

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference X 23 181	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/EP2020/069127	International filing date (<i>day/month/year</i>) 7 July 2020 (07-07-2020)	(Earliest) Priority Date (<i>day/month/year</i>) 30 July 2019 (30-07-2019)
Applicant ASAHI KASEI KABUSHIKI KAISHA		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out 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))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6**bis**(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 3

- ☒ as suggested by the applicant
☐ as selected by this Authority, because the applicant failed to suggest a figure
☐ as selected by this Authority, because this figure better characterizes the invention

b. ☐ none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2020/069127

A. CLASSIFICATION OF SUBJECT MATTER		
INV.	D04H3/14	D04H3/147
	D01D5/098	D01D5/32
		D01F8/06
ADD.	D01D5/34	D01D13/00
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) D04H D01F D01D		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2017/314163 A1 (SOMMER SEBASTIAN [DE] ET AL) 2 November 2017 (2017-11-02)	1-4, 19-21
Y	claims 12,15; figure 1 paragraphs [0030], [0048] paragraph [0025] paragraph [0031] paragraph [0046]	5-18
X	WO 2005/111299 A1 (KIMBERLY CLARK CO [US]; KEPNER ERIC SCOTT [US] ET AL.) 24 November 2005 (2005-11-24)	19
Y	figure 1 page 12, lines 27-29 page 13, lines 5-7 page 13, lines 14-27 page 15, lines 17-20 page 16, lines 35-36	5-18
	----- -/-	
☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 24 September 2020		Date of mailing of the international search report 07/10/2020
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Beckert, Audrey

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International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 394 435 A (KNEE TERENCE E C) 30 July 1968 (1968-07-30) the whole document -----	1-21
A	JP S49 6786 B1 (-) 16 February 1974 (1974-02-16) the whole document -----	1-21

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Information on patent family members

International application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2017314163	A1	02-11-2017	AR 108335 A1 08-08-2018
			BR 102017008542 A2 07-11-2017
			CN 107326541 A 07-11-2017
			EP 3239378 A1 01-11-2017
			ES 2720805 T3 24-07-2019
			JP 2017206803 A 24-11-2017
			KR 20170124095 A 09-11-2017
			PL 3239378 T3 31-07-2019
			RU 2017114956 A 30-10-2018
			SI 3239378 T1 28-06-2019
			US 2017314163 A1 02-11-2017
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			CN 1946896 A 11-04-2007
			EP 1740759 A1 10-01-2007
			US 2005245157 A1 03-11-2005
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US 3394435	A	30-07-1968	NONE
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