



(43) International Publication Date  
22 November 2012 (22.11.2012)

WIPO | PCT

(10) International Publication Number  
**WO 2012/158591 A1**

(51) International Patent Classification:

*A61K 8/18* (2006.01) *A61Q 99/00* (2006.01)  
*A61K 8/73* (2006.01) *A61P 27/00* (2006.01)  
*A61K 8/92* (2006.01)

(21) International Application Number:

PCT/US2012/037724

(22) International Filing Date:

14 May 2012 (14.05.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/487,430 18 May 2011 (18.05.2011) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))

(54) Title: ANTI-BLEPHARITIS PRODUCTS AND METHODS

(57) Abstract: The present disclosure is directed to a cosmetic composition and methods for treating or preventing blepharitis. The process is directed towards a cosmetic composition including verbascoside and a shale oil. The present disclosure is also directed to a method for preventing blepharitis including administering a therapeutic amount of verbascoside and a shale oil. The present disclosure is also directed to a method for treating blepharitis comprising administering a therapeutic amount of verbascoside and a shale oil.



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## **ANTI-BLEPHARITIS PRODUCTS AND METHODS**

### **FIELD OF THE DISCLOSURE**

[0001] The disclosure relates generally to the field of products that can prevent or treat blepharitis. More specifically, the present disclosure is directed to preventing or treating blepharitis through application of various cosmetics.

### **BACKGROUND OF THE DISCLOSURE**

[0002] Blepharitis is one of the most common ocular disorders, affecting millions of Americans. Blepharitis is a continuum of inflammatory disease processes of the eyelid and can be divided anatomically into anterior and posterior blepharitis. Anterior blepharitis is inflammation around the eyelashes and follicles, while posterior type involves the meibomian glands. The pathophysiology of blepharitis involves bacterial colonization of the eyelids. This bacterial colonization results in immune mediated inflammatory damage to the surrounding tissues.

[0003] People with blepharitis typically present with various complaints including burning, watery eyes, foreign body sensation, red eye lids, red eyes, pain and blurry vision. Physical examination of patients with blepharitis often shows loss of lashes, plugging of the meibomian glands and injection of the conjunctiva. Also, the irritation that blepharitis causes can often lead to dry eyes. If the blepharitis is severe enough it may even affect the cornea, causing marginal infiltrates, marginal ulcers and pannus formation.

[0004] Ophthalmologists often see female patients wearing heavy cosmetics, complaining of symptoms of blepharitis. In these situations, even though the patients are advised to stop

wearing the cosmetics, patients typically refuse to stop wearing cosmetics because they like how the cosmetics make them appear.

[0005] What is desired are formulations of cosmetics that can be used to treat or prevent blepharitis. Further, what is desired are formulations that have anti-bacterial and anti-inflammatory effects that can be used as cosmetics.

[0006] Embodiments of the present application provide products and methods that address the above and other issues.

### **SUMMARY OF THE DISCLOSURE**

[0007] The present disclosure is directed to a cosmetic composition and methods for treating or preventing blepharitis. The process is directed towards a cosmetic composition comprising verbascoside and a shale oil.

[0008] The present disclosure is also directed to a method for preventing blepharitis comprising administering a therapeutic amount of verbascoside and a shale oil.

[0009] The present disclosure is also directed to a method for treating blepharitis comprising administering a therapeutic amount of verbascoside and a shale oil.

### **DETAILED DESCRIPTION OF THE DISCLOSURE**

[0010] The methods and compositions of the present disclosure provide improvements over traditional cosmetics that cause or exacerbate blepharitis symptoms. The improvements are, *inter alia*, treatment or prevention of blepharitis symptoms and blepharitis through application of the described cosmetic compositions.

[0011] Various cosmetic compositions are disclosed herein. Each cosmetic composition includes both 2-(3',4'-dihydroxyphenyl)ethyl-O- $\alpha$ -1-rhamnopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -d-(4-O-caffeoyl)-glucopyranoside (Verbascoside), also known as kusagin in or acetoside, and a shale oil, among other components. These other components can include one or more cosmetically suitable excipients such as glycerine and xanthan gum. These other components comprise the balance of the total composition as further illustrated among the several examples below, with their individual concentrations depending on the kind of cosmetic composition being produced. Individual concentrations of the suitable excipients are listed in the examples, but these individual concentrations may be modified in either direction, higher or lower percentage, as needed.

[0012] The shale oil can be any shale oil suitable for topical use including light-colored pale sulfonated shale oil (ICHTHYOL® pale) and dark sulfonated shale oil (ICHTHYOL®). The shale oil can be present in concentrations ranging from 0.0001% by weight to about 10% by weight of the total composition. The shale oil is useful as an anti-inflammatory, anti-bacterial and antimycotic when applied topically and is also water soluble. The other components can include a metal ion carrier that can contain any suitable metal ion that is capable of offering an anti-inflammatory or anti-bacterial effect. As one option, the inorganic metal ion carrier can be an inorganic silver ion carrier. The inorganic silver ion carrier can be Ionpure® WPA glass powder, among others. Ionpure® is an inorganic, soluble glass containing anti-bacterial metal ions. The Ionpure® glass particles are non-volatile, heat resistant and in the presence of water or moisture, will release the metal ions gradually. Metal ions, such as silver ions, are taken into

microbes where they react, bond and inhibit the microbe's enzyme activity and can reduce multiplication of the microbes. These microbes can include blepharitis causing bacteria.

[0013] The other components can also include glycerophosphoinositol (GPI) lysine. GPI Lysine, such as Distinctive® GPI Lysine offered by Resources of Nature, Inc. South Plainfield, New Jersey, is useful as an anti-inflammatory and anti-itch substance. GPI lysine is stable over a broad range of temperatures and pH's and can be present in concentrations ranging from 0.0001% by weight to about 10% by weight of the total composition.

[0014] Verbascoside is an effective cellular protectant that can be applied topically. Verbascoside can be isolated or extracted from various raw materials. In one example, verbascoside can be gathered from the leaves of the *buddleja cordata* tree. The leaves can be dried, ground and extracted with hexane and methanol. The methanolic portion is evaporated to obtain a crude syrup that is further treated to produce a verbascoside amorphous powder.

[0015] Verbascoside is a phenylpropanoid glycoside (PPG) that is a water soluble derivative of phenylpropanoid (PP). Verbascoside has a strong anti-inflammatory and anti-bacterial activity. Distinctive® Phytostem Lilac is one example of a material containing verbascoside, but any other suitable verbascoside containing material could also be used. Distinctive® Phytostem Lilac is a cell culture extract titrated in verbascoside.

[0016] The verbascoside and shale oil can be encapsulated, the shale oil and the GPI lysine can also be encapsulated. The encapsulated materials can be immediate, sustained or a mixture of immediate and sustained release encapsulations. The materials can be encapsulated in any suitable manner, such as the encapsulation methods described in European Patent EP0966268

and those described in “Drug Delivery: Principles and Applications” by Wang, et al. (John Wiley & Sons, Inc. 2005), both of which are incorporated by reference.

[0017] In the cosmetic composition, the verbascoside and the inorganic metal ion carrier can be differing concentrations based on the desired result. In the cosmetic composition, the verbascoside can be about 0.0001% by weight to about 10% by weight of the composition and the inorganic metal ion carrier can be about 0.0001% by weight to about 10% by weight.

[0018] The cosmetic composition can be one of many cosmetic compositions, which can include lotions, creams, eye pencils, eye shadows, hydroalcoholic liquid or spray, primer, serum, mascara, eye liner and a single phase liquid or spray. These cosmetic compositions can be applied topically on any exposed skin surface that could be affected by blepharitis including, but not limited to, eye lids and the areas surrounding each of the eyes. These cosmetic compositions can be formed using various manufacturing techniques, some of which are described throughout the examples below. Blepharitis can have many different causes, including but not limited to Staphylococci, Seborrheic, Allergies, Lice, cosmetic products and others from other sources other than cosmetic products.

[0019] The disclosure also includes a method for preventing or treating blepharitis that includes administering a therapeutic amount of verbascoside and shale oil. The administration of the verbascoside and shale oil is useful in both preventing the presence of blepharitis and blepharitis symptoms, it is also useful in treating the severity of the blepharitis and blepharitis symptoms such as the reduction of sebum production, reduction of bacterial growth and the unclogging of skin's pores.

**[0020]** Surprisingly, the combination of verbascoside and shale oil provides improved blepharitis prevention and treatment as compared to the administration of verbascoside alone or shale oil alone. The combination can be synergistic, e.g., where the joint action of two or more components is such that the combined effect is greater than the sum of their individual effects.

**[0021]** The following examples serve to illustrate aspects of the disclosure but are not intended to limit the scope of the disclosure, which is defined by the claims appended hereto.

**EXAMPLES**

[0022] For each of the examples below, ICHTHYOL® pale is included. For each of the examples, Ionpure® WPA glass powder can also be used, instead of or in combination with ICHTHYOL® pale, in similar percentages by weight.

**Example 1**

[0023] In the following example, the composition is an oil in water lotion:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Deionized Water	qs
	1,3 Butylene Glycol	5.00
	Glycerine	3.00
	Disodium EDTA	0.10
	Xanthan Gum	0.30
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
Phase B	Mineral Oil 70 vis.	10.00
	Petrolatum	4.00
	Cetyl Alcohol	3.00
	Dimethicone (350 cks)	1.00
	PEG 100 Stearate	3.00
	Potassium Cetyl Phosphate	2.00
	Polysorbate 60	0.80
	Tocopheryl Acetate	0.50
	Salicylic Acid (as applicable)	0.1% to 20%
Phase C	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	ICHTHYOL® pale	0.50
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
Phase D	Fragrance	qs



Phase E	Preservative	qs
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[0024] All percentages above are based on weight. The oil in water lotion is formed by first preparing phase A by adding Butylene glycol, glycerine and disodium EDTA to water and the other components, the combination is then heated to 80 °C. Next, the Phase B ingredients are mixed together and heated to 80 °C. Phase B is added to Phase A while mixing. The entire mixture is cooled to 35 °C while being mixed. Phase C, D and E ingredients are then added.

**Example 2**

[0025] In the following example, the composition is an oil in water cream:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Deionized Water	Qs
	1,3 Butylene Glycol	5.00
	Glycerine	3.00
	Disodium EDTA	0.10
	Xanthan Gum	0.30
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
Phase B	Mineral Oil 70 vis.	10.00
	Petrolatum	4.00
	Cetyl Alcohol	2.00
	Behenyl Alcohol	1.00
	Glyceryl Stearate	2.50
	Dimethicone (350 cks)	1.00
	PEG 100 Stearate	3.00
	Potassium Cetyl Phosphate	2.00
	Polysorbate 60	0.80
	Salicylic Acid (as applicable)	0.1% to 20%
	Tocopheryl Acetate	0.50
Phase C	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	ICHTHYOL® pale	0.50
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
Phase D	Fragrance	Qs
Phase E	Preservative	Qs
Phase F	Colorants	Qs

[0026] All percentages above are based on weight. The oil in water cream is formed by first preparing phase A by adding Butylene glycol, glycerine and disodium EDTA to water and the other components, the combination is then heated to 80 °C. Next, the Phase B ingredients are mixed together and heated to 80 °C. Phase B is added to Phase A while mixing. The entire mixture is cooled to 35 °C while being mixed. Phase D, E and F ingredients are then added.

**Example 3**

[0027] In the following example, the composition is water in oil lotion:

	Ingredient	%(w/w)
Phase A	Deionized Water	qs
	1,3 Butylene Glycol	5.00
	Glycerine	3.00
	Disodium EDTA	0.10
	Sodium Chloride	2.00
	Sodium Borate	0.15
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
Phase B	Mineral Oil 70 vis.	10.00
	Petrolatum	4.00
	Cetyl Alcohol	2.00
	Behenyl Alcohol	1.00
	Beeswax	2.50
	Dimethicone (350 cks)	1.00
	PEG 100 Stearate	3.00
	Salicylic Acid (as applicable)	0.1% to 20%
	Sorbitan Sesquioleate	0.80
	Tocopheryl Acetate	0.50
Phase C	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	Sodium Sulfonated Shale Oil	1.00
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
Phase D	Fragrance	qs
Phase E	Preservative	qs
Phase F	Colorants	qs

[0028] All percentages above are based on weight. The water in oil lotion is formed by first preparing phase A by adding Butylene glycol, glycerine, sodium chloride, sodium borate and disodium EDTA to water and the other components, the combination is then heated to 80 °C. Next, the Phase B ingredients are mixed together and heated to 80 °C. Phase B is added to Phase A while mixing. The entire mixture is cooled to 35 °C while being mixed. Phase C, D, E and F ingredients are then added.

**Example 4**

[0029] In the following example, the composition is water in oil cream:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Deionized Water	Qs
	1,3 Butylene Glycol	5.00
	Glycerine	3.00
	Disodium EDTA	0.10
	Sodium Chloride	2.00
	Sodium Borate	0.30
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
Phase B	Mineral Oil 70 vis.	40.00
	Petrolatum	5.00
	Cetyl Alcohol	5.00
	Behenyl Alcohol	3.00
	Beeswax	5.00
	Dimethicone (350 cks)	1.00
	PEG 100 Stearate	3.00
	Salicylic Acid (as applicable)	0.1% to 20%
	Sorbitan Sesquioleate	0.80
	Tocopheryl Acetate	0.50
Phase C	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	Sodium Sulfonated Shale Oil	1.0
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
Phase D	Fragrance	Qs
Phase E	Preservative	Qs
Phase F	Colorants	Qs

[0030] All percentages above are based on weight. The water in oil cream is formed by first preparing phase A by adding Butylene glycol, glycerine, sodium chloride, sodium borate and disodium EDTA to water and the other components, the combination is then heated to 80 °C.

Next, the Phase B ingredients are mixed together and heated to 80 °C. Phase B is added to Phase A while mixing. The entire mixture is cooled to 35 °C while being mixed. Phase C, D, E and F ingredients are then added.

**Example 5**

[0031] In the following example, the composition is for an eye pencil “A”:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Rhus Succedanea Fruit Wax	q.s.
	Hydrogenated Vegetable Oil	7.50
	Hydrogenated Palm Kernel Glycerides	7.50
	Stearic Acid	5.00
	Copernicia Cerifera (Carnauba) Wax	4.00
	Hydrogenated Coco-Glycerides	3.00
	Beeswax (Cera Alba)	2.00
	Caprylic/Capric Triglyceride	2.00
	Coco-Caprylate/Caprate	2.00
	Tristearin	2.00
	Hydrogenated Palm Glycerides	2.00
	Talc	1.00
	Behenyl Behenate	0.50
	Preservative	q.s.
	Tocopheryl Acetate	<1%
	Aloe Barbadensis Leaf Extract	0.50
	Isopropyl Myristate	0.50
	Isopropyl Palmitate	0.50
	Iron Oxides CI 77499	37.50
	Ferric Ammonium Ferrocyanide CI 77510	2.00
	Ultramarines CI 77007	2.00
	Carmines CI 75470	0.50
	Distinctive® Active Powder SL Special (Calcium Aluminum Borosilicate (and) Glycerin (and) Silica (and) Sodium Sulfonated Shale Oil (and) Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract)	2.00



[0032] All percentages above are based on weight. The eye pencil “A” is formed by mixing all components of Phase A together until uniform and forming the mixed components into a suitable shape for application to a user’s eye.

**Example 6**

[0033] In the following example, the composition is for an eye pencil “B”:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Beeswax	Q.S.
	Coco Caprylate/Caprate	1.00
	Distinctive Ink Black Chip OD (D&C Black #2 (and) Polyethylene)	10.00
	Carnauba Wax (Copernicia Cerifera (Carnauba) Wax)	2.00
	Euphorbia Cerifera (Candelilla) Wax	3.00
	Microcrystalline Wax	4.00
	Polyethylene	2.00
	Talc	7.00
	Preservative	q.s.
	Distinctive® Active Powder SL Special (Calcium Aluminum Borosilicate (and) Glycerin (and) Silica (and) Sodium Sulfonated Shale Oil (and) Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract)	2.00
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
	Salicylic Acid (as applicable)	0.1% to 20%
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
	Fragrance	Qs
	Colorants	Qs

[0034] All percentages above are based on weight. The eye pencil “B” is formed by combining all components of Phase A and heating the mixture to 95 °C. After heating, the mixture is mixed

until uniform and cooled to room temperature. The mixture is then formed into a suitable shape for application to a user's eye.

**Example 7**

[0035] In the following example, the composition is for an eye shadow:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Talc	Q.S.
	Zinc Stearate	7.00
	Calcium Silicate	0.10
	Natural Finish Velvet Kaolin (Kaolin (and) Dimethicone/Methicone Copolymer (and) Dimethicone)	5.00
	Red Iron Oxide	0.30
	Yellow Iron Oxide	1.00
	Black Iron Oxide	0.10
	Mica (and) Titanium Dioxide	15.00
	Preservative	q.s.
	Distinctive® Active Powder SL Special (Calcium Aluminum Borosilicate (and) Glycerin (and) Silica (and) Sodium Sulfonated Shale Oil (and) Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract)	2.00
	Coco Caprylate/Caprate	5.00
	Isopropyl Isostearate	3.00
	Fragrance	Qs
	Colorants	Qs

[0036] All percentages above are based on weight. The eye shadow is formed by mixing all components of Phase A together until uniform and forming the mixed components into a suitable shape for application to a user's eye.

**Example 8**

[0037] In the following example, the composition is for a silicon in water lotion:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Deionized Water	Qs
	1,3 Butylene Glycol	5.00
	Glycerin	3.00
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
	Disodium EDTA	0.10
Phase B	Cyclopentasiloxane	10.00
	Polysilicone-11	4.00
	Cetyl Alcohol	2.00
	Dimethicone (350 cks)	5.00
	Phenyl Dimethicone	5.00
	PEG 100 Stearate	3.00
	Potassium Cetyl Phosphate	2.00
	Salicylic Acid (as applicable)	0.1% to 20%
	Tocopheryl Acetate	0.50
	Polysorbate 60	0.80
Phase C	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	Sodium Sulfonated Shale Oil	1.00
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
Phase D	Fragrance	Qs
Phase E	Preservative	Qs
Phase F	Colorants	Qs

[0038] All percentages above are based on weight. The silicon in water lotion is formed by first preparing phase A by adding Butylene glycol, glycerin and disodium EDTA to water and the other components, the combination is then heated to 80 °C. Next, the Phase B ingredients are mixed together and heated to 80 °C. Phase B is added to Phase A while mixing. The entire mixture is cooled to 35 °C while being mixed. Phase C, D, E and F ingredients are then added.

**Example 9**

[0039] In the following example, the composition is for a water in silicone lotion:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Deionized Water	Qs
	1,3 Butylene Glycol	5.00
	Glycerin	3.00
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
	Disodium EDTA	0.10
	Sodium Chloride	2.00
Phase B	Cyclopentasiloxane	25.00
	Polysilicone-11	6.00
	Cetyldimethicone Copolyol	1.50
	Phenyl Dimethicone	5.00
	Ethylhexyl Palmitate	5.00
	Salicylic Acid (as applicable)	0.1% to 20%
	Phenyl Dimethicone	20.00
	Tocopheryl Acetate	0.50
	Cetyl Alcohol	2.00
	Behenyl Alcohol	1.00
	Dimethicone (350 cks)	3.00
	Sorbitan Sesquioleate	0.80
Phase C	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	Sodium Sulfonated Shale Oil	1.00
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
Phase D	Fragrance	Qs
Phase E	Preservative	Qs
Phase F	Colorants	Qs

[0040] All percentages above are based on weight. The water in silicone lotion is formed by first preparing phase A by adding Butylene glycol, glycerin, sodium chloride and disodium EDTA to water and the other components, the combination is then heated to 80 °C. Next, the Phase B ingredients are mixed together and heated to 80 °C. Phase B is added to Phase A while mixing. The entire mixture is cooled to 35 °C while being mixed. Phase C, D, E and F ingredients are then added.



**Example 10**

[0041] In the following example, the composition is for a hydroalcoholic liquid or spray:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Deionized Water	qs
	Denatured Alcohol	20.00
	1,3 Butylene Glycol	5.00
	Glycerine	3.00
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
	Verbascoside	0.01% to 0.5%
	Salicylic Acid (as applicable)	0.1% to 20%
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
Phase B	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	Sodium Sulfonated Shale Oil	1.00
Phase C	Fragrance	qs
Phase D	Preservative	qs
Phase E	Colorants	qs

[0042] All percentages above are based on weight. The hydroalcoholic liquid or spray is formed by first preparing phase A by combining all Phase A components. Next, the Phase B, C, D and E components are mixed together and combined with the Phase A components.

**Example 11**

[0043] In the following example, the composition is for a cosmetic primer:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Deionized Water	Qs
	1,3 Butylene Glycol	2.50
	PVP	7.00
	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	Sodium Sulfonated Shale Oil	1.00
	Preservative	1.00
	Sodium Acrylate/Sodium Acryloyldimethyl Taurate Copolymer (and) Isohexadecane (and) Polysorbate 80	2.50
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
	Salicylic Acid (as applicable)	0.1% to 20%
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
Phase E	Fragrance	Qs
Phase F	Preservative	Qs
Phase G	Colorants	Qs

[0044] All percentages above are based on weight. Cosmetic primer is formed by first preparing phase A by combining all Phase A components. Next, the Phase E, F and G components are mixed together and combined with the Phase A components.

**Example 12**

[0045] In the following example, the composition is for a cosmetic serum:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Deionized Water	qs
	1,3 Butylene Glycol	5.00
	Glyceryl Acrylate/Acrylic Acid Copolymer	5.00
	Glycerin	5.00
	Disodium EDTA	0.10
	Allantoin	0.25
	Xanthan Gum	0.30
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
Phase B	Ethylhexyl Palmitate	10.00
	Isononyl Isononanoate	4.00
	Cetyl Alcohol	1.00
	Behenyl Alcohol	1.00
	Dimethicone (350 cks)	1.00
	Phospholipids	3.00
	Hydrogenated Lecithin	2.00
	Laureth 4	1.00
	Salicylic Acid (as applicable)	0.1% to 20%
	PEG 100 Stearate	3.00
	Polysorbate 20	0.80
Phase C	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
	Vitamin E Acetate	1.00
Phase D	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	Sodium Sulfonated Shale Oil	1.00
Phase E	Fragrance	qs
Phase F	Preservative	qs
Phase G	Colorants	qs

[0046] All percentages above are based on weight. The cosmetic serum is formed by first preparing phase A by adding Butylene glycol, glycerin, glyceryl acrylate/acrylic acid copolymer and disodium EDTA to water and the other components, the combination is then heated to 80 °C. Next, the Phase B ingredients are mixed together and heated to 80 °C. Phase B is added to Phase A while mixing. The entire mixture is cooled to 35 °C while being mixed. Phase C, D, E, F and G components are then added.

**Example 13**

[0047] In the following example, the composition is for a mascara:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Deionized Water	qs
	Hydroxyethylcellulose	0.75
	Distinctive Ink Black Chip AQ (D&C Black #2 (and) Polyester-5 (and) PVP (and) Laureth-4)	6.00
	DC Instalift Lengthening (Water (and) PVP (and) Triticum vulgare (Wheat) Protein (and) Gossypium Herbaceum (Cotton))	5.00
	DC Hydroglide (Glycerin (and) Water (and) Glycine Soja (Soybean) Germ Extract (and) Beta Vulgaris (Beet) Root Extract (and) Algae Extract (and) Sodium Hyaluronate	3.00
	Tromethamine 40%	5.69
	Preservative	q.s.
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
Phase B	Glyceryl Stearate	4.00
	Carnauba Wax (Copernicia Cerifera (Carnauba) Wax)	5.00
	Stearic Acid	4.00
	Propylene Glycol Stearate	2.00
	Beeswax	4.00
	C18-36 Triglyceride	0.40
	Paraffin Wax (Paraffin)	1.00
	Salicylic Acid (as applicable)	0.1% to 20%
Phase C	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
Phase D	Acrylates Copolymer	10.00
Phase E	DC Silica Beads (Silica)	2.00
	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	DI Water	4.00
Phase F	Sodium Sulfonated Shale Oil	1.00
Phase G	Fragrance	qs
	Colorants	qs

[0048] All percentages above are based on weight. The cosmetic serum is formed by first preparing phase A by adding all the components, the combination is then heated to 85 °C. Next, the Phase B ingredients are mixed together and heated to 85-90 °C. Phase B is added to Phase A while mixing. The entire mixture is cooled to 35 °C while being mixed. Phase C, D, E, F and G components are then added.

**Example 14**

[0049] In the following example, the composition is for a waterproof mascara:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Petroleum Distillates	qs
	Tall Oil Glycerides	5.00
	Distinctive Ink Black Chip OD (D&C Black #2 (and) Polyethylene)	6.00
	Ozokerite Wax (Ozokerite)	5.00
	Carnauba Wax (Copernicia Cerifera (Carnauba) Wax)	6.00
	Ethylcellulose	0.60
	Distinctive Gel ID (Quaternium-90 Bentonite (and) Isododecane (and) Propylene Carbonate	15.00
	Beeswax	2.00
	Kaolin	5.00
	Preservative	q.s.
	Silica	0.30
	Distinctive® Active Powder SL Special (Calcium Aluminum Borosilicate (and) Glycerin (and) Silica (and) Sodium Sulfonated Shale Oil (and) Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract)	2.00
	ICHTHYOL® pale	1.00
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
	Salicylic Acid (as applicable)	0.1% to 20%
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
	Fragrance	qs
	Colorants	qs

[0050] All percentages above are based on weight. Waterproof mascara is formed by first preparing phase A by combining all Phase A components and heating them to 95 °C. The components are mixed until uniform, cooled to room temperature and formed into a suitable shape for application to a user's eye.

**Example 15**

[0051] In the following example, the composition is for an eyeliner containing iron oxide:

Phase A	DI Water	qs
	PVP	6.00
	Distinctive Iox Black Chip AQ (CI 77499 (Black Iron Oxide) (and) Polyester-5 (and) PVP (and) Laureth-4)	10.00
	Citric Acid	q.s. to pH 4.5
	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	Sodium Sulfonated Shale Oil	1.00
	Kaolin	5.00
	Preservative	q.s.
	Acrylates Copolymer	0.20
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
	Salicylic Acid (as applicable)	0.1% to 20%
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
	Fragrance	qs
	Colorants	qs

[0052] All percentages above are based on weight. Eyeliner containing iron oxide is formed by first preparing phase A by combining all Phase A components and heating them to 85 °C. The components are mixed until uniform, cooled to room temperature and formed into a suitable shape for application to a user's eye.



**Example 16**

[0053] In the following example, the composition is for an eyeliner:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	DI Water	qs
	PVP	6.00
	Distinctive Ink Black Chip AQ (D&C Black #2 (and) Polyester-5 (and) PVP (and) Laureth-4)	10.00
	Citric Acid	q.s. to pH 4.5
	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	Sodium Sulfonated Shale Oil	1.00
	Kaolin	5.00
	Preservative	q.s.
	Acrylates Copolymer	0.20
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
	Salicylic Acid (as applicable)	0.1% to 20%
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
	Fragrance	qs
	Colorants	qs

[0054] All percentages above are based on weight. Eyeliner is formed by first preparing phase A by combining all Phase A components and heating them to 85 °C. The components are mixed until uniform, cooled to room temperature and formed into a suitable shape for application to a user's eye.

**Example 17**

[0055] In the following example, the composition is for an anhydrous eyeliner:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Petroleum Distillates	Qs
	Tall Oil Glycerides	3.00
	Distinctive Ink Black Chip OD (D&C Black #2 (and) Polyethylene)	8.00
	Ozokerite Wax (Ozokerite)	2.00
	Carnauba Wax (Copernicia Cerifera (Carnauba) Wax)	2.00
	Distinctive Gel ID (Quaternium-90 Bentonite (and) Isododecane (and) Propylene Carbonate	3.00
	Beeswax	1.00
	Kaolin	5.00
	Preservative	q.s.
	Silica	0.20
	Distinctive® Active Powder SL Special (Calcium Aluminum Borosilicate (and) Glycerin (and) Silica (and) Sodium Sulfonated Shale Oil (and) Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract)	5.00
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
	Salicylic Acid (as applicable)	0.1% to 20%
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
	Fragrance	Qs
	Colorants	Qs

[0056] All percentages above are based on weight. Anhydrous eyeliner is formed by first preparing phase A by combining all Phase A components and heating them to 95 °C. The components are mixed until uniform, cooled to room temperature and formed into a suitable shape for application to a user's eye.

**Example 18**

[0057] In the following example, the composition is for a mascara containing iron oxide:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Deionized Water	qs
	Hydroxyethylcellulose	0.75
	Distinctive Iox Black Chip AQ (CI 77499 (Black Iron Oxide) (and) Polyester-5 (and) PVP (and) Laureth-4)	6.00
	DC Instalift Lengthening (Water (and) PVP (and) Triticum vulgare (Wheat) Protein (and) Gossypium Herbaceum (Cotton))	5.00
	DC Hydroglide (Glycerin (and) Water (and) Glycine Soja (Soybean) Germ Extract (and) Beta Vulgaris (Beet) Root Extract (and) Algae Extract (and) Sodium Hyaluronate	3.00
	Tromethamine 40%	5.69
	Preservative	q.s
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
Phase B	Glyceryl Stearate	4.00
	Carnauba Wax (Copernicia Cerifera (Carnauba) Wax)	5.00
	Stearic Acid	4.00
	Propylene Glycol Stearate	2.00
	Beeswax	4.00
	C18-36 Triglyceride	0.40
	Paraffin Wax (Paraffin)	1.00
	Salicylic Acid (as applicable)	0.1% to 20%
Phase C	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
Phase D	Acrylates Copolymer	10.00
Phase E	DC Silica Beads (Silica)	2.00
	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	DI Water	4.00
Phase F	Sodium Sulfonated Shale Oil	1.00
Phase G	Fragrance	qs
	Colorants	qs

[0058] All percentages above are based on weight. The mascara containing iron oxide is formed by first preparing phase A by adding all the components, the combination is then heated to 85 °C. Next, the Phase B ingredients are mixed together and heated to 85-90 °C. Phase B is added to Phase A while mixing. The entire mixture is cooled to 35 °C while being mixed. Phase C, D, E, F and G components are then added.

**Example 19**

[0059] In the following example, the composition is for a single phase cosmetic liquid or spray:

	<b>Ingredient</b>	<b>%(w/w)</b>
Phase A	Deionized Water	Qs
	1,3 Butylene Glycol	5.00
	Glycerine	3.00
	Glycolic Acid or Lactic Acid (as applicable)	2% to 10%
	Salicylic Acid (as applicable)	0.1% to 20%
	Retinol or Retinol derivatives (as applicable)	0.01% to 0.25%
Phase B	Distinctive® Phytostem Lilac 50 (Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract	0.50
	Sodium Sulfonated Shale Oil	1.00
Phase C	Fragrance	Qs
Phase D	Preservative	Qs
Phase E	Colorants	Qs

[0060] All percentages above are based on weight. A single phase cosmetic liquid or spray is formed by first preparing phase A by combining all Phase A components. The components are mixed until uniform, and added to the Phase B, C, D and E components.

**Example 20**

[0061] In the following example, the composition is for a wet wipe cloth and liquid:

Phase	Ingredient	%	
A	Tego Wipe DEPF (Diethylhexyl Carbonate (and) Polyglyceryl-4 Laurate (and) Phenoxyethanol (and) Dilauryl Citrate	6.70	
A	Water	Q.S.	
A	Distinctive Phytostem Lilac 50 Maltodextrin (and) Syringa Vulgaris (Lilac) Leaf Cell Culture Extract)	0.50	
A	Shale Oil (Sodium Shale Oil Sulfonate)	0.50	
A	Polysorbate 20	1.00	
A	Germall Plus (Diazolidinyl Urea (and) Iodopropynyl Butylcarbamate)	0.25	
B	Citric Acid 25%	q.s. to pH 4.50	

[0062] All percentages above are based on weight. The wet wipe and liquid are formed by combining phase A ingredients and mixing until uniform. Phase B ingredients are then added and mixed until uniform.

**CLAIMS**

What is claimed is:

1. A cosmetic composition comprising verbascoside and a shale oil.
2. The composition of claim 1, further comprising one or more cosmetically suitable excipients.
3. The composition of claim 1, wherein the shale oil is ICHTHYOL® pale.
4. The composition of claim 1, further comprising an inorganic metal ion carrier.
5. The composition of claim 4, wherein the inorganic metal ion carrier is an inorganic silver ion carrier.
6. The composition of claim 5, wherein the inorganic silver ion carrier is a glass containing silver ions.
7. The composition of claim 6, wherein the glass containing silver ions is silver borosilicate.
8. The composition of claim 1, wherein the composition comprises a lotion, cream, eye pencil, eye shadow, hydroalcoholic liquid or spray, primer, serum, mascara, eye liner and a single phase liquid or spray.



9. The composition of claim 1, wherein the verbascoside comprises from about 0.0001% by weight to about 10% by weight of the composition and shale oil comprises from about 0.0001% by weight to about 10% by weight.
10. The composition of claim 1, wherein the shale oil comprises from about 0.0001% by weight to about 10% by weight of the composition.
11. The composition of claim 1, further comprising glycerophosphoinositol (GPI) lysine.
12. The composition of claim 10, wherein the GPI lysine comprises from about 0.0001% by weight to about 10% by weight of the composition.
13. A method for preventing blepharitis comprising administering a therapeutic amount of verbascoside and a shale oil.
14. A method for treating blepharitis comprising administering a therapeutic amount of verbascoside and a shale oil.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 2012/037724

A. CLASSIFICATION OF SUBJECT MATTER		<i>A61K 8/18 (2006.01)</i> <i>A61K 8/73 (2006.01)</i> <i>A61K 8/92 (2006.01)</i> <i>A61Q 99/00 (2006.01)</i> <i>A61P 27/00 (2006.01)</i>		
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 8/18, 8/73, 8/92, A61Q 99/00, A61P 27/00				
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)				
PatSearch (RUPTO internal), Esp@cenet, PAJ, USPTO				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
Y	US 7718199 B2 (I.R.B. ISTITUTO DI RICERCHE BIOTECNOLOGICHE S.R.L.) 18.05.2010, abstract, col. 20, line 5-col.24, line 50, examples	1-14		
Y	US 2002/0102289 A1 (ANJA DRUCKS et al.) 01.08.2002, abstract, [0022], [0192], [0193]	1-14		
Y	US 2010/0086502 A1 (L'OREAL) 08.04.2010, [0349], [0379]	3, 8		
Y	US 2005/0031547 A1 (FOAMIX LTD.) 10.02.2005, [0249]	4-7		
Y	US 7625883 B1 (I.R.B. ISTITUTO DI RICERCHE BIOTECNOLOGICHE S.R.L.) 01.12.2009, abstract, col. 2, lines 37-59, col. 4, line 59	11, 12		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.				
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13 July 2012 (13.07.2012)		02 August 2012 (02.08.2012)		
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