LOVE MUSHROOMS LTD
1 MARCASSIE FARM, RAFFORD, FORRES IV36 2RH SCOTLAND

The following sample was submitted and identified by the client as LOVE MUSHROOMS COLLAGEN TRUFFLE MOISTURISING CREAM (1 formulation).

Net Weight	:	50ml per consumer product
SGS Report No.	:	HKHC2511008709HC
SGS Case No.	:	HKHC250900002788-104 (HZCPCH25002238-004)
Manufacturer	:	Dongguan Meitai Biotechnology Co., Ltd.
Region of Origin	:	China
Region of Destination	:	UK
Sample Receiving Date	:	Sep 02 – Nov 24, 2025
Test Period	:	Sep 02 – Nov 26, 2025

Test Requested
This Cosmetic Product Safety Report (CPSR) is carried out according to the Product Safety and Metrology etc. (Amendment etc.) (EU Exit) Regulations 2019, SCHEDULE 34 Amendment of Regulation (EC) No. 1223/2009 and related amendments, SI 2019 No 696.

Test Results
Please refer to the following pages.

Summary
It is my opinion that this cosmetic formulation is safe to use under normal or reasonably foreseeable conditions of use.
This assessment takes account of:

a) The general toxicological profile of each ingredient used.
b) The chemical structure of each ingredient.
c) The level of exposure of each ingredient.
d) The specific exposure characteristics of each ingredient on the areas on which the cosmetic product will be applied.
e) The specific exposure characteristics of the class of individuals for which the cosmetic product is intended.

If there is an adverse reaction from using this formulation then the undersigned should be informed so that the formulation can be further reviewed.

Signed for and on behalf of
SGS Hong Kong Ltd.

_____
Yin Tung CHOI, Stella
Certified Cosmetic Safety Assessor
MSc (Food Safety and Toxicology), MSc (Nutrition, Food Science and Technology)

PART A - COSMETIC PRODUCT SAFETY INFORMATION

INTRODUCTION

SGS is requested to review the safety of the product formula LOVE MUSHROOMS COLLAGEN TRUFFLE MOISTURISING CREAM for consumer health and no other part of the product. Neither the efficacy nor the claim (if there is any) of the product has been verified or assessed in this report. This product is assessed based on cosmetic product. The product is for UK market and intended for application on face and neck skin for keeping it in good condition by adults. The net weight of this product (The formula under assessment) is 50ml per consumer product. Detailed formulation is submitted by the client as in Section 1.

LITERATURE SOURCES

This review was compiled by using information gathered from raw material suppliers and various online databases including the EU Scientific Committee on Consumer Safety (SCCS) opinions, Cosmetic Ingredients Review (CIR); detailed references are not reported here but are recorded in the SGS Scientific Archives.

1. Quantitative and qualitative composition of cosmetic product under assessment

INCI or Chemical Name	CAS No.	EINECS/ ELINCS	Conc. %	Intended Function
Aqua	7732-18-5	231-791-2	64.1600000000	Solvent
Butylene Glycol	107-88-0 / 6290-03-5	203-529-7 / 228-532-0	10.0000000000	Humectant / Skin Conditioning / Solvent / Viscosity Controlling
Squalane	111-01-3	203-825-6	5.0000000000	Emollient / Refatting / Skin Conditioning
Glycerin	56-81-5	200-289-5	2.5000000000	Denaturant / Humectant / Skin Protecting / Solvent / Viscosity Controlling / Skin Conditioning
Glyceryl Stearate	31566-31-1 / 11099-07-3 / 123-94-4 / 85251-77-0	250-705-4 / 234-325-6 / 204-664-4 / -	2.3000000000	Skin Conditioning / Emollient / Surfactant / Emulsifying
Tremella Fuciformis Extract	N/A	N/A	2.0000000000	Humectant / Skin Conditioning
Euphorbia Cerifera Wax	8006-44-8	232-347-0	2.0000000000	Astringent / Emulsion Stabilizing / Film Forming / Viscosity Controlling / Skin Conditioning
Simmondsia Chinensis Seed Oil	90045-98-0 / 61789-91-1	289-964-3 / -	2.0000000000	Skin Conditioning / Emollient
Ganoderma Atrum Extract	N/A	N/A	1.0000000000	Skin Conditioning
Tuber Magnatum Extract	N/A	N/A	1.0000000000	Skin Conditioning
Rhodiola Rosea Root Extract	N/A	N/A	1.0000000000	Skin Conditioning / Emollient / Skin Protecting
Panax Ginseng Root Extract	84650-12-4	283-493-7	1.0000000000	Emollient / Skin Conditioning / Skin Protecting / Tonic
Argania Spinosa Kernel Oil	223747-87-3 / 299184-75-1	- / -	1.0000000000	Emollient / Skin Conditioning
Persea Gratissima Oil	8024-32-6	232-428-0	0.5000000000	Skin Conditioning
Pentylene Glycol	5343-92-0	226-285-3	0.5000000000	Skin Conditioning / Solvent
Hydroxyacetophenone	99-93-4	202-802-8	0.5000000000	Antioxidant
Trehalose	99-20-7	202-739-6	0.5000000000	Humectant / Moisturising
1,2-Hexanediol	6920-22-5	230-029-6	0.5000000000	Solvent / Skin Conditioning

INCI or Chemical Name	CAS No.	EINECS/ ELINCS	Conc. %	Intended Function
Collagen	9007-34-5	232-697-4	0.5000000000	Moisturising / Skin Conditioning
Acrylates/C10-30 Alkyl Acrylate Crosspolymer	N/A	N/A	0.4000000000	Emulsion Stabilising / Film Forming / Viscosity Controlling
Aminomethyl Propanol	124-68-5	204-709-8	0.2000000000	Buffering
Coffea Arabica Seed Extract	84650-00-0	283-481-1	0.2000000000	Skin Conditioning
Tocopherol	54-28-4 / 16698-35-4 / 10191-41-0 / 119-13-1 / 1406-18-4 / 1406-66-2 / 2074-53-5 / 59-02-9 / 7616-22-0	200-201-5 / 240-747-1 / 233-466-0 / 204-299-0 / 215-798-8 / - / 218-197-9 / 200-412-2 / -	0.2000000000	Antioxidant / Skin Conditioning
Betaine	107-43-7	203-490-6	0.2000000000	Humectant / Skin Conditioning
Hesperidin Methyl Chalcone	24292-52-2	246-128-2	0.1500000000	Antioxidant
Saccharomyces Cerevisiae Ferment	84604-16-0	283-294-5	0.1500000000	Skin Conditioning
Cyclodextrin	7585-39-9 / 12619-70-4	231-493-2 / -	0.1000000000	Absorbent / Chelating
Chlorhexidine Digluconate	18472-51-0	242-354-0	0.1000000000	Preservative
Caprylhydroxamic Acid	7377-03-9	230-936-7	0.0900000000	Chelating
Dipeptide Diaminobutyroyl Benzylamide Diacetate	N/A	N/A	0.0500000000	Skin Conditioning
Tremella Fuciformis Polysaccharide	778577-37-0	N/A	0.0500000000	Emulsion Stabilising / Film Forming / Skin Conditioning
Capryloyl Glycine	14246-53-8	238-122-3	0.0500000000	Anti-Seborrheic / Antimicrobial / Anti-Sebum / Cleansing / Surfactant
Acetyl Hexapeptide-8	616204-22-9	N/A	0.0500000000	Humectant / Skin Conditioning
Sodium Hyaluronate	9067-32-7	N/A	0.0300000000	Humectant / Skin Conditioning
Palmitoyl Tetrapeptide-7	221227-05-0	N/A	0.0100000000	Skin Conditioning
Dipeptide-2	N/A	N/A	0.0100000000	Skin Conditioning

FRAGRANCE ALLERGENS
No parfum is present in the formulation.

2. Physical/chemical characteristics and stability of the formulation

2.1 The product is a yellow colored paste.

2.2 The stability test result on formulation, by third party laboratory (NP-PTC report no. PTC250519210305), with a testing period of May 19 – Aug 25, 2025, was submitted and reviewed. It is the responsibility of manufacturer or responsible person to determine the product's minimum durability and period-after-opening (PAO), if applicable, using the available data.

Testing conditions : -5±1°C, 25±1°C, and 45±2°C (70% humidity) for 3 months
Testing parameters : Appearance, Odour, pH value change, and Total Pate Counting (CFU/g)

Conclusion: The stability of the formulation is acceptable for this application.

3. Microbiological quality

3.1 The microbiological test results on formulation, with reference to European Pharmacopeia 10.0 2.6.12 & 2.6.13, by third party laboratory (NP-PTC report no. PTC250519210303), with a testing period of May 19 – 29, 2025, was submitted and reviewed based on following criteria as required by SCCS Notes of Guidance.

Product Category of this product: 2

Micro-organisms	Total viable count and Total yeast and mold	*E. Coli, P.aeruginosa*, *S.aureus* and *C.albicans*
Category 1: Products specifically intended for children under 3 years, to be used in the eye area and on mucous membranes	≤ 100 cfu/g or 100 cfu/ml	not detectable in 1g or 1 ml
Category 2: Other products	≤ 1000 cfu/g or 1000 cfu/ml	not detectable in 1g or 1 ml

Conclusion: The microbiological quality of the formulation is acceptable for this application.

3.2 The preservation efficacy test result on formulation, with reference to European Pharmacopeia 10.0, 5.1.3, by third party laboratory (NP-PTC report no. PTC250519210304), with a testing period of May 19 – Jul 07, 2025, was submitted and reviewed based on following criteria.

		Day 2	Day 7	Day 14	Day 28
		Log reduction			
Criteria A	*E.coli, P.aeruginosa*, *S.aureus*	2	3	/	NI
	C. albicans	/	/	2	NI
	A. brasiliensis (niger)	/	/	2	NI
Criteria B	*E.coli, P.aeruginosa*, *S.aureus*	/	/	3	NI
	C. albicans	/	/	1	NI
	A. brasiliensis (niger)	/	/	1	NI

NI: No increase

Conclusion: The preservative efficacy of the formulation achieved criteria B and is acceptable for this application.

4. Impurities, traces and information about the formulation and the packaging material

4.1 The heavy metal test results on formulation, by third party laboratory (NP-PTC report no. PTC250519210302), with a testing period of May 19 – 29, 2025, was submitted and reviewed based on following criteria.

	The maximum permissible limit quoted from Bundesamt für Verbraucherschutz und Lebensmittelsicherheit (BVL) (Published online:06 Oct 2016)					The maximum permissible limit is quoted from German Health No. 7/1992, Session 45 from Nov 14, 1991
Test items	As	Hg	Pb	Sb	Cd	Ni (soluble)
Limit in cosmetic products in general (mg/kg)	≤0.5[b]	≤ 0.1	≤2.0[a]	≤0.5	≤0.1	≤10

[a] For the products make-up powder, rough, eye shadow, eyeliner, kajal, as well as theater, fan or carnival make-up: 5 mg/kg

[b] For theater, fan or carnival make-up: 2.5 mg/kg

Conclusion: The heavy metal content of the formulation is acceptable for this application.

4.2 The client has supplied the following list of packaging parts for this product as the immediate container.

No.	Immediate Container	Material
1.	Bottle	Glass

2.	Pump	PP

4.3 For the packaging materials, the test results of total Lead (Pb), Cadmium (Cd), Mercury (Hg), Chromium VI (Cr (VI)), by third party laboratory (NP-PTC report no. PTC250519210301), with a testing period of May 19 – 29, 2025, indicate the total amount of lead, cadmium, mercury and chromium (VI) is less than 100ppm.
Conclusion: The heavy metal content of the packaging material is acceptable.

4.4 Packaging compatibility test results on packaging material, tested together with the formulation, by third party laboratory (NP-PTC report no. PTC250519210305), with a testing period of May 19 – Aug 25, 2025, was submitted and reviewed.
Testing conditions : -5±1°C, 25±1°C, and 45±2°C (70% humidity) for 3 months
Testing parameters : Appearance and Appearance of the package
Conclusion: The stability of the packaging material is acceptable.

5. Normal and reasonably foreseeable use
The normal use of this product is for application on face and neck skin by adults. Application of this product to any other parts of the body is possible. Ingestion of this product would a misuse.

6. Exposure to cosmetic product
Product type: Skin care cosmetics
Use category: Facial Cream
Physical form: Paste
The site(s) of application: Face and neck skin
The surface area(s) of application: 965 cm^2
The amount per application: 0.72 g
The duration of exposure: 720 minutes
The frequency of use: 781 times per year
The normal and reasonably foreseeable exposure route(s): Primarily via dermal contact
The targeted (or exposed) population(s): Adults
The body weight: 60 kg
Estimated daily amount applied: 1541 mg/day

7. Exposure and toxicological profile of the substances
There are no nanoparticles indicated to be used in this formulation.
For toxicological profile of ingredients, refer to Annex 1.
Systemic Exposure Dose(SED) is derived for each substance, taking into account of 50 % bioavailability as a default value for oral and dermal absorption, and 100 % bioavailability for inhalation, unless otherwise specified.Margins of safety(MoS) is calculated by dividing systemic NO(A)ELsys by the SED, when NO(A)EL or relevant Point of Departure(POD) is available in the present stage of knowledge.

8. Undesirable effects and serious undesirable effects
No data on any undesirable effects associated with this product has been supplied.

9. Information on the cosmetic product
The product is indicated to be manufactured by Dongguan Meitai Biotechnology Co., Ltd., in a manufacturing setting according to ISO 22716: 2007, with scope of compliance on manufacturing of general liquid unit, including hair care & cleansing products, skin care liquid products and gel products; manufacturing of cream & lotion unit, including skin care & cleansing products and hair care products, by third party laboratory (Intertek Certificate SZ2507L1 which is valid until Jul 28, 2028).

PART B - COSMETIC PRODUCT SAFETY ASSESSMENT

1. Assessment conclusion

The product complies with the Product Safety and Metrology etc. (Amendment etc.) (EU Exit) Regulations 2019 SCHEDULE 34 Amendment of Regulation (EC) No. 1223/2009 and related amendments, SI 2019 No 696.
Provided the manufacturer's instructions are followed, it is considered that, in the present state of knowledge, the submitted formulation put on the market is unlikely to pose a significant risk to the health of intended consumer under normal and reasonably foreseeable conditions of use.

2. Recommended labelled warnings and instructions of use

Stop using this product when it disagrees with you.
Keep out of reach of children.

3. Reasoning

All the ingredients in the formulation are either reported to be used in cosmetic or within the recommended limit as suggested by EU SCCS and UK Secretary of State and Cosmetic Ingredient Review (CIR). No CMR substance is indicated to be intentionally added to the formulation.
Margin of Safety (MoS) was derived for all ingredients except those which No Observed (Adverse) Effect Levels (NO(A)ELs) or other Point of Departure (POD) were not available. For ingredients that MoS cannot be derived, their safety is substantiated by history of safe use at similar levels in related cosmetic products, reference doses, TTC approach, etc. Detailed explanation is given in the individual ingredient toxicological summary in annex 1.
The formulation is not expected to be irritating to the eye, skin and respiratory tract, be sensitizing, phototoxic, and is unlikely to cause damage to internal organs through skin in the majority of consumers under normal and reasonably foreseeable conditions of use. Accidental exposure to eyes may cause slight irritation, but is expected to be minimal after rinsing. There are substances of allergenic potential but at low level that is not expected to induce an allergenic reaction in most of the users under normal and reasonably foreseeable conditions of use. However, sensitized people can react to allergen present at extremely low concentrations.
The potential interactions between ingredients have been considered. The submitted test results indicate the product will be safe for intended use concerning the impurity, stability, microbiological quality, and preservative efficacy while the product was manufactured in accordance with ISO 22716:2007 Cosmetic GMP.

4. Assessor's credentials and approval of Part B

Date: Nov 26, 2025

Yin Tung CHOI, Stella MSc (Food Safety and Toxicology), MSc (Nutrition, Food Science and Technology)

The validity of this review depends on the validity of disclosure by both the manufacturer of the components and that of the finished products. Best professional capabilities are used in performing this review and if the client wishes to use this opinion with any alternations to the submitted formula, SGS (HK) Ltd. or any of its employees will not be held liable for any injury or damage resulting from this product. It is the manufacturer's responsibility to ensure each batch of the ingredient used in the formulations are of acceptable grade to substantiate the safety of the product and to comply with the UK Cosmetic Regulation. This review will need to be updated upon reformulation or upon change of the new significant safety information.

all liability for the accuracy of any such publicly available information or any legal interpretation of such information. The Company provides its services in a consulting capacity only and offers no legal opinion(s) herein. The opinions provided by the Company are not a substitute for professional legal advice and Client should seek legal review to ensure compliance with any applicable laws and regulations.

******** End of Report ********

ANNEX 1 TOXICOLOGICAL PROFILE OF INDIVIDUAL INGREDIENT

1. Aqua
CAS No.: 7732-18-5
EINECS/ELINCS: 231-791-2
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: None
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 8.2392133333 mg/kg bw/day
MOS: --
Aqua is a ubiquitous liquid that is normally used as solvent in cosmetic products and is not expected to result in any acute or chronic toxicity following typical exposures.

2. Butylene Glycol
CAS No.: 107-88-0 / 6290-03-5
EINECS/ELINCS: 203-529-7 / 228-532-0
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe at concentration up to 89% in rinse off product and safe at concentration up to 20% in leave on products
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: 5000 mg/kg bw/day
SED: 1.2841666667 mg/kg bw/day
MOS: 1946
Butylene Glycol is the aliphatic diol which is used as fragrance ingredients/skin-conditioning agents/solvents generally in products such as, baby lotions, bath oils, eye shadows, lipsticks. The results of acute, subchronic, and chronic oral toxicity studies using a variety of animal species indicate a low order of toxicity for Glycols. Results of parenteral injection, inhalation, and acute and subchronic cutaneous toxicity studies likewise support a low order of toxicity. Butylene Glycol caused minimal to mild irritation of rabbit skin, and produced mild to severe ocular irritation when tested in rabbits. Undiluted Butylene Glycol was not an eye irritant to rabbits, but was to humans. Human skin patch tests on undiluted Butylene Glycol produced a very low order of primary skin irritation. A repeated insult patch test on Butylene Glycol produced no evidence of skin sensitization. Based on the available data CIR panel concluded that Butylene Glycol is safe as presently used in cosmetics.

3. Squalane
CAS No.: 111-01-3
EINECS/ELINCS: 203-825-6
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to be used up to 31%
Food additive recommendation: None
Toxicological profile by chemical supplier: None

NOAEL: 1000 mg/kg bw/day
SED: 0.6420833333 mg/kg bw/day
MOS: 778
Squalane is the saturated branched chain hydrocarbon, obtained by hydrogenation of shark liver oil or other natural oils. It is used as hair conditioning agents, skin conditioning agents in cosmetic range from 0.1 to 50%. It is a natural component of human sebum and is slowly absorbed through the skin and poorly absorbed by the gastrointestinal tract. Its acute toxicity by all routes is low in animal studies. It is neither an irritant to rabbit skin and eye at 100 percent concentration nor a significant human skin irritant or sensitizer. The CIR panel concluded that Squalane is safe as cosmetic ingredients in the present practices of use and concentration.

4. Glycerin
CAS No.: 56-81-5
EINECS/ELINCS: 200-289-5
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to be used at up to 79.2% in leave-on products and 99.4% in rinse-off products
Food additive recommendation: Yes, but no given ADI
Toxicological profile by chemical supplier: None
NOAEL: ≥ 2200 mg/kg bw/day
SED: 0.3210416667 mg/kg bw/day
MOS: 3426
Glycerin is the polyhydric alcohol that is naturally occurring and abundant in animal and human tissues, including the skin and blood. Glycerin is reported to function in cosmetics as a denaturant, fragrance ingredient, hair conditioning agent, humectants, oral care agent, oral health care drug, skin protectant, skin-conditioning agent and viscosity decreasing agent. Glycerin is absorbed following ingestion and metabolised by glycerokinase in the liver to carbon dioxide and water or incorporated in the standard metabolic pathways to form glucose and glycogen. The weight of evidence indicates that glycerin is of low toxicity when ingested, inhaled or in contact with the skin. Glycerin is of a low order of acute oral and dermal toxicity with LD50 values in excess of 4000 mg/kg bw. At very high dose levels, the signs of toxicity include tremor and hyperaemia of the gastro-intestinal -tract. Skin and eye irritation studies indicate that glycerin has low potential to irritate the skin and the eye. The available human and animal data, together with the very widespread potential for exposure and the absence of case reports of sensitisation, indicate that glycerin is not a skin sensitiser. Repeated oral exposure to glycerin does not induce adverse effects other than local irritation of the gastro-intestinal tract. The 2-year study of Hine (1953) was chosen to establish the overall NOEL after prolonged treatment with glycerin of 10,000 mg/kg bw/day (20% in diet), which is in agreement with the findings in other studies. At this dose level no systemic or local effects were observed. For inhalation exposure to aerosols, the NOAEC for local irritant effects to the upper respiratory tract is 165 mg/m3 and 662 mg/m3 for systemic effects. Glycerin is not considered to possess genotoxic potential. There were no reproductive or developmental effects observed in oral studies using rats, mice, and rabbits. Glycerin was not genotoxic in multiple in vitro tests and was not carcinogenetic to rats in a long-term feeding study. There were no signs of toxicity or effects on blood or on urine production when human subjects were orally administered approximately 1300-2200 g/kg/d glycerin for 50 days. The NOAEL was >=2200 mg/kg/d.

5. Glyceryl Stearate
CAS No.: 31566-31-1 / 11099-07-3 / 123-94-4 / 85666-92-8 / 85251-77-0
EINECS/ELINCS: 250-705-4 / 234-325-6 / 204-664-4 / - / -
CLP Classification: N/A
EU Cosmetic Regulation: None

SCCS opinion: None
CIR recommendation: Safe as used in rinse off product up to 18.9% and safe at concentration up to 17% in leave on products
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: 2500 mg/kg bw/day (Read across)
SED: 0.2953583333 mg/kg bw/day
MOS: 4232
Glyceryl Stearate is the monoester of glycerin and stearic acid. It is a white or cream-coloured wax-like solid with a faint odor and an agreeable fatty taste. It is soluble in alcohol, petroleum ether, benzene, acetone, and mineral oil but insoluble in water. It is widely used in cosmetics. When applied to skin, it may produce a waxy, occlusive, water-soluble film, which makes it useful for hand lotions and creams. Glyceryl stearate is used as a surfactant, emulsifier, flavor, dispersant, anti-sticking, and thickening agent. In acute oral toxicity studies in rats, glyceryl stearate is non-toxic or mildly toxic. In chronic studies, application of 15 – 20% glyceryl stearate in the diet of rats for three consecutive generations had no adverse effects. Rats fed with a diet containing 25% glyceryl stearate for two years developed renal calcifications. Glyceryl stearate was mildly irritating or non-irritating to the skin of rabbits; and mildly irritating or non-irritating when instilled in the eyes of rabbits. It was not a sensitizer to guinea pig. According to clinical studies, it was non-sensitizing and non-irritating to human skin. Products containing 2% glyceryl stearate were non-phototoxic and non-photoallergic. The CIR Expert Panel concluded that Glyceryl Stearate is safe for topical application to humans in the present practices of use and concentration. It is also a Generally Recognized as Safe (GRAS) substance regulated by the US Food and Drug Administration (FDA).

6. Tremella Fuciformis Extract
CAS No.: N/A
EINECS/ELINCS: N/A
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: None
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.2568333333 mg/kg bw/day
MOS: --
Tremella Fuciformis (Mushroom) Extract is an extract of the Mushroom, Tremella Fuciformis. The mushroom is edible and has been a food source for human consumption for a period of time, the systemic toxicity of this mushroom from cosmetic exposure is therefore not of concern compared to the dietary exposure.

7. Euphorbia Cerifera Wax
CAS No.: 8006-44-8
EINECS/ELINCS: 232-347-0
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe when used as a cosmetic ingredient up to 27%
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: 600 mg/kg bw/day (oral, dogs, 6 months)
SED: 0.2568333333 mg/kg bw/day

MOS: 1168
Euphorbia Cerifera Wax is a wax obtained from the Candelilla, Euphorbia cerifera, Euphorbiaceae. It is used as astringent, emulsion stabilising, film forming, perfuming, skin conditioning and viscosity controlling agent in cosmetic. Euphorbia Cerifera (Candelilla) Wax is a Generally Recognized As Safe (GRAS) ingredient used in chewing gum and hard candy, with no limitation. The acute oral LD50 of Candelilla Wax in rat is greater than 5 g/kg. Primary skin irritation tests of 100% Candelilla Wax caused no irritation on rats. A 75% solution of the wax in corn oil caused minimal irritation on shaved skin of nine albino rabbits. One product containing 11 % Candelilla Wax caused slight to well defined erythema and edema. A dermal irritation and systemic toxicity test of 3.5% Candelilla Wax in a formulation on rabbits produced no systemic toxicity but there was slight erythema and drying of the skin at the application site. A 75% concentration of Candelilla Wax in corn oil caused no eye irritation in rabbits. A formulation containing 3.5% Candelilla Wax was neither teratogenic nor embryotoxic when dermally administered for 10 days to pregnant rats. In clinical studies, a patch test of 25% Candelilla Wax in castor oil caused no irritation in 20 subjects. The Panel concludes that Euphorbia Cerifera Wax is safe as used in cosmetics under present practices of concentration and use

8. Simmondsia Chinensis Seed Oil
CAS No.: 90045-98-0 / 61789-91-1 (generic)
EINECS/ELINCS: 289-964-3 / -
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: safe to be used up to 100% in both leave on and rinse off product
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.2568333333 mg/kg bw/day
MOS: --
Simmondsia Chinensis (Jojoba) Seed Oil is defined as the fixed oil expressed or extracted from seeds of the desert shrub, Jojoba, Simmondsia chinensis. It is also known as Buxus Chinensis Oil, Jojoba Oil, and Jojoba Seed Oil. Its chemical classification is ester. It only has plant sources. from seeds of the desert shrub, Jojoba, Simmondsia chinensis. Simmondsia Chinensis (Jojoba) Seed Oil is composed almost completely (97%) of wax esters of monounsaturated, straight-chain acids and alcohols with high-molecular weights (C16-C26). These wax esters exist principally (83%) as combinations of C20 and C22 unsaturated acids and alcohols. Simmondsia Chinensis (Jojoba) Seed Oil is stable and resists oxidation. The amount and composition of the oil expressed from S. chinensis seeds varies with maturity of the seeds and somewhat with location and climate conditions surrounding the plant. Simmondsia Chinensis (Jojoba) Seed Oil was not classified as a toxic substance. The CIR Expert Panel recognized that Simmondsia Chinensis (Jojoba) Seed Oil is safe in cosmetic up to 100%.

9. Ganoderma Atrum Extract
CAS No.: N/A
EINECS/ELINCS: N/A
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: None
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.1284166667 mg/kg bw/day

MOS: --
Ganoderma Atrum (Mushroom) Extract is the extract of the fruiting body of the mushroom, Ganoderma atrum. The mushroom is edible and has been a food source for human consumption for a period of time, the systemic toxicity of this mushroom from cosmetic exposure is therefore not of concern compared to the dietary exposure.

10. Tuber Magnatum Extract
CAS No.: N/A
EINECS/ELINCS: N/A
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: None
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.1284166667 mg/kg bw/day
MOS: --
Tuber Magnatum Extract is an extract of the Mushroom, Tuber magnatum. It functions as skin conditioning agent in cosmetic. The truffle is edible and has been a food source for human consumption for a period of time, the systemic toxicity of this truffle from cosmetic exposure is therefore not of concern compared to the dietary exposure.

11. Rhodiola Rosea Root Extract
CAS No.: - / 82457-37-9
EINECS/ELINCS: - / 296-320-5
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: None
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.1284166667 mg/kg bw/day
MOS: --
Rhodiola Rosea Root Extract is an extract of the roots of the Rhodiola rosea, Crassulaceae. It functions as skin conditioning, emollient, and skin protecting agent in cosmetic. With reference to European Medicines agency assessment report, unpublished tests on the cytotoxicity (inhibitory cell growth with L1210 cells and colony-forming efficiency with V79 cells) of the powdered underground organs (Bjellin et al., 1988) revealed a very low cytotoxic potential. Some of the pharmacological tests indicate that dosages up to 6 g herbal preparation per kg body weight per day were well tolerated in rats. The Swedish Herbal Institute supplied unpublished information (Burgos & Hancke 1991) regarding tests on the subchronic toxicity of the herbal preparation SHR-5 (Rhodiola extract SHR-5 (DER 2.5-5:1, first extraction solvent ethanol 70%, second extraction solvent water)). The herbal preparation was administered orally to rats for 90 days in a dose range from 1.0 – 3.4 g per kg. The study medication did not change the development of the body weight, behaviour and appearance of the test animals. Further parameters were not investigated. In a Public Assessment Report of the MHRA it is stated that an extract prepared with ethanol 68% V/V did not reveal any mutagenic effect up to a cytotoxic concentration of 3,160 µg/plate in an Ames test, with and without metabolic activation. Adverse events, mainly non-serous and related to the SOCs nervous system disorders, gastrointestinal disorders and skin and subcutaneous tissue disorders have been reported. The use in children and

adolescents as well as during pregnancy and lactation cannot be recommended. Based on the published data it can be concluded that traditional herbal medicinal products containing Rhodiola rosea are not harmful when used in the specified conditions. The traditional use for adult and elderly is 144-400mg per day, while the use in children and adolescents under 18 years of age was not recommended.

12. Panax Ginseng Root Extract
CAS No.: 84650-12-4 / 50647-08-0
EINECS/ELINCS: 283-493-7 / -
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to be used up to 0.5%
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: 5000 mg/kg bw/day
SED: 0.1284166667 mg/kg bw/day
MOS: 19467
Panax Ginseng Root Extract is an extract of the roots of the Ginseng, Panax ginseng, Araliaceae. The Botanical Safety Handbook classified the root of Panax ginseng C.A. Mey. as class 2d (Contraindicated for hypertension). Panax ginseng root extract was not cytotoxic to human dermal fibroblasts up to 1000 µg/mL. The acute oral LD50 for rats was 750 mg/kg and 200 mg/kg for mice for Panax ginseng root. Oral administration of P ginseng root extract was nontoxic to rats up to 5000 mg/kg/d for up to 105 weeks, and up to 5000 mg/kg for life for mice. There were no adverse effects reported in an oral reproductive study at 15 mg/kg/day or a developmental study up to 20 mg/kg/day Panax ginseng root extract using rats and no effects on reproductive organs, estrous cycle, or sperm parameters in 3-months studies. Panax ginseng root extract was not carcinogenic to rats or mice up to 5000 mg/kg for 105 weeks. It was not mutagenic in Ames tests. Panax ginseng root extract was not irritating to mice up to 0.1% or humans up to 100 mg/mL. There was no sensitivity detected in HRIPT of products containing Panax ginseng root extract up to 1%. Panax ginseng root extract was not phototoxic. The CIR Panel noted the lack of systemic toxicity at high doses in acute and subchronic oral exposure studies and no irritation or sensitization in multiple tests of dermal exposure. There was no genotoxicity in in vitro and in vivo tests and no carcinogenicity in tests using rats and mice. The Panel concluded that the Panax Ginseng Root Extract is safe in the present practice of use and concentration described in the CIR safety assessment.

13. Argania Spinosa Kernel Oil
CAS No.: 223747-87-3 / 299184-75-1
EINECS/ELINCS: - / -
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to be used up to 10% in leave on product and 2% in rinse off product
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.1284166667 mg/kg bw/day
MOS: --
Argania Spinosa Kernel Oil is the fixed oil expressed from the kernels of the African tree, Argania spinosa. It is used in a wide variety of cosmetic products as emollient and skin conditioning agent at the concentration 0.001-10% of use. Human studies showed that 5% Argania Spinosa Kernel Oil in a face serum and 10% Argania Spinosa Kernel Oil in a skin salve is not an irritant or a sensitizer.

14. Persea Gratissima Oil
CAS No.: 8024-32-6
EINECS/ELINCS: 232-428-0
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to be used from 0.0001 to 98%
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0642083333 mg/kg bw/day
MOS: --
Persea Gratissima Oil is the fixed oil obtained by pressing the dehydrated sliced flesh of the avocado pear, Persea gratissima, Lauraceae. It consists principally of the glycerides of fatty acids. It is used in a wide variety of cosmetic products for skin conditioning, occlusive, emollient, moisturizing in cosmetic up to 98%. CIR indicated it is not an irritant or sensitizer when human subjects were patch tested with cosmetic formulations containing up to 10.7% Persea Gratissima (Avocado) Oil or in patch tests using 100% Persea Gratissima (Avocado) Oil.

15. Pentylene Glycol
CAS No.: 5343-92-0
EINECS/ELINCS: 226-285-3
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to be used up to 5%
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: 1000 mg/kg bw/day (Read across to 1,2-Butanediol)
SED: 0.0642083333 mg/kg bw/day
MOS: 7787
Pentylene Glycol is the 1,2-glycol that functions as skin conditioning agent and solvent. Pentylene glycol is a potential penetration enhancer. The CIR Expert Panel has stated that the available safety test data for 1,2-glycols indicated that they are not significant acute toxicants, are not significantly genotoxic, non-carcinogenic, and are insignificant dermal irritants, sensitizers, or photosensitizers. There was no evidence of systemic toxicity in oral reported dose toxicity studies involving Pentylene Glycol. The CIR Expert Panel agreed that the oral toxicity data could be used to evaluate the safety of 1,2-glycol in products applied to the skin in the absence of dermal studies, because 1,2-glycol blood levels following oral exposure would be higher when compared to dermal exposure and systemic toxicity was absent in the oral studies.

16. Hydroxyacetophenone
CAS No.: 99-93-4
EINECS/ELINCS: 202-802-8
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe use up to 5% for leave-on and rinse-off products
Food additive recommendation: None
Toxicological profile by chemical supplier: None

NOAEL: 45 mg/kg bw/day (oral, rats, 90-day)
SED: 0.0642083333 mg/kg bw/day
MOS: 350
Hydroxyacetophenone is the organic compound that conforms to the formula C8H8O2. It was reported to be used as antioxidant and skin conditioning agents in cosmetic products. Hydroxyacetophenone has a molecular weight (MW) of 136.15 g/mol and an estimated log Kow of 1.65. The highest concentration of use reported for Hydroxyacetophenone is 5%, in non-spray night products, in paste masks, and in mud packs. In 2011, the Joint Expert Committee on Food Additives (JECFA) mentioned Hydroxyacetophenone as a flavoring agent, and that it posed no safety concerns. In Europe, Hydroxyacetophenone dietary exposure was estimated as 0.0002 µg/kg bw/d, while in Japan, Hydroxyacetophenone dietary exposure was estimated as 0.0059 µg/kg bw/d. Hydroxyacetophenone also has a Flavoring, Extract, and Manufacturing Association (FEMA) generally recognized as safe (GRAS) designation, under FEMA No. 4330. The acute dermal LD50 in rabbits was >2000 mg/kg bw. The acute oral LD50 was determined to be 2240 mg/kg bw. The NOAEC for inhalation toxicity in rats was determined to be 42 mg/m3. The NOAEL for Hydroxyacetophenone in rats was determined to be 45 mg/kg bw/d in accordance with OECD TG 408, for 90 d. The NOAEL was determined to be 600 mg/kg bw/d for both males and females in the parental generation, as well as the F1 generation in accordance with OECD TG 422. Hydroxyacetophenone was not genotoxic in 3 separate bacterial reverse mutation assays, 2 gene mutation assays, L5178Y mouse lymphoma cells in the presence or absence of metabolic activation and sister chromatid exchange assay. Hydroxyacetophenone was considered inactive at effecting tumor promotion in the transformation assay. Slight dermal irritation was reported for 3 of 4 New Zealand white rabbits treated with an occlusive, 6 cm2 patch of 0.5 g Hydroxyacetophenone, moistened with saline, for 4 h. In a similar study, 0.5 g of Hydroxyacetophenone applied to rabbit skin in a 1 in2, occlusive patch for 4 h, did not cause dermal irritation to control or treated sites. Guinea pigs were not sensitized to 20% aqueous Hydroxyacetophenone in a Buehler test. In a maximization test, no sensitization occurred when male Hartley guinea pigs were induced twice with 5% Hydroxyacetophenone, in propylene glycol, and challenged with a topical application 0.5 g of 75% Hydroxyacetophenone in petrolatum for 24 h. Hydroxyacetophenone was not irritating in 2 separate SIOPTs. New Zealand white rabbit eyes treated with 0.1 g of undiluted Hydroxyacetophenone, unrinsed, produced a Draize score of 63, categorized as a severe irritant, while eyes rinsed with 0.9% saline for 30 sec produced a Draize score of 22, categorized as a moderate irritant. The Expert Panel for Cosmetic Ingredient Safety tentatively concluded that Hydroxyacetophenone is safe in cosmetics in the present practices of use and concentration.

17. Trehalose
CAS No.: 99-20-7 / 6138-23-4
EINECS/ELINCS: 202-739-6 / -
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to use up to 2%
Food additive recommendation: Yes, ADI not specific
Toxicological profile by chemical supplier: None
NOAEL: 7300 mg/kg bw/day
SED: 0.0642083333 mg/kg bw/day
MOS: 56846
Trehalose is a disaccharide that occurs naturally in insects, plants, fungi and bacteria. Trehalose was not productive toxic, teratogenic, and genotoxic. Studies in humans indicate that trehalose is well tolerated. The JECFA established an ADI “not specific” for trehalose. Trehalose was also listed in the Foods Chemicals Codex as a flavouring agent and humectants. The CIR Expert panel stated that although oral toxicity data are very limited and reproductive toxicity data are mostly absent, the systemic toxicity of these ingredients

was not a concern because of the low concentrations of use and their limited systemic exposure from dermal application.

18. 1,2-Hexanediol
CAS No.: 6920-22-5
EINECS/ELINCS: 230-029-6
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe as used in rinse off product up to 0.8% and safe at concentration up to 10% in leave on products
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: 700 mg/kg bw/day (dermal, rat, 93-day)
SED: 0.0642083333 mg/kg bw/day
MOS: 5451
1,2-Hexanediol belongs to the short chain 1,2-glocol group as used as organic solvent in cosmetic products. The available safety test data for 1,2-glycols indicate that they are not significant acute toxicants, are not significantly genotoxic, are non-carcinogenic, and are not significant dermal irritants or photosensitizers. Mouse local lymph node assay test result for 1,2-Hexanediol up to 100% was negative. It is not skin sensitizer. A 50:50(w/w) mixture of 1,2-Hexanediol and caprylyl glycol, with tested concentration of 1% aqueous (effective concentration per ingredient is 0.5%), was classified as a severe ocular irritant in a Draize test result. The CIR determined that evaluation of reproductive/developmental toxicity data would be the key to determining toxicity studies on this ingredient. The result of oral reproductive/developmental toxicity study on 1,2-Hexanediol was negative, and there was no evidence of systemic toxicity in other oral repeated does toxicity studies involving other glycols. The NOEL for developmental toxicity was considered to be 300 mg/kg bw/day. The dermal absorption is not of a concern because the 1,2-glycol has a low blood level following oral exposure and systemic toxicity is absent in the oral studies, while 1,2-glycol in blood level following dermal exposure is known to be much lower. The CIR Expert Panel concluded that 1,2-hexanediol is safe in the present practices of used and concentration.

19. Collagen
CAS No.: 9007-34-5
EINECS/ELINCS: 232-697-4
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: None
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0642083333 mg/kg bw/day
MOS: --
Collagen is a fibrous protein comprising one third of the total protein in mammalian organisms. It is a polypeptide containing three peptide chains and rich in proline and hydroxyproline. As collagen is abundantly present in human body, the systemic toxicity is not of concern and is not expected to pose significant risk to human systemically. The data of local effects can be taking reference to that of hydrolyzed collagen. Hydrolyzed collagen was practically nontoxic when administered orally or dermally in acute animal toxicity studies. It was minimally irritating to rabbit eyes when tested full-strength. Primary skin irritation tests in rabbits indicated that hydrolyzed collagen was nonirritating or minimally irritating when tested full-strength. It

was non-sensitizing in guinea pigs. In clinical studies, hydrolyzed collagen produced no skin irritation, sensitization or indication of phototoxicity. Provided that the collagen is not category 1 and category 2 material as defined in Articles 4 and 5 respectively of Regulation (EC) No 1774/2002 of the European Parliament and of the Council, and ingredients derived therefrom, this ingredient is not expected to pose a significant risk to the consumer.
The submitted statement of this ingredient, in the product name Recombinant human type III collagen, as supplied by North China Pharmaceutical Group New Drug Research and Development Co., Ltd, indicated the product was produced by high-efficiency fermentation expression using the Pichia pastoris expression system through recombination technology, and is purified by multi-step ultrafiltration, chromatography and other different principles of purification process. The production process uses an inorganic salt formula does not contain human or animal derived components, and this product is a non-human derived product.

20. Acrylates/C10-30 Alkyl Acrylate Crosspolymer
CAS No.: N/A
EINECS/ELINCS: N/A
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to be used up to 3% for leave-on products; 1.8% for rinse-off products; 0.15% for diluted use products but not support use when polymerized in benzene
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0513666667 mg/kg bw/day
MOS: --
Acrylates/C10-30 Alkyl Acrylate Crosspolymer (C10-30 alkyl propenoate, polymer with propenoic acid, butenoic acid and/or alkyl propenoates, product with propenyl sucrose ether or propenyl 2,2-dihydroxymethyl-1,3-propanediol) is a copolymer of C10-30 alkyl acrylate and one or more monomers of acrylic acid, methacrylic acid or one of their simple esters crosslinked with an allyl ether of sucrose or an allyl ether of pentaerythritol. It is used as emulsion stabilising, film forming and viscosity controlling. The dermal LD50 and oral LD50 were reported to be greater than 2 g/kg and greater than 2 or 10 g/kg respectively in rat. No to slight irritation with undiluted, and weak sensitization with 2% aqueous Acrylates/C10-30 Alkyl Acrylate Crosspolymer were reported. In HRIPT, a weak irritation response was reported with undiluted Acrylates/C10-30 Alkyl Acrylate Crosspolymer. Undiluted ingredient produced slight to moderate eye irritation, slight iridal and conjunctival irritation was observed with 1% solution, but all signs of irritation were cleared within 72 hours. The CIR concluded that the substance is safe in the present practices of use and concentration except when they are polymerized in benzene.
The submitted certificate of analysis (COA) of this ingredient, in the product name CARBOPOL® ULTREZ 20 POLYMER (batch 0102470523), as supplied by Lubrizol, indicated the total residual solvent (ethyl acetate and cyclohexane) content is controlled at max 0.45%.

21. Aminomethyl Propanol
CAS No.: 124-68-5
EINECS/ELINCS: 204-709-8
CLP Classification: Skin Irrit. 2 H315; Eye Irrit. 2 H319; Aquatic Chronic 3 H412
EU Cosmetic Regulation: Annex III/61
SCCS opinion: SCCS/0462/01
CIR recommendation: Safe to use up to 7%
Food additive recommendation: None
Toxicological profile by chemical supplier: None

NOAEL: 100 mg/kg bw/day
SED: 0.0256833333 mg/kg bw/day
MOS: 1946
Aminomethyl Propanol (AMP) is a substituted aliphatic alcohol. The European Union Cosmetics Regulation requires a minimum purity of 99%, secondary amine content no greater than 0.5%, and nitrosamines content no greater than 50 ppb. The CIR Expert Panel considered that acute, short-term, subchronic, and chronic oral, inhalation, and dermal toxicity studies are adequate to support the safety of AMP with respect to systemic toxicity end points. These ingredients did not produce significant toxicity to the reproductive systems or development of fetuses in animal studies. AMP did not demonstrate genotoxicity in bacterial, mammalian cell, or animal assays. The available skin irritation and sensitization data at the time were able to support the safety of AMP in cosmetic products up to a concentration of only 1%. Several acute inhalation studies performed with cosmetic formulations containing AMP as well as with AMP in alcohol and propellant indicated that AMP was nontoxic by inhalation. A hair spray containing 0.50% AMPD was also nontoxic to rats. AMP can be used safely in hair sprays because hair spray aerosols are non-respirable. AMP is primary amine that is not substrates for N-nitrosation. However, it may contain secondary amines as impurities in finished products that may undergo N-nitrosation. Because of the possible presence of secondary amine contamination, it is recommended that this ingredient should not be included in cosmetic formulations containing N-nitrosating agents.
The submitted certificate of analysis (COA) of this ingredient, in the product name AMP-ULTRA® PC 2000, Neutralizing Amine (batch number F100L53Z10), as supplied by ANGUS CHEMICAL COMPANY, indicated the purity, secondary amine and nitrosamine content are controlled at min. 99.0%, max. 0.5% and max. 50ppb, respectively.

22. Coffea Arabica Seed Extract
CAS No.: 84650-00-0
EINECS/ELINCS: 283-481-1
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: None
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0256833333 mg/kg bw/day
MOS: --
Coffea Arabica Seed Extract is an extract of the beans of the Coffee plant, Coffea arabica L., Rubiaceae. It is used as a fragrance and skin conditioning agent in cosmetics. American Herbal Products Association's Botanical Safety Handbook classified roasted seed kernel of Coffea arabica L (Coffee) as class 1: Herbs that can be safely consumed when used appropriately. However, it is contraindicated for people with gastric ulcer; contraindicated in glaucoma (temporarily increases intraocular pressure). Coffee is a nervous system stimulant (usually 1.5-2.5% caffeine) and GI irritant. Side effects include chronic headaches, hypertension, diuresis, possible increased risk of pancreatic, breast (in obese women), and ovarian cancer, increased cholesterol levels, increased incidence of delayed conception, increased risk of fetal loss, increased excretion of calcium and magnesium and potential for osteoporosis, and increased risk of heart attack in women. The IARC classification of coffee(drinking) is Group 3: Not classifiable as to its carcinogenicity to humans. The adverse effects are associated with over-consumption of coffee roasted seed which is unlikely to happen when the botanical extract is used as a cosmetic ingredient.

23. Tocopherol
CAS No.: 54-28-4/ 16698-35-4/ 10191-41-0/ 119-13-1/ 1406-18-4/ 1406-66-2/ 2074-53-5/ 59-02-9/ 7616-22-0
EINECS/ELINCS: 200-201-5 / 240-747-1 / 233-466-0 / 204-299-0 /215-798-8 / - / 218-197-9 / 200-412-2 / -
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe as used in rinse off product up to 3% and safe at concentration up to 5.4% in leave on products
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: 500 mg/kg bw/day (Read across to Tocopheryl Acetate)
SED: 0.0256833333 mg/kg bw/day
MOS: 9733
Tocopherol (Vitamin E) consists of alpha-tocopherol, beta-tocopherol, delta-tocopherol and/or gamma-tocopherol. It generally functions as antioxidant, masking and skin conditioning in cosmetics. It is a natural component of cell membranes thought to protect against oxidative damage, and was reported to protect against ultraviolet radiation induced skin damage. Tocopherol is generally not toxic in animal feeding studies, although very high doses (2 g/kg/day) have hemorrhagic activity. It is not irritating or sensitizing to skin or irritating to eyes. Reproductive and developmental toxicity tests in animals using Tocopherol were all negative or showed some effect of reducing toxicity. It was also uniformly negative in genotoxicity tests, exhibited anti-mutagenic activity consistent with its antioxidant properties, not carcinogenic and inhibited tumor promotion. Because methylhydroquinone is used in the chemical synthesis of Tocopherol, there was concern that hydroquinone may be present as an impurity. However, residual levels of hydroquinone would be expected to be limited to those achieved by good manufacturing practices. The CIR Expert Panel concluded up to 5% of this ingredient can be used in cosmetics.

24. Betaine
CAS No.: 107-43-7
EINECS/ELINCS: 203-490-6
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to be used up to 8% for leave-on products; 8.7% for rinse-off products
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0256833333 mg/kg bw/day
MOS: --
Betaine, i.e. N,N,N-trimethylglycine, is the zwitterion (inner salt) that is formed by oxidation of choline in mammals including humans. Betaine is a common food component and is used to treat homocystinuria. Absorption and elimination of betaine in humans were dose dependent, with urinary excretion of betaine increasing with betaine dose. Betaine has low systemic toxicity at high doses in single dose and repeated dose oral animal studies. The oral LD50 of betaine was 11.1 g/kg in rats. The intravenous LD50 of betaine in mice has been reported to be 0.83 g/kg bodyweight. In repeated dose studies, no effects were observed at the highest dose tested (5%) for betaine in rats, NOAEL and NOEL could not be determined due to high tolerance. Betaine was not carcinogenic when tested up to 5% in a 104-week dietary rat study, and it was not genotoxic in in vitro and in vivo studies. Betaine had anti-irritating effects on the skin in several efficacy studies in humans. Betaine at 10% was not an ocular irritant in rabbits. Betaine (up to 50%) was not sensitizing in non-human and human dermal studies. The CIR has no concern that this ingredient would

cause adverse effects from UV exposure. The CIR Expert Panel concluded that Betaine is safe in the present practices of use and concentration in cosmetics, when formulated to be non-irritating.

25. Hesperidin Methyl Chalcone
CAS No.: 24292-52-2
EINECS/ELINCS: 246-128-2
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: None
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0192625000 mg/kg bw/day
MOS: --
Hesperidin Methyl Chalcone is an organic compound. Hesperidin methyl chalcone (HMC) is a safe flavonoid used to treat chronic venous diseases.

26. Saccharomyces Cerevisiae Extract
CAS No.: 84604-16-0
EINECS/ELINCS: 283-294-5
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: safe to be used up to 0.18% in leave on product and up to 0.3% in rinse off product
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0192625000 mg/kg bw/day
MOS: --
Saccharomyces Cerevisiae Ferment is an extract of the yeast cells of Saccharomyces Cerevisiae. It functions as skin conditioning agent in cosmetic. Saccharomyces cerevisiae is GRAS as a flavoring agent and adjuvant at a level not to exceed 5% in food. According to CIR report, LD50 of > 2000 mg/kg was established in rats in acute dermal toxicity assays using Saccharomyces cerevisiae extract (in water). Allergens of Saccharomyces cerevisiae were evaluated via an IgE-immunoblotting assay performed on 83 patients (70 atopic patients, 13 non-atopic controls). 41 atopic patients were positive in the IgE immunoblotting assay, revealing 22 IgE stained bands. Non-atopic serum and sera from atopic patients with negative skin prick tests to Saccharomyces cerevisiae were IgE negative in this experiment. In a similar assay, 20 patients (16 atopic, 4 non-atopic controls) were evaluated for IgE, IgA, and IgG responses to several common yeasts including Saccharomyces cerevisiae. Immunoblotting assays revealed IgE binding in all species (5 IgE binding bands in Saccharomyces cerevisiae). Prominent IgE binding was seen to a 46-kDa band of several species, including Saccharomyces cerevisiae. In addition, IgA and IgG responses were observed against Saccharomyces cerevisiae. In vitro dermal irritation assays on powdered Saccharomyces cerevisiae extract (tested neat) and three trade name mixtures containing up to 4.5% Saccharomyces Cerevisiae Extract yielded negative results. A cosmetic formulation containing 1% Saccharomyces cerevisiae extract was considered to be non-irritating in dermal irritation assays performed in humans. Several LLNAs (assess KE4 in the AOP) were performed in mice using Saccharomyces cerevisiae extract at concentrations of up to 50%. In one assay, the test substance was considered to be sensitizing at concentrations > 10%; however, in four other assays performed according to the same procedure, the test substance was considered to be non-sensitizing. The Panel also noted incidences of IgE-mediated hypersensitivity following inhalation exposure

to certain yeast species (e.g., Saccharomyces cerevisiae). However, these reactions were observed in subjects exposed to live yeasts at high concentrations. Yeasts in cosmetic ingredients are lysed and inactivated, and are reported to be used in inhalable cosmetic products at very low concentrations (≤ 1.1%). In addition, safety of these ingredients was supported by the minimal amount of hypersensitivity case reports present in the literature, in comparison to the widespread historical use and consumption of various species of yeast. The Expert Panel for Cosmetic Ingredient Safety concluded that the Saccharomyces Cerevisiae Extract is safe in cosmetics in the present practices of use and concentration.

27. Cyclodextrin
CAS No.: 7585-39-9 / 12619-70-4 / 17465-86-0
EINECS/ELINCS: 231-493-2 / - / -
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to use up to 4%
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: 654 mg/kg bw/day
SED: 0.0128416667 mg/kg bw/day
MOS: 25463
Cyclodextrin is a cyclic polysaccharide comprised of six to eight glucopyranose units. The toxicity profile of cyclodextrins can differ depending on the route of administration. For example, ß-cyclodextrin administered orally induces limited toxicity. In both rats and dogs, ß-cyclodextrin is considered to be non-toxic at a daily dose less than 600 mg/kg body weight or at 3% or less in the diet. In studies involving rats, there was no specific accumulation of orally administered cyclodextrin in organs, and it was rapidly hydrolyzed to maltose and glucose. However, if ß-cyclodextrin is administered at higher doses in animals via a subcutaneous (s.c.) route, it will cause a decrease in body weight gain, a decrease in liver weight, and nephrotoxicity, with an increase in kidney weight, proximal tubular nephrosis and cellular vacuolation. Cyclodextrin shows only none to slight signs of irritation on skin and eye of New Zealand White rabbits. ß-cyclodextrin did not exhibit any signs of allergic skin reaction when applied on the skin of Dunkin-Hartley guinea pigs. In a HRIPT with 55 subjects, beta Cyclodextrin did not induce irritation or allergic contact dermatitis in human subjects. For systemic toxicity, the liver and kidney were identified as target organs for toxicity in rats dosed with ß-cyclodextrin, but there was no evidence of systemic toxicity in dogs. There were no treatment-related effects in dogs dosed with ɣ-cyclodextrin. Reproductive or developmental toxicity was observed in rat dietary feeding studies on cyclodextrin (up to 20%). Cyclodextrin also did not cause reproductive or developmental toxicity in rabbits when administered at dietary concentrations up to 20%. When fed in the diet to rats, cyclodextrin up to 675 mg/kg/day was not carcinogenic. The CIR Expert Panel concluded that Cyclodextrin is safe in the present practices of use and concentration in cosmetics.

28. Chlorhexidine Digluconate
CAS No.: 18472-51-0
EINECS/ELINCS: 242-354-0
CLP Classification: None
EU Cosmetic Regulation: Annex V/42
SCCS opinion: None
CIR recommendation: Safe to be used up to 0.2%
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0128416667 mg/kg bw/day

MOS: --
Chlorhexidine Digluconate is a salt of Chlorhexidine and gluconic acid. It is reported to be used as antimicrobial, oral care and preservative in cosmetic products. Chlorhexidine Digluconate was slightly toxic in oral and inhalation studies. At cosmetic use concentrations, Chlorhexidine Digluconate was not irritating to the eyes or skin. Positive sensitization reactions were cited in provocative patch testing at 1.0% concentration in patients with eczema, but not in predictive patch testing of 0.05% in normal subjects. In bacterial assays, Chlorhexidine tested both positive and negative for mutagenesis. In 2 mammalian systems, Chlorhexidine Digluconate was not genotoxic. p-Chloroaniline is a degradation product of Chlorhexidine salts. A study of the degradation of Chlorhexidine revealed minor amounts of p-chloroaniline after 36 weeks storage. Chlorhexidine Digluconate was not carcinogenic in a 2-year drinking water study. The CIR Expert Panel concluded that Chlorhexidine Digluconate is safe for use in cosmetic products at concentrations up to 0.20% as Chlorhexidine Digluconate. Chlorhexidine Digluconate is an allowed preservative listed in Annex V of EU cosmetic regulation which is used in cosmetic product at a maximum concentration of 0.3% (as chlorhexidine).

29. Caprylhydroxamic Acid
CAS No.: 7377-03-9
EINECS/ELINCS: 230-936-7
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to be used up to 0.3% in rinse off product and 0.25% in leave on product
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: 50 mg/kg bw/day
SED: 0.0115575000 mg/kg bw/day
MOS: 2163
Caprylhydroxamic Acid can function as chelating agent in cosmetics. According to the assessment report by NICNAS, caprylhydroxamic acid was non-irritating, non-sensitising, not ocular corrosive or severe eye irritant, and not teratogenic. A maximum use of 0.3% of this ingredient is recommended by NICNAS. The Panel stated that caution should be taken with use of Caprylhydroxamic Acid in a manner that would result in increased penetration, such as formulation with penetration enhancers. The Expert Panel for Cosmetic Ingredient Safety concluded that Caprylhydroxamic Acid is safe in cosmetics in the present practices of use and concentration.

30. Dipeptide Diaminobutyroyl Benzylamide Diacetate
CAS No.: 823202-99-9
EINECS/ELINCS: N/A
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: None
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0064208333 mg/kg bw/day
MOS: --
Dipeptide Diaminobutyroyl Benzylamide Diacetate is the diacetate of a benzylamide substituted peptide consisting of ß-alanine and proline, and diaminobutyric acid. It can be used as skin conditioning agent in cosmetic products.

The submitted safety data sheet (SDS) of this ingredient, in the product name Dipeptide diaminobutyroyl benzylamide (diacetate), as supplied by MedChemExpress USA, indicated the product is classified as Harmful if swallowed, Causes skin irritation, Causes serious eye irritation and May cause respiratory irritation.

31. Tremella Fuciformis Polysaccharide
CAS No.: 778577-37-0
EINECS/ELINCS: N/A
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: None
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0064208333 mg/kg bw/day
MOS: --
Tremella Fuciformis Polysaccharide is the polysaccharide fraction derived from the Mushroom, Tremella fuciformis. It can be used as emulsion stabilising, film forming, skin conditioning in cosmetic products.

32. Capryloyl Glycine
CAS No.: 14246-53-8
EINECS/ELINCS: 238-122-3
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: safe to use up to 2%
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: 200 mg/kg bw/day (oral, rat, 14-day)
SED: 0.0064208333 mg/kg bw/day
MOS: 15574
Capryloyl Glycine is the acylation product of glycine with caprylic acid chloride. When administered orally, it had an LD50 greater than 10 g/kg after 10 administrations on consecutive days as a 5 % suspension in gum Arabic. The LD50 of the test item is higher than 2000 mg/kg body weight by dermal route in the rat. Capryloyl Glycine is not irritating to skin but irritating to eye. Capryloyl Glycine at 25% is non-sensitizing to guinea pig.

33. Acetyl Hexapeptide-8
CAS No.: 616204-22-9
EINECS/ELINCS: N/A
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: None
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0064208333 mg/kg bw/day
MOS: --
Acetyl hexapeptide-8 (or Argireline) is the synthetic peptide consisting of arginine, methionine, and acetylated glutamic acid residues. It is a product obtained by the acetylation of Hexapeptide-8. Acetyl hexapeptide-8 is

reported to be functioning as a humectant or skin conditioning agent in cosmetics. It is used in a wide range of skincare and makeup products, especially those claiming to have a muscle-relaxing effect similar to Botox injections. Analysis of the mechanism of action (Blanes-Mira C et al., 2002) showed that Argireline significantly inhibited neurotransmitter release and it displayed much lower efficacy than the neurotoxin. It was also reported that this peptide did not exhibit in vivo oral toxicity nor primary irritation at high doses. Taken together, these findings demonstrate that Argireline is non-toxic. In an in vitro skin penetration study of acetyl hexapeptide-8 (Kraeling ME et al., 2015), an oil/water emulsion containing 10% Acetyl hexapeptide-8 was applied to skin at a dose of 2 mg/cm2. After a 24-h exposure, the skin surface was washed to remove unabsorbed peptide, total acetyl hexapeptide-8 found in the epidermis of hairless guinea pig (HGP) and human skin was similar at 0.01%. No peptide was detected in the dermis or buffer collected underneath the skin for both human and HGP. There was no hexapeptide metabolite detected in any layers of HGP skin, human skin or buffer collected underneath the skin.

34. Sodium Hyaluronate
CAS No.: 9067-32-7
EINECS/ELINCS: N/A
CLP Classification: N/A
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to be used up to 2% in leave on product and 0.5% in rinse off product
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0038525000 mg/kg bw/day
MOS: --
Sodium Hyaluronate is the sodium salt of Hyaluronic Acid. It is used as skin conditioning agents and viscosity increasing agent in cosmetic up to a maximum of 2%. Hyaluronic acid and its salt was not genotoxic or sensitizer in animal studies. It showed negative result in reproductive or developmental toxicity in studies using rats or rabbits. The CIR Expert Panel determined that sodium hyaluronate can be used safely in sprays because the ingredient particle size is not respirable. The CIR Expert Panel compared the amount of hyaluronic acid found in the skin to the maximum amount of hyaluronic acid applied to the skin by cosmetic products, of 0.02 mg/cm2 by a product with the maximum concentration of 2%, and found the contribution via application of such a cosmetic product to be negligible. Acute, short-term, and chronic toxicological studies indicated low toxicity. The CIR concluded hyaluronic acid and its sodium and potassium salts were safe for use in cosmetics in the present practices of use and concentration.
The submitted certificate of analysis (COA) of this ingredient, in the product name Sodium Hyaluronate (batch no. 150824), as supplied by AcrosOrganicsN.V., indicated the origin is fermentation.

35. Palmitoyl Tetrapeptide-7
CAS No.: 221227-05-0
EINECS/ELINCS: N/A
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: Safe to use in the present practices of use and concentration in cosmetics
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0012841667 mg/kg bw/day
MOS: --

Palmitoyl Tetrapeptide-7 is the reaction product of palmitic acid and Tetrapeptide-7. It is reported to be a skin conditioning agent in cosmetic products. In the hen's egg chorioallantoic membrane in vitro assay for evaluating ocular irritation potential, RiginTM (contains 500 ppm palmitoyl tetrapeptide-7) was slightly irritating. Ames test result for RiginTM (contains 500 ppm palmitoyl tetrapeptide-7) was negative with and without metabolic activation in Salmonella typhimurium bacterial strains. Typical use concentration of Palmitoyl Tripeptide-7 is <10 ppm. The CIR Panel noted that the low use concentration and negative safety test data reviewed obviate any concerns relating to the safety of these ingredients in cosmetic products. Thus, the Panel concluded that Palmitoyl Tripeptide-7 is safe in the present practices of use and concentration in cosmetics.

36. Dipeptide-2
CAS No.: 556-50-3
EINECS/ELINCS: 209-127-3
CLP Classification: None
EU Cosmetic Regulation: None
SCCS opinion: None
CIR recommendation: None
Food additive recommendation: None
Toxicological profile by chemical supplier: None
NOAEL: --
SED: 0.0012841667 mg/kg bw/day
MOS: --
Dipeptide-2 is the dipeptide composed of valine and tryptophan. It is used as skin conditioning agents in cosmetic.
The submitted safety data sheet (SDS) of this ingredient, in the product name Dipeptide 2, as supplied by MedChemExpress USA, indicated the product is classified as Harmful if swallowed, Causes skin irritation, Causes serious eye irritation and May cause respiratory irritation.

******** End of Annex ********