☐ 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 24-25 and 27-29. 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)	5. ☐ Examiner's Amendment/Comment
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>See Continuation Sheet</u> .	6. ☐ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.	

/SRIKANTH PATURY/ Examiner, Art Unit 1657	/LOUISE W HUMPHREY/ Supervisory Patent Examiner, Art Unit 1657
--	---

Continuation of Attachment(s) 2. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date:
The IDS documents filed on 07/21/2017 are considered and attached herewith.

The reasons for allowance were included in the Notice of Allowance previously mailed on 10/28/2021.

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)

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

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

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

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

Application Number	14/578,075 - GAU: 1657
Filing Date	2015-01-13
First Named Inventor	Jeff Addy
Art Unit	
Examiner Name	Kailash C. Srivastava
Attorney Docket Number	FloraTech002

U.S.PATENTS						Remove
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
	1	4329298		1982-05-11	Brown et al.	
	2	4360387		1982-11-23	Brown et al.	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS						Remove
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
	1	20130149414		2013-06-13	Favre et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS								Remove
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
	1							

If you wish to add additional Foreign Patent Document citation information please click the Add button. Add

NON-PATENT LITERATURE DOCUMENTS								Remove
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/SRIKANTH PATURY/

11/01/2021
Vantage Exhibit 1002

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

Application Number	
Filing Date	2015-01-13
First Named Inventor	Jeff Addy
Art Unit	
Examiner Name	
Attorney Docket Number	FloraTech002

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	Sessa et al., "Differential Scanning Calorimetry Index for Estimating Level of Saturation in Transesterified Wax Esters," J. Amer. Oil Chem. Soc., v. 73, 271-273 (1996)	
	2	James Brown et al., "Trans Isomers in Cosmetics," Part 2, Soap & Cosmetics, May 2001, p. 33-36, and June 2001	
	3	James Brown et al., "Trans Isomers in Cosmetics," Soap & Cosmetics, May and June 2001, p. 1-4	
	4	Patrick Cappillino et al., "Composition of Chilean Jojoba Seed," presentation given at the 5th New Crops Symposium in Atlanta, GA Nov. 10-13, 2001, slides 1-19.	
	5	Patrick Cappillino et al., "Composition of Chilean Jojoba Seeds," Ind. Crops and Prod., v. 17, p. 177-182 (2003)	
	6	Avery Sengupta et al., "Comparative Study of Sterol Ester Synthesis using Termomyces Lanuginosus Lipase in Stirred Tank and Packed-Bed Bioreactors," J. Am Oil Chem Soc, Vol. 87, p. 1019-1025 (2010)	
	7	Jose A. Arcos et al., "Continuous Enzymatic Esterification of Glycerol with (Poly)Unsaturated Fatty Acids in a Packed-Bed Reactor," Biotechnology and Bioengineering, Vol. 68, No. 5, p. 563-570 (June 5, 2000)	
	8	Aran H-Kittikun et al., "Continuous production of monoacylglycerols from palm olein in packed-bed reactor with immobilized lipase PS," Biochemical Engineering Journal 40, p. 116-120 (2008)	
	9	Anders Falk Vikbjerg et al., "Continuous Production of Structured Phospholipids in a Packed Bed Reactor with Lipase from Thermomyces lanuginosa," AOCS, Vo. 82, No. 4 (2005)	
	10	Sarah M. Meunier, "Development of a Packed-bed Reactor Containing Supported Sol-gel Immobilized Lipase for Transesterification," A thesis presented to the Univ. of Waterloo (2012)	

/SRIKANTH PATURY/

Vantage Exhibit 1002

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

Application Number		
Filing Date		2015-01-13
First Named Inventor	Jeff Addy	
Art Unit		
Examiner Name		
Attorney Docket Number	FloraTech002	

11	Roberta Claro da Silva et al., "Interesterification of Lard and Soybean Oil Blends Catalyzed by Immobilized Lipase in a Continuous Packed Bed Reactor," J. Am. Oil Chem. Soc., Vol. 88, p. 1925-1933 (2011)
12	Roberta Claro da Silva et al., "Microstructure and Thermal Profile of Structured Lipids Produced by Continuous Enzymatic Interesterification," J. Am. Oil Chem. Soc., Vol. 90, p. 631-639 (2013)
13	Ozmutlu et al., "Numerical Simulation of Fluid Flow and Enzyme Catalysed Substrate Conversion in a Packed-bed Enzyme Reactor," Proc. Appl. Math. Mech. 3, p. 398-399 (2003)
14	X. Xu et al., "Production of Specific-Structured Lipids by Enzymatic Interesterification in a Pilot Continuous Enzyme Bed Reactor," AOCS, Vol. 75, No. 11 (1998)
15	Xuebing Xu et al., "Production of Structured Lipids in a Packed-Bed Reactor with Thermomyces lanuginosa Lipase," AOCS, Vol. 79, No. 6 (2002)
16	Design of Ideal Plug Flow Reactors (PFRs) operated at Steady State under Isothermal Conditions," CP303, Set #4 (July-October 2013)
17	"Fixed-Bed Catalytic Reactors," Copyright 2011 by Nob Hill Publishing, LLC
18	Neha R. Sonare et al., "Transesterification of used sunflower oil using immobilized enzyme," Journal of Molecular Catalysis B: Enzymatic 66, p. 142-147 (2010)

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Examiner Signature	/SRIKANTH PATURY/	Date Considered	11/01/2021
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2015-01-13
First Named Inventor	Jeff Addy	
Art Unit		
Examiner Name		
Attorney Docket Number	FloraTech002	

CERTIFICATION STATEMENT

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

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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.

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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	/Adam R. Stephenson/	Date (YYYY-MM-DD)	2017-07-21
Name/Print	Adam R. Stephenson	Registration Number	58349

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.**

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

Application Number	14/578,075 - GAU: 1657
Filing Date	2015-01-13
First Named Inventor	Jeff Addy
Art Unit	
Examiner Name	Kailash C. Srivastava
Attorney Docket Number	FloraTech002

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	2	8349594		2013-01-08	Pearce et al.	

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	1	WO2012130961	WO		2012-10-04	Holm et al.		

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Filing Date	2015-01-13
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Examiner Name	Kailash C. Srivastava
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	1	A. Proskova et al., "Lipase-catalyzed transesterification of rendering plant fat," Res. Agr. Eng., Vol. 56, No. 3: p. 122-125 (2010)	
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Filing Date		2015-01-13
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Examiner Name	Kailash C. Srivastava	
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Examiner Signature	/SRIKANTH PATURY/	Date Considered	11/01/2021
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Vantage-Exhibit 1002

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

Application Number		14578075
Filing Date		2014-12-19
First Named Inventor	Jeff Addy	
Art Unit	14578075 - GAU: 1657	
Examiner Name	Kailash C. Srivastava	
Attorney Docket Number	Floritech002	

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Application Number	14578075
Filing Date	2014-12-19
First Named Inventor	Jeff Addy
Art Unit	14578075 - GAU: 1657
Examiner Name	Kailash C. Srivastava
Attorney Docket Number	Floritech002

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03/07/2017

Vantage Exhibit 1002

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/578,075	02/15/2022	11248245	47604-0020001	2053

26171 7590 01/26/2022

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ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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

The Patent Term Adjustment is 1138 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

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 Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

INVENTOR(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional inventors):

Jeff Addy, Chandler, AZ;
Clay Daly, Chandler, AZ;
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APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

International Flora Technologies, Ltd., Chandler, AZ;

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AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been
 filed in the U.S. District Court _____ for the District of Delaware _____ on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF CARGILL, INCORPORATED AND INTERNATIONAL FLORA TECHNOLOGIES LTD.,		DEFENDANT VANTAGE SPECIALTY CHEMICALS, INC.,
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 11,248,245	2/15/2022	International Flora Technologies, Ltd.
2		
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

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