

TRANSLATION**PATENT COOPERATION TREATY****PCT****INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference ALL4LABELS		FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/BR2022/050442	International filing date (<i>day/month/year</i>) 16.11.2022	Priority date (<i>day/month/year</i>) 18.11.2021	
International Patent Classification (IPC) or national classification and IPC See supplemental box			
Applicant ALL4LABELS GRÁFICA DO BRASIL LTDA.			

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.		
2.	This REPORT consists of a total of <u>7</u> sheets, including this cover sheet.		
3.	This report is also accompanied by ANNEXES, comprising: a. ☒ a total of <u>17</u> sheets, as follows: ☒ sheets of the description, claims and/or drawings which have been amended and/or sheets containing rectifications authorized by this Authority, unless those sheets were superseded or cancelled, and any accompanying letters (see Rules 46.5, 66.8, 70.16, 91.2, and Section 607 of the Administrative Instructions). ☐ sheets containing rectifications, where the decision was made by this Authority not to take them into account because they were not authorized by or notified to this Authority at the time when this Authority began to draw up this report, and any accompanying letters (Rules 66.4bis, 70.2(e), 70.16 and 91.2). ☐ superseded sheets and any accompanying letters, where this Authority either considers that the superseding sheets contain an amendment that goes beyond the disclosure in the international application as filed, or the superseding sheets were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in item 4 of Box No. I and the Supplemental Box (see Rule 70.16(b)) b. ☐ a separate electronic file containing a sequence listing (<i>sent to the International Bureau only</i>).		
4.	This report contains indications relating to the following items: ☒ Box No. I Basis of the report ☐ Box No. II Priority ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability ☐ Box No. IV Lack of unity of invention ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement ☐ Box No. VI Certain documents cited ☐ Box No. VII Certain defects in the international application ☒ Box No. VIII Certain observations on the international application		

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/BR	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. I Basis of the report

1. With regard to the **language**, this report is based on:
- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rule 55.2(a) and/or 55.3(a))
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-11 as originally filed/furnished.
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- Nos. _____ as originally filed/furnished.
- Nos.* _____ as amended (together with any statement) under Article 19
- Nos.* 1-14 received by this Authority on 18.09.2023
- ☒ the drawings:
- pages 1-2 as originally filed/furnished.
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing – see Supplemental Box Relating to Sequence Listing.
3. ☒ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☒ the claims, Nos. 15-19
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since either they are considered to go beyond the disclosure as filed, or they were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in the Supplemental Box (Rule 70.2(c) and (c-bis)):
- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
5. ☐ This report has been established:
- ☐ taking into account **the rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.1(d-bis) and 70.2(e)).
- ☐ without taking into account **the rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.1bis and 70.2(e)).
6. With regard to top-up searches (Rules 66.1ter and 70.2(f)):
- ☐ A top-up search was carried out by this Authority on _____
- ☐ Additional relevant documents have been discovered during the top-up search.
- ☒ No top-up search was carried out by this Authority because it would serve no useful purpose.
7. ☐ Supplementary international search report(s) from Authority(ies) _____
- ☐ has/have been received and taken into account in establishing this report (Rule 45bis.8(b) and (c)).
- * If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/BR2022/050442

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	<u>1-14</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-14</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-14</u>	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
The following documents identified in the international search report were considered in this report: D1: US2020269554 A1 D2: Patil CK, Jung DW, Jirimali HD, Baik JH, Gite VV, Hong SC. Nonedible Vegetable Oil-Based Polyols in Anticorrosive and Antimicrobial Polyurethane Coatings. Polymers (Basel). 2021 Sep 17; 13(18): 3149. doi: 10.3390/polym13183149 PMID: 34578051; PMCID: PMC8473091 D3: US5498452 A1 The present invention relates to biodegradable, recyclable, compostable, sealable and thermoformed packaging for use for packaging foodstuffs, personal health care and home care products, and to the method for manufacturing same. Problem addressed: To provide a simple, low-cost and easy-to-manufacture solution capable of going into a cooking oven and hence of withstanding "high" temperatures, that is entirely compostable, recyclable and biodegradable and that is also made from renewable raw material from a non-edible source.			

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

Solution to the problem: For that purpose, a biodegradable packaging is proposed, wherein the packaging is made up of layers, including a substrate (10) made of paper, and a coating (20) covering the substrate (10) comprising a biodegradable resin of plant origin, from a non-edible source, which can be a bio-polyurethane, characterised in that the packaging can be thermoformed; the resin composition comprises castor bean or palm oil; the packaging is sealable with a cardboard lid or a paper lid coated with a biodegradable resin; the packaging is totally compostable; the packaging is impervious to oils, fats and moisture at temperatures from -35°C to 280°C.

The invention defined in the new claims 1-14 is considered novel and complies with PCT Article 33(2) because the prior art documents do not disclose the invention.

In view of the arguments presented by the applicant in the letter of reply to the first written opinion on 18 September 2023, regarding inventive step in the new claims 1-14 in relation to documents D1-D3, it should be noted that:

The arguments and amendments to the set of claims convincingly demonstrated that the present invention is novel and involves an inventive step in view of documents D1-D3. The subject matter of the present invention is not considered obvious to a person skilled in the art from the combination of documents D1-D3, since the combination

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

of the packaging described in D1 with the raw material source (castor bean and palm oil) described in D2 would not be sufficient *per se* to lead to a product intended for the use described in D3 (a freezer- and microwave oven-resistant packaging), in such a way that the product is totally compostable and suitable for processing by thermoforming after the coating resin is cured. Thus, the new claims 1-14 are considered to comply with PCT Article 33(3).

The subject matter of the new claims 1-14 is considered industrially applicable and therefore complies with PCT Article 33(4).

Box No. VIII **Certain observations on the international application**

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

The application does not meet the requirements of PCT Article 6 because claim 2 is unclear. The present claim 2 is erroneously made dependent on the present claim 4.

The feature "totally compostable" according to dependent claim 4 is defined in the subject matter of independent claim 1. Consequently, these claims are not concise (PCT Article 6).

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Cover sheet, International Patent Classification and CPC

B32B 1/02 (2006.01)i; B32B 27/10 (2006.01)i; B32B 27/40
(2006.01)i; B65D 65/40 (2006.01)i; B65D 81/34 (2006.01)i

CPC: B32B2255/12, B32B2255/26, B32B2307/7163,
B32B2439/70, B65D81/3453