



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> : <b>A61L 15/46, 15/20</b>	<b>A3</b>	(11) International Publication Number: <b>WO 96/40300</b>  (43) International Publication Date: 19 December 1996 (19.12.96)								
<p>(21) International Application Number: PCT/US96/08911</p> <p>(22) International Filing Date: 3 June 1996 (03.06.96)</p> <p>(30) Priority Data:</p> <table border="0"> <tr> <td>08/487,950</td> <td>7 June 1995 (07.06.95)</td> <td>US</td> </tr> <tr> <td>08/487,876</td> <td>7 June 1995 (07.06.95)</td> <td>US</td> </tr> <tr> <td>08/487,875</td> <td>7 June 1995 (07.06.95)</td> <td>US</td> </tr> </table> <p>(71) Applicant: KIMBERLY-CLARK CORPORATION [US/US]; 401 North Lake Street, Neenah, WI 54956 (US).</p> <p>(72) Inventor: SYVERSON, Rae, Ellen; W2756 Poplar Road, Fond du Lac, WI 54935 (US).</p> <p>(74) Agents: DAVIS, Mark, L. et al.; Kimberly-Clark Corporation, 401 North Lake Street, Neenah, WI 54956 (US).</p>	08/487,950	7 June 1995 (07.06.95)	US	08/487,876	7 June 1995 (07.06.95)	US	08/487,875	7 June 1995 (07.06.95)	US	<p>(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p> <p>(88) Date of publication of the international search report: 12 June 1997 (12.06.97)</p>
08/487,950	7 June 1995 (07.06.95)	US								
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08/487,875	7 June 1995 (07.06.95)	US								
(54) Title: INHIBITION OF EXOPROTEIN IN ABSORBENT ARTICLE										
<p>(57) Abstract</p> <p>Absorbent articles, such as catamenial tampons, for absorbing body fluids are disclosed which include an effective amount of an ether, amine or amide composition, either alone or in combination to substantially inhibit the production of exotoxins by Gram positive bacteria. The ether composition has the general formula: R<sub>1</sub>-O-R<sub>2</sub> wherein R<sub>1</sub> is a straight or branched alkyl group having a chain of 8 to 18 carbon atoms and R<sub>2</sub> is selected from an alcohol, a polyalkoxylated sulfate salt and a polyalkoxylated sulfosuccinate salt. The amine compound has general formula (a) wherein R<sub>3</sub> is an alkyl group having from about 8 to about 18 carbon atoms; and R<sub>4</sub> and R<sub>5</sub> can be the same or different and are selected from hydrogen and an alkyl group having from 1 to about 18 carbon atoms and which can have one or more substitutional moieties selected from hydroxyl, carboxyl and carboxyl salts, and imidazoline. The amide compound has general formula (b) wherein R<sub>7</sub> is an alkyl group having 8 to 18 carbon atoms, inclusive of the carbonyl carbon, and R<sub>8</sub> and R<sub>9</sub> can be the same or different, R<sub>8</sub> and R<sub>9</sub> are selected from hydrogen, an alkyl group having 1 to about 12 carbon atoms and may contain one or more substituent groups selected from ester, ether, amine, hydroxyl, carboxyl, carboxyl salts, sulfonate, sulfonate salts and combinations thereof. A method of inhibiting the production of exoprotein from Gram positive bacteria is also disclosed.</p>	$\begin{array}{ccc} R_3-N-R_4 & (a) & \begin{array}{c} O \\   \\ R_7-CN-R_8 \\   \\ R_9 \end{array} & (b) \\   & & & \\ R_5 & & & \end{array}$									

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Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

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INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 96/08911

<p>A. CLASSIFICATION OF SUBJECT MATTER IPC 6 A61L15/46 A61L15/20</p> <p>According to International Patent Classification (IPC) or to both national classification and IPC</p>																							
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) IPC 6 A61L</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <p>Electronic data base consulted during the international search (name of data base and, where practical, search terms used)</p>																							
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category *</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>EP 0 483 812 A (MCNEIL PPC INC) 6 May 1992 see claims ---</td> <td>1-24</td> </tr> <tr> <td>A</td> <td>EP 0 395 099 A (MCNEIL PPC INC) 31 October 1990 see claims; examples ---</td> <td>1-24</td> </tr> <tr> <td>A</td> <td>WO 86 05388 A (HARVARD COLLEGE) 25 September 1986 see claims ---</td> <td>1-24</td> </tr> <tr> <td>A</td> <td>US 4 405 323 A (AUERBACH SIDNEY) 20 September 1983 see claims ---</td> <td>1</td> </tr> <tr> <td>A</td> <td>EP 0 402 266 A (SANOFI SA) 12 December 1990 see claims; examples ---</td> <td>25-66</td> </tr> <tr> <td colspan="2" style="text-align: center;">-/--</td> <td></td> </tr> </tbody> </table>			Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	A	EP 0 483 812 A (MCNEIL PPC INC) 6 May 1992 see claims ---	1-24	A	EP 0 395 099 A (MCNEIL PPC INC) 31 October 1990 see claims; examples ---	1-24	A	WO 86 05388 A (HARVARD COLLEGE) 25 September 1986 see claims ---	1-24	A	US 4 405 323 A (AUERBACH SIDNEY) 20 September 1983 see claims ---	1	A	EP 0 402 266 A (SANOFI SA) 12 December 1990 see claims; examples ---	25-66	-/--		
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.	<input checked="" type="checkbox"/> Patent family members are listed in annex.																						
<p>* Special categories of cited documents :</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"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</p> <p>"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</p> <p>"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.</p> <p>"&amp;" document member of the same patent family</p>																							
<p>Date of the actual completion of the international search</p> <p>22 April 1997</p>	<p>Date of mailing of the international search report</p> <p>07.05.97</p>																						
<p>Name and mailing address of the ISA</p> <p>European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+ 31-70) 340-2040, Tx. 31 651 epo nl, Fax (+ 31-70) 340-3016</p>	<p>Authorized officer</p> <p>ESPINOSA, M</p>																						

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 96/08911

## 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 3 629 454 A (BARR FRED S ET AL) 21 December 1971 see claims -----	45-66

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 96/08911

**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1. Claims 1 - 24 (in full)
  2. Claims 25 - 44 (in full), 45, 61, 63 - 66 (in part)
  3. Claims 46 - 60, 62 (in full), 45, 61, 63 - 66 (in part)
- 
1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
  2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
  3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
  4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 96/08911

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