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(54) Title: PENETRATING PHARMACEUTICAL FOAM

(57) Abstract: The invention relates to an alcohol-free cosmetic or pharmaceutical foam carrier comprising water, a hydrophobic solvent, a surface-active agent and a gelling agent. The foam carrier further comprises active agents and excipients with therapeutic properties having enhanced skin penetration.



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**INTERNATIONAL SEARCH REPORT**

International Application No  
PCT/IB2004/002965

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 A61K9/12 A61K31/196 A61K31/167 A61K7/48 A61K31/496

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)  
 IPC 7 A61K

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 practical, search terms used)  
 EPO-Internal, WPI Data, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 2002, no. 05, 3 May 2002 (2002-05-03) & JP 2002 012513 A (KANEBO LTD), 15 January 2002 (2002-01-15)  abstract example 4  ----- -/--	1,3-5,9, 13-56, 58, 61-63, 65, 68-71, 79,80

Further documents are listed in the continuation of box C.       Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier document but published on or after the international filing date	"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
"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)	"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. °
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search <b>3 May 2005</b>	Date of mailing of the international search report <b>18 JUL 2005</b>
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Name and mailing address of the ISA 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	Authorized officer  <b>Martin, E</b>
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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/002965

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 145 411 A (MENDE ET AL) 20 March 1979 (1979-03-20) cited in the application	63
A	column 1, line 63 - last line	1,3-5,9, 13-56, 58, 60-62, 65, 67-70, 74,78-80
	column 3, line 8 - line 18; claim 1; example 1	
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A	US 5 972 310 A (SACHETTO ET AL) 26 October 1999 (1999-10-26)	1,3-5,9, 13-56, 58, 60-63, 65, 67-70, 74,78-80
	column 2, line 8 - line 23 column 3, line 22 - column 5, line 33; examples 1,2; table II	
	-----	
A	WO 02/41847 A (WELLA AKTIENGESELLSCHAFT; BROCKS, WERNER; EBERHARDT, HEIKO; KALBFLEISC) 30 May 2002 (2002-05-30)	1,3-5,9, 13-56, 58, 60-63, 65, 67-70, 74,78-80
	example 2	
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/IB2004/002965

Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
JP 2002012513	A	15-01-2002	NONE	
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			AU 701373 B2	28-01-1999
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			JP 2004513958 T	13-05-2004
			US 2004076651 A1	22-04-2004

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB2004/002965

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 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:  

Although claims 26-28, 61-63, 65, 67-70, 74, and 78-80 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the composition.
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 III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

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

see additional sheet

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.:

see annex

### Remark on Protest

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

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1 (in part), 3-5, 9, 13-56 (in part), 58, 60-63 (in part), 65, 67 (in part), 68-70, 74, 78-80 (in part)

An oil in water foamable emulsion that is stable in its pre-dispensed state comprising : (i) 5-50% by weight of composition of a liquid, non-volatile hydrophobic solvent; (ii) 0.1 to 5% by weight of a composition of a surface-active agent; (iii) 0.1 to 5% by weight of a gelling agent; (iv) urea; and (v) a liquefied gas propellant at a concentration of 3% to 18% by weight of the total composition; wherein the emulsion is alcohol-free; a foam, comprising: (i) 0.1 to 5% by weight of a composition of a surface-active agent; (ii) 0.1 to 5% by weight of a gelling agent; (iii) 10% to 40% urea; and (iv) water wherein the foam is alcohol-free and has a specific gravity of between 0.01 g/mL and 0.1 g/mL; and use of said foamable emulsion or foam in the treatment of a disorder, wounds, burns, cuts and ulcers.

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2. claims: 1 (in part), 6-8, 13-56 (in part), 59, 60-63 (in part), 66, 67 (in part), 71-73, 78-80 (in part)

An oil in water foamable emulsion that is stable in its pre-dispensed state comprising : (i) 5-50% by weight of composition of a liquid, non-volatile hydrophobic solvent; (ii) 0.1 to 5% by weight of a composition of a surface-active agent; (iii) 0.1 to 5% by weight of a gelling agent; (iv) a hydroxy acid; and (v) a liquefied gas propellant at a concentration of 3% to 18% by weight of the total composition; wherein the emulsion is alcohol-free; a foam, comprising: (i) 0.1 to 5% by weight of a composition of a surface-active agent; (ii) 0.1 to 5% by weight of a gelling agent; (iii) 10% to 30% hydroxy acid; and (iv) water wherein the foam is alcohol-free and has a specific gravity of between 0.01 g/mL and 0.1 g/mL; and use of said foamable emulsion or foam in the treatment of a disorder, wounds, burns, cuts and ulcers.

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3. claims: claims 1 (in part), 2, 14-56 (in part), 57, 60 (in part)-63 (in part), 64, 67 (in part), 78-80 (in part)

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An oil in water foamable emulsion that is stable in its pre-dispensed state comprising : (i) 5-50% by weight of composition of a liquid, non-volatile hydrophobic solvent; (ii) 0.1 to 5% by weight of a composition of a surface-active agent; (iii) 0.1 to 5% by weight of a gelling agent; (iv) a eutectic mixture of active agents; and (v) a liquefied gas propellant at a concentration of 3% to 18% by weight of the total composition; wherein the emulsion is alcohol-free; a foam, comprising: (i) 0.1 to 5% by weight of a composition of a surface-active agent; (ii) 0.1 to 5% by weight of a gelling agent; (iii) a eutectic mixture of active agents; and (iv) water wherein the foam is alcohol-free and has a specific gravity of between 0.01 g/mL and 0.1 g/mL; and use of said foamable emulsion or foam in the treatment of a disorder, wounds, burns, cuts and ulcers.

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4. claims: claims 10-12, 14-56 (in part), 63 (in part), 67 (in part), 75-77, 78-80 (in part)

An oil in water foamable emulsion that is stable in its pre-dispensed state comprising: (i) 5-50% by weight of composition of a liquid, non-volatile hydrophobic solvent; (ii) 0.1 to 5% by weight of a composition of a surface-active agent; (iii) 0.1 to 5% by weight of a gelling agent; (iv) a therapeutic enhancer selected from the group consisting of propylene glycol, butylene glycols, glycerol, pentaerythritol, sorbitol, mannitol, oligosaccharides, dimethyl isosorbide, monooleate of ethoxylated glycerides having 8 to 10 ethylene oxide units, polyethylene glycol 200-600, transcutool, glycofurol and cyclodextrins ; (v) a therapeutically effective concentration of at least one active agent; and (vi) a liquefied gas propellant at a concentration of 3% to 18% by weight of the total composition; wherein the emulsion is alcohol-free; and use of said foamable emulsion or foam in the treatment of a disorder, wounds, burns, cuts and ulcers.

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