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(54) Title: COSMETICS MADE IN ONE OR MORE COLOURS BY APPLYING A MAGNETIC FIELD, AND METHOD FOR THEIR PREPARATION

(57) Abstract: The present invention relates to a cosmetic product having a visible pattern consisting of one or more colours, comprising a cosmetic composition including one or more dyes and/or pigments which contain magnetic or magnetisable particles, characterised in that said cosmetic composition is housed in a container enclosing a magnet capable of generating a magnetic field, whereby said dyes and/or pigments are positioned and/or oriented in the container by said magnetic field, thereby creating the visible pattern.



**COSMETICS MADE IN ONE OR MORE COLOURS BY APPLYING A
MAGNETIC FIELD, AND METHOD FOR THEIR PREPARATION**

Field of invention

The present invention relates to cosmetic products, preferably used for make-up, made in one or more colours with geometrical or random patterns housed in a container including a magnet.

5 **Technical background**

Numerous patent applications disclose the manufacture of make-up cosmetics in a plurality of colours, housed in a single container, using a variety of technologies. Some examples are patent applications JP2013079202, US2011073125, JP2012065847, US2008261844 and US2008277827. Said
10 documents disclose technologies for the manufacture of multicoloured cosmetics in a single container in the form of a solid, powder, cast, fluid or emulsified product. However, a number of difficulties are involved in the manufacture of these cosmetics. The main technical difficulties include problems associated with making clear demarcations between the various colours, and the difficulty of combining in
15 the same container colours that present physical incompatibilities with one another from the formulation standpoint, such as a colour in powder form and a colour in fluid form.

According to the literature, the manufacture of cosmetics with a plurality of colours in the same container requires the use, at least at one stage of the
20 manufacturing process, of moulds, templates or preforms to prepare an initial rough pattern of the individual colours before combining them in the final container; however, this operation requires the use of complex machinery and equipment.

The use of magnetic fields applied to make-up cosmetics is also reported in the literature.

25 US 2011/000498 discloses a device for applying a cosmetic composition, in

particular mascara, including a magnet and magnetic or magnetisable particles. The disclosed device makes it easier both to apply the composition and to improve the deposition of magnetic or magnetisable particles on keratinous fibres in order to obtain the visual effect created by magnetic particles having an optical effect by reflecting and/or diffracting light.

EP1700534 discloses an article having a film comprising magnetic particles oriented as a visible pattern, and an adhesive surface which assures the fixation of the article on the skin, fingernail or artificial fingernail. A magnetic field is applied during the manufacturing process of the article before drying the film.

FR2888115 discloses a liquid foundation including at least one colouring agent having non-zero magnetic susceptibility, such as metallic iron, preferably soft iron. The foundation is applied to the skin and then subjected to a magnetic field in order to modify the orientation of at least some of the particles of the colouring agent(s) presenting non-zero magnetic susceptibility.

WO2006/037901 discloses a kit for applying make-up to a surface such as the skin, nails, hair or lips, said kit comprising a first cosmetic composition including magnetic particles that are movable under the effect of a magnetic field and a second cosmetic composition for covering or being covered by the first composition and a magnetic device for generating a magnetic field that makes it possible to displace and/or modify the orientation of all or some of the magnetic particles when the first composition is applied in the form of a layer to the surface.

All of said patents disclose inventions relating to mainly fluid cosmetics which are first subjected, during or after application, to a magnetic field, in order to improve their cosmetic performance.

Description of the invention

The present invention relates to the manufacture of cosmetics in one or more colours housed in a single container, which is also the final container designed for use. The colours may be visibly separated from one another without the use of

moulds, templates or preforms, but with the use of a magnet applied directly to the container of the cosmetic product. Alternatively a decorative pattern is created in a monocolour cosmetic products by changing the orientation of the magnetic particles with the use of a magnetic field.

5 The subject of the present invention is a cosmetic product having a visible pattern consisting of one or more colours, comprising a cosmetic composition including one or more dyes and/or pigments which contain magnetic or magnetisable particles, characterised in that said cosmetic composition is housed in a container enclosing a magnet capable of generating a magnetic field, whereby said
10 dyes and/or pigments are positioned and/or oriented in the container by said magnetic field, thereby creating the visible pattern.

In one embodiment of the invention the visible pattern consists of two or more colours forming coloured areas visibly separated from each other.

In a further embodiment of the invention, the visible pattern consists of one
15 colour and said dyes and/or pigments, containing magnetic or magnetisable particles, are oriented in the container by said magnetic field, thereby creating the visible pattern.

The magnet can be applied internally or externally in contact with the container of the cosmetic composition.

20 The magnet generates a magnetic field with a magnetic induction value higher than 0.1 G (10^{-5} T), a magnetic field intensity higher than 0.1 Oersted, and a magnetic permeability value higher than 0.1 MegaGauss Oersted.

The magnetic induction value preferably ranges between 2 G (2×10^{-4} T) and 3 G (3×10^{-4} T).

25 The intensity of the magnetic field preferably ranges between 2 Oe (0.16 kA/m) and 2.5 Oe (0.20 kA/m).

The magnetic permeability preferably ranges between 1.5 MGOe (11.94 kJ/m^3) and 2 MGOe (15.91 kJ/m^3).

The magnet preferably consists of magnetised plastoferrite, such as anisotropic magnetic rubber sold by Alga. The plastoferrite is preferably magnetised by inductive discharge to create a specific pattern. The magnet applied to the container positions and/or orients the dyes and/or pigments according to the specific design, creating a decorative effect without the use of moulds, templates or preforms.

The container can be made, for example, of glass, plastic, metal, natural fibres, synthetic fibres, non-woven fabric or a mixture thereof.

The dye and/or pigment is a dye and/or pigment acceptable for cosmetic use, and is preferably pearly.

According to the present invention, the term pearly dye and/or pigment means a luster particle (creating unique luster effects) that can be based on different substrates, for example mica (mica can be a natural or synthetic substrate), synthetic fluorphlogopite, silica, calcium aluminium borosilicate, calcium sodium borosilicate, aluminium calcium sodium silicate, acrylates copolymer, triethoxycaprylylsilane, polyurethane-11 and polyester (a polyester-based dye and/or pigment may be a glitter).

The particles orientable in a magnetic field preferably consist of at least one iron oxide or hydroxide.

The cosmetic compositions can be in solid, liquid or fluid form, and preferably take the form of a free or compact powder, waxy mass, liquid, paste, extruded product or emulsion.

Example 1: Manufacture of a three-colour eye make-up powder

The raw materials in the percentages by weight listed below:

	Talc	2%
	Mica CI 77019	5%
5	Titanium dioxide	3%
	Black iron oxide CI 77499	40%
	Red iron oxide CI 77491	36.5%
	FD&C blue no. 1	10%
	Magnesium and aluminium silicate	3%
10	Sorbic acid	0.25%
	Potassium sorbate	0.25%

are mixed together in a fan grinder and divided by a powder filling machine between the final containers, to which a magnetic field with a magnetic induction value of 2.55 Gauss (2.55×10^{-4} T), a magnetic field intensity of 2.15 Oersted (0.17 kA/m) and magnetic permeability of 1.57 MGOe (12.49 kJ/m^3) is applied. The magnetic field to which the product is subjected visibly separates the colours contained in it. The orientation of the magnetic field in relation to the container determines the shape of the demarcation lines between the colours.

Example 2: Preparation of a two-colour cast lip make-up product

The raw materials in the percentages by weight listed below:

20	White beeswax	1%
	Ozokerite	4%
	Liquid paraffin	0.5%
	Castor oil	30%
25	Titanium dioxide	0.5%
	Mica	4%
	Red iron oxide	30%
	Yellow iron oxide	30%

are melted at the temperature of 90°C in a wax melter. They are then divided by a fluid metering unit between the final containers, to which a magnetic field with a magnetic induction value of 2.40 Gauss (2.40×10^{-4} T), a magnetic field intensity of 2.35 Oersted (0.19 kA/m) and magnetic permeability of 1.45 MGOe (11.54 kJ/m³) is applied. The magnetic field to which the product is subjected visibly separates the colours contained in it. The orientation of the magnetic field in relation to the container determines the shape of the demarcation lines between the colours.

CLAIMS

1. Cosmetic product having a visible pattern consisting of one or more colours, comprising a cosmetic composition including one or more dyes and/or pigments
5 which contain magnetic or magnetisable particles, characterised in that said cosmetic composition is housed in a container enclosing a magnet capable of generating a magnetic field, whereby said dyes and/or pigments are positioned and/or oriented in the container by said magnetic field, thereby creating the visible pattern.
- 10 2. The cosmetic product according to claim 1, wherein the visible pattern consists of two or more colours forming coloured areas visibly separated from each other.
3. The cosmetic product according to claim 1, wherein the visible pattern consists of one colour and said dyes and/or pigments are oriented in the container
15 by said magnetic field, thereby creating the visible pattern.
4. The cosmetic product according to any one of claims 1 to 3, wherein the dye and/or pigment is a dye and/or pigment acceptable for cosmetic use.
5. The cosmetic product according to claim 4, wherein the dye and/or pigment is a pearly dye and/or pigment.
- 20 6. The cosmetic product according to claim 5, wherein the pearly dye or pigment is based on substrates selected from the group consisting of natural or synthetic mica, synthetic fluorphlogopite, silica, calcium aluminium borosilicate, calcium sodium borosilicate, aluminium calcium sodium silicate, acrylates copolymer, triethoxycaprylsilane, polyurethane-11 and polyester.
- 25 7. The cosmetic product according to any one of the preceding claims, wherein the magnetic or magnetisable particles consist of at least one iron oxide or hydroxide.
8. The cosmetic product according to any one of the preceding claims, wherein

the cosmetic composition takes the form of a free or compact powder, waxy mass, liquid, paste, extruded product or emulsion.

9. The cosmetic product according to any one of the preceding claims, wherein the container consists of glass, plastic, metal, natural fibres, synthetic fibres, non-
5 woven fabric or a mixture thereof.

10. The cosmetic product according to any one of the preceding claims, wherein the magnet generates a magnetic field with a magnetic induction value ranging between 2 G (2×10^{-4} T) and 3 G (3×10^{-4} T), an intensity of the magnetic field ranging between 2 Oe (0.16 kA/m) and 2.5 Oe (0.20 kA/m) and a magnetic permeability
10 ranging between 1.5 MGOe (11.94 kJ/m³) and 2 MGOe (15.91 kJ/m³).

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER INV. A61Q1/04 A61Q1/10 A61Q1/12 A61K8/02 A61K8/19 ADD.		
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) A61K A61Q		
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 2011/000498 A1 (FRANCHANT JEAN-FRANCOIS [FR] ET AL) 6 January 2011 (2011-01-06)	1,4,5, 7-9
Y	the whole document	1-10
Y	EP 1 700 534 A1 (OREAL [FR]) 13 September 2006 (2006-09-13) paragraphs [0007], [0008], [0023] - [0029], [0040] - [0043], [0051] - [0052] claims 1, 5, 7, 15, 17, 18; examples ----- -/--	1-10
☒ 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 22 May 2015		Date of mailing of the international search report 01/06/2015
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 Perrone Dunet, S

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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.
X	FR 2 888 115 A1 (OREAL [FR]) 12 January 2007 (2007-01-12)	1,4,5, 7-9
Y	page 1, lines 17-21 page 4, line 6 - page 5, line 19 page 6, line 24 - page 11, line 13 page 36, lines 7-21 page 39, lines 1-10 claims 1-3, 23, 25, 27, 28; examples figure 2 -----	1-10
Y	WO 2006/037901 A1 (OREAL [FR]; THEVENET LUDOVIC [FR]) 13 April 2006 (2006-04-13) claims 1, 2, 7-14, 20, 21, 23, 25, 36; examples figures -----	1-10
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Y	page 2, line 17 - page 3, line 30 page 8, line 21 - page 13, line 32 page 22, line 15 - page 24, line 28 claims 1, 5, 10, 11; figures -----	10
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