

AUSTRALIA

660738

PATENTS ACT 1990

NOTICE OF ENTITLEMENT

WE, ISTITUTO GENTILI S.P.A. of Via Mazzini, 112, I-56100 Pisa, Italy, being the applicant in respect of the attached application state the following:-

The inventor of the invention is as follows:

LUCIANO FONTANELLI of Via Mazzini, 112, I-56100 Pisa, Italy.

The person nominated for the grant of the patent:

ISTITUTO GENTILI S.p.A is the applicant of the application listed in the declaration under Article 8 of the PCT and has entitlement from the inventor by virtue of a verbal arrangement dated November 22 1991.

The basic application listed in the declaration made under Article 8 of the PCT is the first application made in a convention country in respect of the invention.

DATED THIS 15TH DAY OF APRIL 1994.

ISTITUTO GENTILI S.p.A
By their Patent Attorneys
KELVIN LORD AND COMPANY
PERTH, WESTERN AUSTRALIA.

Kevin Lord



AU9229296

(12) PATENT ABRIDGMENT (11) Document No. AU-B-29296/92
(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. 660738

- (54) Title
DERMATOLOGICAL AND COSMETIC COMPOSITIONS
- International Patent Classification(s)
(51)⁵ A61K 007/00 A61K 007/48
- (21) Application No. : 29296/92 (22) Application Date : 12.11.92
- (87) PCT Publication Number : WO93/09760
- (30) Priority Data
- | | | |
|-------------|-----------|--------------|
| (31) Number | (32) Date | (33) Country |
| MI91A3127 | 22.11.91 | IT ITALY |
- (43) Publication Date : 15.06.93
- (44) Publication Date of Accepted Application : 06.07.95
- (71) Applicant(s)
ISTITUTO GENTILI S.P.A.
- (72) Inventor(s)
LUCIANO FONTANELLI
- (74) Attorney or Agent
KELVIN LORD & COMPANY , 4 Douro Place, WEST PERTH WA 6005
- (57) Claim

1. Dermatological and cosmetic compositions consisting of:

1) emulsifying and self-emulsifying agents, having o/w activity formed by a mixture containing (as % w/w)

1') polyethylene glycol mono- or distearate 0.5-5.0 %

2') polyglycol esters of saturated or unsaturated C₁₄-C₂₀ fatty acids 1.0-10.0 %

3') cetyl alcohol and optionally other higher alcohols, comprising free or esterified sterols 1.0-16.0 %

2) sodium versenate and antioxidant agents 0.1-5.0 %

3) anti-mould and bacteriostatic agents 0.05-0.1 %

4) active ingredients 1-30 %

5) purified water F.U. q.s. to 100 %

PCT

ANNOUNCEMENT OF THE LATER PUBLICATION
OF INTERNATIONAL SEARCH REPORT

29296/92

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁵ : A61K 7/06, 7/48, 7/06	A3	(11) International Publication Number: WO 93/09760 (43) International Publication Date: 27 May 1993 (27.05.93)
(21) International Application Number: PCT/EP92/02597 (22) International Filing Date: 12 November 1992 (12.11.92) (30) Priority data: MI91A003127 22 November 1991 (22.11.91) IT (71) Applicant (for all designated States except US): ISTITUTO GENTILI S.P.A. [IT/IT]; Via Mazzini, 112, I-56100 Pisa (IT). (72) Inventor; and (75) Inventor/Applicant (for US only): FONTANELLI, Luciano [IT/IT]; Via Mazzini, 112, I-56100 Pisa (IT). (74) Agent: MINOJA, Fabrizio; Studio Consulenza Brevettuale, Via Rossini, 8, I-20122 Milano (IT).		(81) Designated States: AU, BB, BG, BR, CA, CS, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, PL, RO, RU, SD, US, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 8 July 1993 (08.07.93) 66 0738
(54) Title: DERMATOLOGICAL AND COSMETIC COMPOSITIONS (57) Abstract Dermatological and cosmetic compositions having high endermicity and antiageing activity and high stability are herein described consisting of: 1) emulsifying and self-emulsifying agents, having o/w activity formed by a mixture containing (as % w/w); 1') polyethylene glycol mono- or distearate 0.5-5.0 %; 2') polyglycol esters of saturated or unsaturated C ₁₄ -C ₂₀ fatty acids 1.0-10.0 %; 3') cetyl alcohol and optionally other higher alcohols, comprising free or esterified sterols 1.0-16.0 %; 2) sodium versenate and antioxidant agents 0.1-5.0 %; 3) anti-mould and bacteriostatic agents 0.05-0.1 %; 4) active ingredients 1-30 %; 5) purified water F.U. q.s. to 100 %.		

DERMATOLOGICAL AND COSMETIC COMPOSITIONS

The present invention relates to dermatological and cosmetic compositions and particularly to compositions having antiageing activity; said compositions are also useful in the treatment of burns, wounds and are characterized by a high stability such as to make them also suitable for the stabilization of active ingredients.

Skin is formed by cells whose state affects the external appearance of epidermis. Skin ageing derives from a slowing of the derm functions, particularly nutrition, respiration, hydration, regeneration and cutaneous tissues protection. Skin ageing is a natural phenomenon whose causes are of different origin and can be more or less fast for each person. Generally, the function slowing of certain cells, whose role is very important in maintaining the integrity of derm structure, begins around one's thirties. This phenomenon may begin at a more or less early age, due to many factors, such as genetic set, general health state, each individual's peculiar way of life.

The object of the present invention are dermatological and cosmetic compositions having antiageing activity and having high stability, also in the presence of active ingredients of various kind.

The compositions according to the invention consist of:

- 1) emulsifying and self-emulsifying agents, having o/w activity formed by a mixture containing (as % w/w)
- 1') polyethylene glycol mono- or distearate 0.5-5.0 %

- 2') polyglycol esters of saturated or
unsaturated C₁₄-C₂₀ fatty acids 1.0-10.0 %
- 3') cetyl alcohol and optionally other
higher alcohols, comprising free
5 or esterified sterols 1.0-16.0 %
- 2) sodium versenate and antioxidant agents 0.1-5.0 %
- 3) anti-mould and bacteriostatic agents 0.05-0.1 %
- 4) active ingredients 1-30 %
- 5) purified water F.U. q.s. to 100 %
- 10 Polyethylene glycols, having various molecular weight, for example ranging from 200 to 10,000, preferably from 400 to 2,000, more preferably 1,000, can be used. Polyethylene glycol 1,000 monostearate is particularly preferred.
- 15 The antioxidant agents are selected from the group consisting of:
- a) polyunsaturated fatty acids, preferably belonging to vitamin F group;
- b) tocopheryl derivatives, preferably tocopheryl
20 acetate.
- Examples of anti-mould and/or bacteriostatic agents are methyl or propyl p-oxybenzoates.
- The active ingredients preferably have derm reconstituting activity. Examples of said active
25 ingredients, which can be used alone or combined each other, are collagen, in the several forms thereof, esurosamine, elastin, amino acids, peptides, mucopolysaccharides.
- The compositions of the invention are
30 characterized by a remarkable eudermicity, therefore, they act in an extraordinarily favourable extent on skin stretching and smoothness (anti-wrinkle effect),

translucency, on tissue stiffening, turgidity and elasticity, on the reduction of irregular fat accumulation in subcutaneous connective ("cellulitis"). The same favourable effects are exerted by the compositions on skin irritations on children, due to wet linens or sweat, on feet irritations due to maceration, on sun-induced irritations.

Further, the compositions of the invention also carry out a surprising dermatological activity on burns, crural ulcer, wound healings, bedsores, accelerating their recovery.

A particular and surprising aspect of the present invention lies in the fact that the above mentioned compositions, with a formulation excluding the active ingredients of the above point 4, act as stabilizing carriers towards several active ingredients, such as vitamins, hormones, antibiotics. Accordingly, said compositions are useful for the preparation of pharmaceutical compositions containing active ingredients, which are subject to degradation due to environmental conditions (temperature, humidity, oxidants, etc.).

Several stability tests, through chromatographic analysis, established that the compositions of the invention maintain the titre of the active ingredients therein enclosed within the limits fixed at room temperature; particularly some vitamins showed a titre loss not higher than 10% within two years.

The compositions of the invention are prepared according to the techniques which are well-known in dermatology and cosmetics, said compositions may be in

the form of creams, lotions, milks, ointments, oils, ampoules, masks, gels, pads, sprays.

According to one of the advantageous embodiments of the invention, both creams and milks can be prepared
5 with the same components.

Tolerability tests, carried out on dermatological and cosmetic compositions of the present invention, proved that said compositions are perfectly tolerated and cause no irritations, thus confirming their high
10 eudermicity.

The following examples further illustrate the invention.

EXAMPLE 1

To prepare 100 g of "base" cream:

15	Purified water	43.220 g
	Hamamelis water	27.500 g
	Cetyl alcohol	16.000 g
	Free and esterified sterols	1.000 g
	Methyl p-oxybenzoate	0.150 g
20	Polyethylene glycol 1,000 monostearate	3.000 g
	Propyl p-oxybenzoate	0.050 g
	Propyl gallate	0.030 g
	Propylene glycol	7.000 g
	Rose essence	0.250 g
25	Disodium versenate	0.050 g
	Vitamin F 80%	1.250 g
	Polyglycol esters of saturated or unsaturated C ₁₄ -C ₂₀ fatty acids	0.500 g

EXAMPLE 2

To prepare 100 g of Elastin cream:

	Elastin (anhydrous)	1-2 g
	Linol-linoleic acid	1.25 g
5	Cetyl alcohol	12.00 g
	Polyethylene glycol 1,000 monostearate	2.25 g
	Polyglycol esters of saturated or unsaturated C ₁₄ -C ₂₀ fatty acids	0.375-0.75 g
	Free and esterified sterols	0.75 g
10	Methyl p-oxybenzoate	0.13 g
	Propyl p-oxybenzoate	0.07 g
	Propyl gallate	0.30 g
	Versenic acid sodium salt	0.05 g
	Hamamelis water	20.50 g
15	Propylene glycol	5.25 g
	Purified water	55.975-54.600 g
	Rose essence	0.20 g.

EXAMPLE 3

To prepare 100 g of Collagen cream:

20	Soluble collagen (anhydrous))	1.20 g
	Vitamin F (polyunsaturated fatty acid)	1.15 g
	Elastin	0.50 g
	Esurosamine	0.50 g
	Vitamin E (Tocopheryl acetate)	0.20 g
25	Cetyl alcohol	7.50 g
	Polyethylene glycol 1,000 monostearate	3.00 g
	Polyglycol esters of saturated or unsaturated fatty acids	1.50 g
	Free and esterified sterols	1.50 g
30	Methyl p-oxybenzoate	0.10 g
	Propyl p-oxybenzoate	0.01 g

Propyl gallate	0.02 g
Versenic acid sodium salt	0.05 g
PCV-1845/2 Givaudan essence	0.30 g
Purified water	82.47 g.

5

EXAMPLE 4

To prepare 100 g of detergent milk:

	Purified water	45.050 g
	Hamamelis water	27.500 g
	Cetyl alcohol	2.500 g
10	Free and esterified sterols	1.000 g
	Polyglycol esters of saturated or unsaturated C ₁₄ -C ₂₀ fatty acids	5.000 g
	Elastin	1.000 g
	Esurosamine	1.000 g
15	Methyl p-oxybenzoate	0.130 g
	Polyethylene glycol 1,000 monostearate	0.750 g
	Propyl p-oxybenzoate	0.070 g
	Propyl gallate	0.300 g
	Propylene glycol	14.000 g
20	PCV-1845/2 Givaudan essence	0.200 g
	Versenic acid sodium salt	0.050 g
	Vitamin F 80%	1.250 g
	Vitamin E (Tocopheryl-acetate)	0.200 g.

CLAIMS

1. Dermatological and cosmetic compositions consisting of:
- 5 1) emulsifying and self-emulsifying agents, having o/w activity formed by a mixture containing (as % w/w)
- 1') polyethylene glycol mono- or distearate 0.5-5.0 %
- 2') polyglycol esters of saturated or unsaturated C₁₄-C₂₀ fatty acids 1.0-10.0 %
- 10 3') cetyl alcohol and optionally other higher alcohols, comprising free or esterified sterols 1.0-16.0 %
- 2) sodium versenate and antioxidant agents 0.1-5.0 %
- 3) anti-mould and bacteriostatic agents 0.05-0.1 %
- 15 4) active ingredients 1-30 %
- 5) purified water F.U. q.s. to 100 %
2. Compositions according to claim 1, wherein polyunsaturated fatty acids, belonging to the group of vitamin F, and tocopherol derivatives are the
- 20 antioxidant agents; the active ingredients are selected from the group consisting of collagen, in the several forms thereof, esurosamine, elastin, amino acids, peptides, mucopolysaccharides.
3. Compositions according to claim 1, wherein the
- 25 active ingredients are selected from the group consisting of vitamins, hormones, antibiotics.
4. Compositicns according to claims 1 and 2, wherein polyethylene glycol 1,000 monostearate is a component of the emulsifying agent.
5. Compositions according to claims 1-3, wherein tocopheryl acetate is the tocopherol derivative.
6. Compositions according to claims 1-4, wherein



methyl or propyl p-oxybenzoate is the anti-mould agent.

7. Compositions according to claims 1-5, in the form of milks, lotions, creams, ointments, oils, ampoules, masks, gels, pads, sprays.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 92/02597

I. CLASSIFICATION OF SUBJECT MATTER (If several classification symbols apply, indicate all) ⁶		
According to International Patent Classification (IPC) or to both National Classification and IPC		
Int.Cl. 5 A61K7/00; A61K7/48; A61K7/06		
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁷		
Classification System	Classification Symbols	
Int.Cl. 5	A61K	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁸		
III. DOCUMENTS CONSIDERED TO BE RELEVANT⁹		
Category ¹⁰	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
A	EP,A,0 049 354 (STERLING DRUG INC.) 14 April 1982 see examples 1,3 ---	1, 4
A	GB,A,2 130 486 (L'OREAL) 6 June 1984 see examples 2,3 ---	1
A	GB,A,2 143 841 (WILKINSON SWORD LIMITED) 20 February 1985 see example 3 ---	1
A	EP,A,0 024 031 (STERLING DRUG INC.) 18 February 1981 see page 11; example 2 ---	1
A	US,A,4 474 763 (LUBOWE I.) 2 October 1984 see column 4, line 40 - line 52; example 1 ---	1,2,3,6
-/--		
¹⁰ Special categories of cited documents: ¹⁰ "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document 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 "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. "A" document member of the same patent family		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search 07 APRIL 1993		Date of Mailing of this International Search Report 12.05.93
International Searching Authority EUROPEAN PATENT OFFICE		Signature of Authorized Officer COUCKUYT P.J.R.

III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)		
Category *	Citation of Document, with indication, where appropriate, of the relevant passages	Relevant to Claim No.
A	US,A,4 695 452 (GANNIS ET AL.) 22 September 1987 see examples	1-3
A	DE,A,3 304 896 (REHBERG INGE) 4 August 1983 see example 1	1,4

**ANNEX TO THE INTERNATIONAL SEARCH REPORT
ON INTERNATIONAL PATENT APPLICATION NO.**

EP 9202597
SA 67156

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

07/04/93

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP-A-0049354	14-04-82	US-A- 4767788	30-08-88
GB-A-2130486	06-06-84	LU-A- 84485	13-06-84
		BE-A- 898268	21-05-84
		CH-A- 657987	15-10-86
		DE-A, C 3341979	24-05-84
		FR-A, B 2536277	25-05-84
		JP-A- 59108716	23-06-84
		NL-A- 8304001	18-06-84
		US-A- 4545990	08-10-85
GB-A-2143841	20-02-85	AU-A- 3091184	31-01-85
		BE-A- 900216	16-11-84
		DE-A- 3426058	14-02-85
		FR-A- 2549848	01-02-85
		JP-A- 60049099	18-03-85
EP-A-0024031	18-02-81	AT-T- 5330	15-12-83
		AU-A- 6118180	19-02-81
		CA-A- 1168949	12-06-84
		JP-A- 56032598	02-04-81
		US-A- 4420484	13-12-83
		US-E- RE32300	02-12-86
US-A-4474763	02-10-84	None	
US-A-4695452	22-09-87	None	
DE-A-3304896	04-08-83	None	