

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)**

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/B2017/001405

International filing date (day/month/year)
29.09.2017

Priority date (day/month/year)

International Patent Classification (IPC) or both national classification and IPC
INV. D21H27/00

Applicant
SCA HYGIENE PRODUCTS AB

1. This opinion contains indications relating to the following items:

- 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 usually 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.

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Date of completion of this opinion

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Box No. I Basis of the 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.1(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.1(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.1(a)).
 - on paper or in the form of an image file (Rule 13ter.1(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:

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)	Yes: Claims	<u>1-22</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-22</u>
Industrial applicability (IA)	Yes: Claims	<u>1-22</u>
	No: Claims	

2. Citations and explanations

see separate sheet

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:

see separate sheet

Item VIII

- 1 Claim 1 is not clear since the length of the first end and second end respectively are not defined. These features being undefined, they will therefore be interpreted broadly.
- 2 Claim 1 is also unclear since the amount of nonionic cellulose ether and its molecular weight are not defined in the claim. These essential features must be defined in the claim. It is actually not credible that the technical effect underlying the present invention can be achieved for any amount of cellulose ether and having any molecular weight.

Item V

- 3 Reference is made to the following documents:
 - D1 US 4 487 378 A (KOBAYASHI MASASHI [JP]) 11 December 1984 (1984-12-11)
 - D2 WO 2013/082240 A1 (PROCTER & GAMBLE [US]) 6 June 2013 (2013-06-06)

4 Independent claims

4.1 Independent product claim 1

The closest prior art is document D1 (see claim 1) which discloses a coreless roll of an absorbent sheet. The only distinguishing feature is that the second end is coated with a nonionic cellulose ether.

The technical effect is an improvement of the mechanical strength properties and hence a reduced tendency to delamination.

The technical problem is therefore regarded as how to improve the strength of the coreless roll.

The skilled person would know from the common general knowledge that strength agents are available for such absorbent sheet products (e.g. tissue/toilet papers), among them non ionic cellulose ether. He would then apply nonionic cellulose ether to at least the second end of the web forming the roll.

Alternatively he would learn from document D2, pertaining to the same technical field, that CMC (carboxymethyl cellulose) can be used to improve the strength of tissue paper webs. With this teaching he would then arrive in an obvious manner at the subject-matter of claim 1.

Claim 1 is not inventive over D1 taken alone or in combination with D2; Art. 33(3) PCT.

4.2 Independent method claim 20

The process steps contained in claim 20 related to the manufacture per se of the coreless roll are well known from the common general knowledge since they represent the normal steps of producing a coreless roll. Furthermore no surprising and unexpected technical effect derives from these manufacturing steps. The application by coating of a solution as defined in present claim 1 to the second end is also known from the prior art (see arguments put forward as to claim 1).

Claim 20 is therefore not inventive over D1 taken alone or in combination with D2; Art. 33(3) PCT.

4.3 Independent use claim 22

At least the use for a toilet paper is also disclosed in D1 (column 1, line 66 - column 2, line 2).

Claim 22 is therefore not inventive over D1 taken alone or in combination with D2; Art. 33(3) PCT.

5 Dependent claims

Taken in isolation, the dependent claims are not considered to involve an inventive step because they contain only normal features that relate to the optimization of the subject-matter of the independent claims to which they refer (selection of a nonionic cellulose ether, range of molecular weights, etc.). Furthermore, no surprising and unexpected technical effect is supported in the description for any of those subject-matters when considered individually.