

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To: SULLIVAN, MICHAEL J. KIMBERLY-CLARK WORLDWIDE, INC. 2300 WINCHESTER ROAD NEENAH WI 54956 USA

Date of mailing (day/month/year)	03 June 2015 (03.06.2015)
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Applicant's or agent's file reference 64941833PC01	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/US2014/058372	International filing date (day/month/year) 30 September 2014 (30.09.2014)	Priority date(day/month/year)
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International Patent Classification (IPC) or both national classification and IPC C12M 3/00(2006.01)i, C12N 1/20(2006.01)i
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Applicant KIMBERLY-CLARK WORLDWIDE, INC.
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1. This opinion contains indications relating to the following items:

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|-------------------------------------|--------------|---|
| ☒ | Box No. I | Basis of the opinion |
| ☐ | Box No. II | Priority |
| ☐ | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| ☐ | Box No. IV | Lack of unity of invention |
| ☒ | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement |
| ☐ | Box No. VI | Certain documents cited |
| ☒ | Box No. VII | Certain defects in the international application |
| ☐ | Box No. VIII | Certain observations on the international application |

2. **FURTHER ACTION**

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

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

Name and mailing address of the ISA/KR International Application Division Korean Intellectual Property Office 189 Cheongsa-ro, Seo-gu, Daejeon Metropolitan City, 302-701, Republic of Korea Facsimile No. +82-42-472-7140	Date of completion of this opinion 01 June 2015 (01.06.2015)	Authorized officer HEO, Joo Hyung Telephone No. +82-42-481-8150
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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2014/058372

Box No. 1 Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis. I(a))

3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:

- a. ☐ forming part of the international application as filed:
- ☐ in the form of an Annex C/ST.25 text file.
- ☐ on paper or in the form of an image file.
- b. ☐ furnished together with the international application under PCT Rule 13ter. I(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
- c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
- ☐ in the form of an Annex C/ST.25 text file (Rule 13ter. I(a)).
- ☐ on paper or in the form of an image file (Rule 13ter. I(b) and Administrative Instructions, Section 713).

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

**WRITTEN OPINION OF THE
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International application No.

PCT/US2014/058372

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-20	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 2013-0281948 A1 (EHRNSPERGER, BRUNO JOHANNES et al.) 24 October 2013

D2: US 2014-0096924 A1 (REKOSKE, MICHAEL JOHN et al.) 10 April 2014

D3: US 8506978 B2 (SOERENS, DAVE ALLEN et al.) 13 August 2013

D4: CN 102370598 A (TIANJIN SINOSH NEW MATERIAL TECHNOLOGY CO., LTD.)
14 March 2012

D5: US 2012-0164200 A1 (QIN, JIAN et al.) 28 June 2012

D6: US 2009-0181157 A1 (TOREKI, WILLIAM et al.) 16 July 2009

1. Novelty and Inventive Step

1.1 Claims 1-10

Claim 1

Claim 1 relates to a creped tissue web comprising greater than about 2mg prebiotic per square meter of web surface area, the web having a basis weight greater than about 10 grams per square meter and a bulk greater than about 3 cubic centimeters per gram.

None of the prior art documents disclose or suggest the creped tissue web comprising greater than about 2mg prebiotic per square meter of web surface area.

Accordingly, claim 1 is neither anticipated nor obvious to a person skilled in the art by the prior documents, taken alone or in combination.

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**WRITTEN OPINION OF THE
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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

The unit of measure "g/3"" employed in claims 4 and 13 are not additionally expressed in terms of the units stipulated by PCT Rule 10.1(a).

Supplemental Box

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

Continuation of : Box No. V

Therefore, claim 1 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 2-10

Claims 2-10 are substantially dependent on claim 1. Consequently, claims 2-10 also meet the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

1.2 Claims 11-14

Claim 11

Claim 11 relates to a multi-ply creped tissue product comprising the creped tissue web of claim 1. Thus, there is no doubt that the same reasoning as in claim 1 applies hereto.

Therefore, claim 11 also meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 12-14

Claims 12-14 are dependent on claim 11. Consequently, claims 12-14 also meet the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

1.3 Claims 15-20

Claim 15

Claim 15 relates to a method of manufacturing a prebiotic creped tissue web comprising the steps of dispersing cellulosic fibers to form a fiber slurry, forming a wet tissue web, partially dewatering the wet tissue web, applying a creping composition comprising a prebiotic to a creping cylinder, pressing the partially dewatered tissue web to the creping cylinder, drying the tissue web and creping the dried tissue web from the creping cylinder.

None of the prior art documents disclose or suggest the method of manufacturing a prebiotic creped tissue web comprising the step of applying a creping composition comprising a prebiotic to a creping cylinder.

Accordingly, claim 15 is neither anticipated nor obvious to a person skilled in the art by the

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Supplemental Box

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prior documents, taken alone or in combination.

Therefore, claim 15 meets the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

Claims 16-20

Claims 16-20 are substantially dependent on claim 15. Consequently, claims 16-20 also meet the requirements of PCT Article 33(2) and (3) with respect to novelty and inventive step.

2. Industrial Applicability

Claims 1-20 are industrially applicable under PCT Article 33(4).