Certificate of Analysis

Product Name: BLUEBERRY LIQUID FRUIT EXTRACT
Batch No: 4499804
Best Before End: MARCH 2025

Quality Control

Results Analytical Test Method No.	Characteristic	Specification Limit Lower	Upper	Value	Status
	Addendum 00	PASS OR FAIL		Pass	p
	REVISION	1.0		Pass	p
AC018000	NUMBER ASPECT	CLEAR LIQUID		Pass	p
AC018000	COLOUR	VERY PALE YELLOW TO YELLOW		Pass	p
	COLOUR				
AC018000	ODOUR	POSSIBLE PINK NUANCE		Pass	p
AC018000		CHARACTERISTIC		Pass	p
◆0031 AO	SPECIFIC GRAVITY (20°C)	1.115	1.145	1.133	p
FC0032AO	REFRACTJVE INDEX (20°C)	1.385	1.415	1.401	p
EC003000	WATER CONTENT KARL FISCHER	47.0	52.0	49.2 %	p
FC0064AO	pH VALUE (20°C)	4.0	6.0	5.6	p
JC0054BO	MOULDS/YEASTS	10 MAX CFU/G		Pass	p
JC0054BO	TOTAL GERMS	100 MAX CFU/G		Pass	p

Long term storage between 15 - 25°C, dark in closed containers
The performed analysis are guaranteed on original packaging
When stored accordingly, stable for 24 months

Batch Status: Pass
The quality tests on this batch are reported above. The tests carried out are those necessary to demonstrate compliance with our product specification and are not intended to guarantee the product as suitable tor any application beyond those contained in the specification. We recommend you perform your own quality and or identification checks on receipt

Product Information File – cosmetic ingredient

Product Name: **Blueberry Liquid Fruit Extract**
Article No: NA22711

PCPC INCI Name: Water, Glycerin, Vaccinium Myrtillus Fruit Extract Aqua, Glycerin,

EU INCI Name: Vaccinium Myrtillus Fruit Extract

The product conforms to all technical features specified and to all written agreements indicated in the selling specifications.

All information contained in this Product Information File is provided in good faith and to the best of our knowledge to date. It shall be considered indicative only and is therefore subject to change. It should not be subject to any quality complaints.

CERTIFICATIONS AND COMMITMENTS

Certifications

Environmental management systems	ISO 14001:2015
Quality management systems	ISO 9001:2015
Occupational health and safety management systems	ISO 45001:2018
Good Manufacturing Practices	EFfCI (2017)
Authorised Economic Operator (AEO)	Yes
Halal certified by HCS (Halal Certifying Services)	Yes
COSMOS	Certified and Approved products (See certificates)
RSPO Supply Chain Certification Standard	Mass Balance and Segregated models SCCS certificate N°: BVC-RSPO-FR075152

Commitments

Within the framework of its Corporate Social Responsibility (CSR), Ouir supplier implements corporate governance that applies to its organization and to its purchasing and supply chains (CRODA CSR report and code of Ethics).

Through its "Smart science to improve lives" strategy, the group commits to being People Land and Climate Positive for 2030.

Proudly certified ISO14001, ISO 45001, ISO9001 and EFfCI for several years now, they have also signed the Responsible Care Global Charter in 2018.

They have initiated a continuous improvement process for its practices, the coherence of which is governed by standard ISO26000 we are committed to minimize social and environmental impacts on our stakeholders without compromising innovation and quality.

This strategy is also aligned with United Nation Sustainable Development Goals.

Established a code of conduct which includes all its commitments. It aimed to formalize and share our ethical, social and environmental commitments and to unite all our partners around such values. “Code of conduct for responsible relationships and purchasing” is available on our website.

In 2019, this strategy is named Be ACTIVEly Committed and based its commitments on 3 pillars: PEOPLE, PLANET and BUSINESS.

Be ACTIVEly Committed TO BUSINESS

- Business loyalty:
  undertakes to respect all French and international regulations in the countries where it is established. Particularly with the NAGOYA protocol.
  The company seeks to establish win-win collaboration based on fair practices and favorize social responsibility across the entire value chain.
- Questions to consumers:
  assesses / certifies its practices with different standards such as COSMOS, ERI 360, ISO 16128, Halal, …

Be ACTIVEly Committed TO PEOPLE

- Human rights:
  pays particular attention on human rights and know-how respect in its organization (prohibit all discrimination, promote gender equality…).
- Relation and health at work:
  ensures management of health, safety and well-being at work (ISO45001) and promote a strong culture related to safety.
- Community & local development:
  encourages local development through the sourcing of its raw materials, its collaborations (university, organism) but also by promoting education (interns and apprentices, visiting students on the factory, etc.).

Be ACTIVEly Committed TO THE PLANET

- Environment:
  ensures environmental management (ISO14001). The company aims to reduce its consumption of water, wastes and energy in particular by promoting green technologies (Eco-sound, Microwaves, etc.).
  The group is also engaged in a decarbonization project to reduce its carbon footprint. In addition, achieves carbon offsetting through an environmental project (Climate Care, Rimba Raya project).
  implement sustainable sourcing strategy.

II. PRODUCT INFORMATION

Composition

The below concentrations are quantities introduced at the beginning of the process and are checked by the production team and quality product department, following the cosmetic GMP.

These contents are not part of our routine analytical procedure and quality control system. Therefore, they are not measured on a regular basis (not part of the selling specifications).

The process (weighing, solubilization, purity of substances, process steps) can have an impact on final concentration, which is not finally tested per batch. Crodarom has not defined norms for ingredients contents.

Ingredient PCPC INCI Name	**CAS**	**EINECS**	**Function**	**Origin***	**Free of GMO** *(Yes / No)*	**Concentration (%)** *based on theoretical composition*
Water	7732-18-5	231-791-2	Solvent	N	N/A	47 – 51 %
Glycerin	56-81-5	200-289-5	Solvent	V	Yes	47 – 51 %
Vaccinium Myrtillus Fruit Extract	84082-34-8	281-983-5	Botanical	V (organic)	Yes	1 – 5 % **
Potassium Sorbate	24634-61-5	246-376-1	Preservative	S	N/A	Approx. 0.525 %
Sorbic Acid	110-44-1	203-768-7	Preservative	S	N/A	Approx. 0.025 %

** V: vegetable; S: synthetic, B: biotechnological; N: natural*

*** Vaccinium Myrtillus Fruit Extract is expressed as **dried** fruits.*

The value of the water content in the final selling specification (SAP specification) per batch will be slightly higher due to the water entry by the plant material. The definition of "water content" in selling spec is the total water composed of process and plant water. The "water content" in the PIF is the process water only.

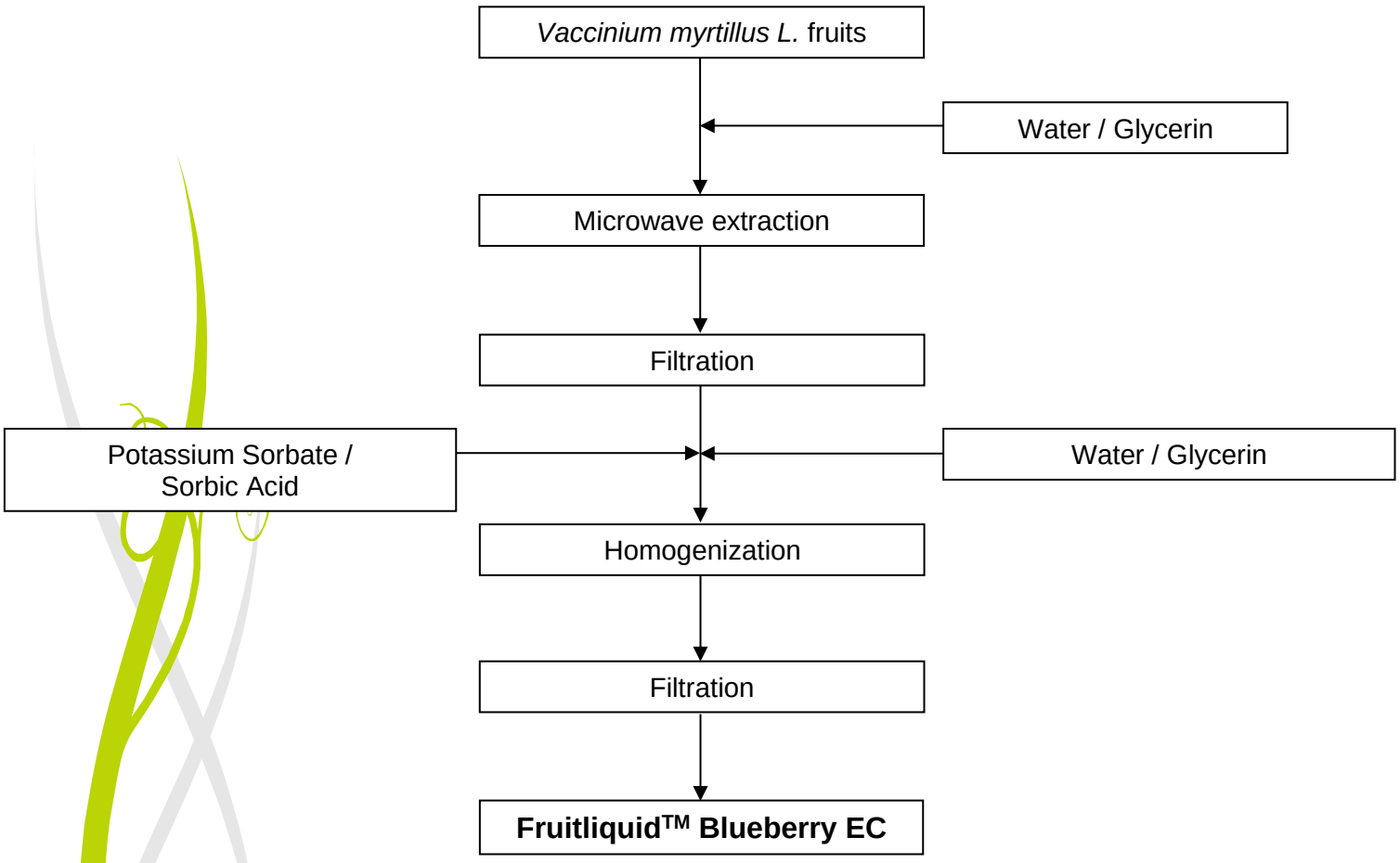
Microbiological Data

Bacteria:	< 100 cfu / g (part of the CofA)
Moulds and yeasts:	< 10 cfu / g (part of the CofA)
Pathogenic Micro-organisms:	Not tested
Challenge test:	Conform at 28 days for A criterion according to NF EN ISO 11930 (Report available on request)

Product Certifications

Blueberry Liquid Fruit Extract is COSMOS certified by ECOCERT.

Blueberry Liquid Fruit Extract is Halal certified by HCS (Halal Certifying Services).


Vaccinium myrtillus L. fruits
Water / Glycerin
Microwave extraction
Filtration
Potassium Sorbate / Sorbic Acid
Water / Glycerin
Homogenization
Filtration
Fruitliquid™ Blueberry EC

The plants used for Blueberry Liquid Fruit Extract have been organically cultivated. Therefore pesticides, heavy metals or impurities are not expected.

Impurities and traces below mentioned are considered technically unavoidable within the meaning of the European Cosmetic Regulation EC 1223/2009 according to information from our suppliers.

Heavy metals: Total heavy metals expressed as Pb < 10 ppm according to Ph. Eur. 2.4.8 method C or USP <231> method II. Conclusion by analogy.

Pesticides: Pesticides are expected to pass DFG S 19. Conclusion by analogy

Residual solvents: Not expected

Other impurities:

*The below-mentioned substances are not used as raw material and are not intentionally added to the product. Based on the manufacturing process, they are not expected to be present. However, they are not a part of our routine analytical procedures and quality control system; therefore, they are not measured on a regular basis.

- Ethylene/Diethylene Glycol: Max. 500 ppm (not tested – conclusion by analogy)

Diethylene Glycol: Glycerin used to produce Blueberry Liquid Fruit Extract s compliant with the USP monograph (DEG: < 0.10%).

- Methanol: Max. 5 ppm (not tested – conclusion by analogy). *Impurity from Glycerin*.

- Formaldehyde: Max. 2 ppm (not tested – conclusion by analogy). *Impurity from Sorbic Acid*.

- Nitrosamines: Not added – not expected – not tested*

- Nonylphenol, alkylphenol, phenol, nonoxynol components: Not added – not expected – not tested*

- Dioxanes: Not added – not expected – not tested*

- Phthalates: Not added – not expected – not tested*

Substance	CAS N°
Dibutyl phthalate (DBP)	84-74-2
Diethylhexyl phthalate (DEHP)	117-81-7
Benzyl butyl phthalate (BBP)	85-68-7
Di-n-pentyl phthalate (DnPP)	131-18-0
bis(2-Methoxyethyl) phthalate (DMEP)	117-82-8
Diisopentylphthalate (DiPP)	605-50-5
n-pentyl isopentyl phthalate (DPP)	84777-06-0
Diisobutyl phthalate (DiBP)	84-69-5

- Glycol ethers: Not added – not expected – not tested*

Substance	CAS N°
2-methoxyethanol / ethylene glycol monomethyl ether (EGME)	109-86-4
2-methoxyethyl acetate / methylglycol acetate (EGMEA)	110-49-6
2-ethoxyethanol (EGEE)	110-80-5
2-ethoxyethyl acetate (EGEEA)	111-15-9
1,2-dimethoxyethane / ethylene glycol dimethyl ether (EGDME)	110-71-4
Oxybis(2-methoxyethyl) / dimethoxydiglycol (DEGDME)	111-96-6
1,2-bis(2-methoxyethoxy)ethane / triethylene glycol dimethyl ether (TEGDME)	112-49-2
2-butoxyethanol (EGBE)	111-76-2
2-(2-butoxyethoxy)ethanol (DEGBE)	112-34-5
2-(2-ethoxyethoxy)ethanol (DEGEE)	111-90-0

Hazardous & CMR Substances:

We herewith confirm that, with reference to the confirmation of our raw materials suppliers, we do not add any CMR (Carcinogenic, Mutagenic, Toxic for reproduction) substances graded 1A, 1B or 2 in accordance with the Annex VI of the European Regulation 1272/2008 and its amendments to our product listed below.

Blueberry Liquid Fruit Extract 1223/2009 and its amendments.

According to the Article 17 of the European Regulation 1223/2009, botanical preparations which contain traces or technically unavoidable impurities of plant constituents listed as CMR in the European Regulation 1272/2008, are allowed if article 3 is respected. Thus, they are not concerned by the Article 15 of the European Regulation 1223/2009.

VOC:

Blueberry Liquid Fruit Extract contains Methanol (maximum expected 5 ppm) as impurity from Glycerin. This content is based on conclusion by analogy.

However, VOC content is not a part of our routine analytical procedures and quality control system; therefore, they are not measured on a regular basis.

Proposition 65:

The ingredients constituting Blueberry Liquid Fruit Extract are not known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act of which we regularly follow the updates.

Methanol (impurity from glycerin): Maximum expected 5 ppm.

Palm Oil:

We herewith confirm that palm oil and palm kernel oil are not used as raw materials and are not intentionally added in Blueberry Liquid Fruit Extract and that it is not produced from palm oil or palm kernel oil derived ingredients, with reference to the confirmation of our raw materials suppliers.

Petrochemicals derivatives:

We herewith confirm that Blueberry Liquid Fruit Extract s not derived from petrochemicals raw materials.

However, according to our raw materials suppliers Potassium Sorbate (approx. 0.525 %) is used as raw material and is derived from petrochemicals.

Irradiation:

We herewith confirm that Blueberry Liquid Fruit Extract has not been irradiated radioactively.

Allergens – EU Cosmetic Regulation:

We herewith confirm that Blueberry Liquid Fruit Extract , meets the following properties:

CAS-No.	Allergens	Content expected
122-40-7	Amyl cinnamic aldehyde	not expected
101-85-9	Amyl cinnamic alcohol	not expected
105-13-5	Anisyl alcohol	not expected
100-51-6	Benzyl alcohol	not expected
120-51-4	Benzyl benzoate	not expected
103-41-3	Benzyl cinnamate	not expected
118-58-1	Benzyl salicylate	not expected
104-55-2	Cinnamic aldehyde	not expected
104-54-1	Cinnamic alcohol	not expected
5392-40-5	Citral	not expected
106-22-9	Citronellol	not expected
91-64-5	Coumarin	not expected
97-53-0	Eugenol	not expected
4602-84-0	Farnesol	not expected
106-24-1	Geraniol	not expected
101-86-0	Hexyl cinnamaldehyde	not expected
107-75-5	Hydroxycitronellal	not expected
97-54-1	Isoeugenol	not expected
80-54-6	Lilial	not expected *
5989-27-5	d-Limonene	not expected
78-70-6	Linalool	not expected
31906-04-4	Lyral	not expected *
111-12-6	Methyl heptine carbonate	not expected
127-51-5	Methyl ionone alpha iso	not expected
90028-68-5	Oakmoss	not expected
90028-67-4	Tree Moss	not expected

** They are synthetic substances that do not occur in botanicals.*

None of the 26 identified allergen perfume compounds have been added to the product.

The absence of any of these 26 allergens cannot be confirmed, but we attest that they cannot technically occur due to the extraction process used.

This information is based on risk estimation which is based on botanical and phytomedicinal reference literature and conclusions by analogy.

Allergens – Food:

We herewith confirm that Blueberry Liquid Fruit Extract , meets the following properties:

Allergens	Presence expected	Used in production site
Cereals containing gluten (i.e. wheat, rye, barley, oats, spelt, kamut or their hybrids) and products thereof	No	Yes
Crustaceans and products thereof	No	No
Eggs and products thereof	No	Yes
Fish and products thereof	No	Yes
Peanuts and products thereof	No	Yes
Soybeans and products thereof	No	Yes
Milk and products thereof (including lactose)	No	Yes
Nuts (i.e. almond, hazelnut, walnut, cashew, pecan, Brazil nut, pistachio nut, macadamia nut, Queensland nut) and products thereof	No	Yes
Celery and products thereof	No	No
Mustard and products thereof	No	No
Sesame seeds and products thereof	No	Yes
Lupin and products thereof	No	Yes
Molluscs and products thereof	No	Yes
Sulphur dioxide and sulphites at concentrations of more than 10 mg/kg expressed or 10 mg/litre as SO2	No	Yes

*Most common food allergens according to EU Directive 2007/68/EC modifying Annex III bis of directive 2000/13/EC

None of the food allergens above listed is used as raw materials in the above mentioned Crodarom products. With reference to the confirmation of our raw materials suppliers, no other ingredient used in the composition of this product derives from any of the a.m. allergens.

Cross-contamination cannot be excluded considering that some of the raw materials used in our production site may derive from food allergens or contain them as impurities, but the risk is expected to be very low as adequate quality measures are implemented to limit the occurrence of contamination.

However, these allergens are not a part of our routine analytical procedures and quality control system (except the manufacturing protocol when used as ingredients). Therefore, their presence or absence are not measured on a regular basis.

We herewith confirm below the contents according to the ISO 16128-1 and ISO 16128-2 standards (including formulation water) of Blueberry Liquid Fruit Extract is:

Natural content (%)	Derived natural content (%) *	Organic content (%)	Derived organic content (%)
50,9	99,4	8,0	8,0

**: based on an index of natural origin = 1 for the ingredient Glycerin (Carbon 14 method).*

However, this information is calculated according to our interpretation of the standard ISO 16128, theoretical composition and information communicated by our suppliers.

It is likely to evolve along the way of discussions with professional federations of cosmetic industry.

III. REGULATORY INFORMATION

REACH:

Our supplier is committed to meet the requirements set out in the REACh (Registration Evaluation and Authorization of Chemicals) regulations and we are working with our suppliers to ensure a continued supply of the below mentioned product.

Blueberry Liquid Fruit Extract is so called preparation composed of ingredients (named under REACh as substances).

INCI	CAS	EINECS	REACH status	Comment
Water	7732-18-5	231-791-2	/	/
Glycerin	56-81-5	200-289-5	Exempt	Annex V
Vaccinium Myrtillus Fruit Extract	84082-34-8	281-983-5	Exempt	Production <1T/yr
Potassium Sorbate	24634-61-5	246-376-1	Registered	01-2119950315-41
Sorbic Acid	110-44-1	203-768-7	Registered	01-2119950330-49

If in the future the amount of a substance produced would exceed the 1T/year limit, we ensure its registration.

We do not anticipate any disruptions of this product supplied to our customers. However changes to the product portfolio may become necessary also for reasons not connected with REACh.

SVHC

Substances of Very High Concern (SVHC; in REACH's Appendix XIV substances' list subjected to authorization) have not been added in the above-mentioned product and are not expected to be impurities of the raw materials used in this product.

EU Cosmetic Regulation:

We herewith confirm that, Blueberry Liquid Fruit Extract complies with the European Cosmetic Regulation EC 1223/2009.

- Substances listed in Annexes II, III, IV and VI of the European Cosmetic Regulation 1223/2009 EC are not used as raw material and are not intentionally added.

Botanical preparations which contain technically unavoidable traces or impurities of plant constituents listed in Annexes II or III are not affected by the exclusion or restriction of the European Regulation 1223/2009.

- Preservatives used are listed in Annex V of the European Cosmetic Regulation 1223/2009 EC:

  Potassium Sorbate: Approx. 0,525 %
  Sorbic Acid: Approx. 0,025 %

Furthermore, according to Annex V of the European Cosmetic Regulation No 1223/2009, the following preservatives are subject to restriction:

- Potassium Sorbate and Sorbic Acid: Their maximum concentration in ready-to-use preparations is 0,6%.

Nanomaterial:

Blueberry Liquid Fruit Extract is not a nanomaterial and does not contain any nanomaterial, according to the Cosmetic Regulation (EC) No 1223/2009 and French Decree n° 2012-232 from 17th of February 2012.

Microplastics:

Blueberry Liquid Fruit Extract is not expected to contain microplastics with reference to the confirmation of our raw materials suppliers.

BSE/TSE:

Blueberry Liquid Fruit Extract is originated from synthetic, and plant raw material with reference to the confirmation of our raw materials suppliers.

None of the ingredients used to produce this product are of bovine, ovine, equine or porcine origin. Therefore, Bovine Spongiform Encephalopathy (BSE) / Transmitting Spongiform Encephalopathy (TSE) risk, as defined in the European Commission Decision 97/534/EC and EMEA/410/10, does not concern this product.

CITES:

Blueberry Liquid Fruit Extract does not contain endangered species (source CITES list) and is not subject to the Convention of Washington to our knowledge to date.

The plants raw materials used are not parts of Annexes I, II and III of the Convention of Washington.

Information about the packaging:

According to information provided by our suppliers, we can confirm that packaging used for Blueberry Liquid Fruit Extract is conform with the following requirements:

- The packaging is made from HDPE (High Density PolyEthylene)
- is compliant with European REACH regulation CE 1907/2006
- is compliant with European Directive 94/62/CE on packaging and packaging waste
- is compliant to European regulation CE 10/2011 and conform for food use
- is free from animal products and derivatives, free of silicones, free of bisphenol A and phthalates and not concerned by nanotechnologies

IV. INFORMATION ON ANIMAL TESTING

Our supplier confirms that since 1990, their products have not been tested on animals in order to meet the requirements of the Cosmetic Regulation and we will not carry out animal tests in the future to meet the requirements of the Cosmetic Regulation.

We are aware that the individual substances that comprise our products may have been tested on animals in the past, but these tests were not carried out either by or on the request

They therefore confirms the compliance of our products with the Cosmetic Regulation 1223/2009 concerning the ban on testing in animals in order to meet the requirements of the Cosmetic Regulation.

V. ACTIVES and EFFECTS

Main actives in the plant:

- ⇒ Polyphenols
- ⇒ Fruit acids (AHA)
- ⇒ Saccharides

Main actives in the extract: Not determined

VI. TOXICOLOGICAL DATA

Toxicity tests on the product

We herewith confirm that no NOAEL measure has been made on this product.

We haven't carried out clinical studies on Blueberry Liquid Fruit Extract but according to literature, Glycerin and *Vaccinium myrtillus* don't contain potentially toxic compounds and they are safe when used appropriately.

Toxicological profile of the ingredients

CIR (2019) (1) concluded that Glycerin is safe as a cosmetic ingredient.

In a safety assessment of Sorbic Acid and Potassium Sorbate (Elder, 1988) (2), the CIR Expert Panel stated that these ingredients are safe as cosmetic ingredients.

⇒ Human skin irritation:

Glycerin:	Not dermally irritating in rabbits (n=12, 100% Glycerin administrated for 90 days); but is a mild dermal irritant at 100% in guinea pigs. (1)
Potassium Sorbate:	Not irritating (rabbits, n=3, 500 mg potassium sorbate mixed with 0.15 ml 0.9 % NaCl solution, semi-occlusive patch) (3)
Sorbic Acid:	Did not produced erythema nor oedema (rabbits, n=3, 500 mg/plaster, semi-occlusive application) (4)

⇒ Mucous membrane irritation:

Glycerin:	Non-irritating to the eye in rabbit irritation studies in 19 laboratories and of questionable irritation in one laboratory (0,1 mL for maximum 7 days). (5)
Potassium Sorbate:	Not irritating to eyes (rabbits, n=3, 100 mg potassium sorbate/eye) (3)
Sorbic Acid:	Irritating to eyes (rabbits, n=3, 100 mg sorbic acid) (4)

⇒ Sensitisation potential:

Glycerin:	Not dermal sensitizer (human, n=15, 100 %, patch test for 48h) (5)
Potassium Sorbate:	Did not induced skin sensitising following LLNA assay (guinea pigs, n=10/sex, 0.1% and 1%) (3)
Sorbic Acid:	Did not induced skin sensitising following LLNA assay (guinea pigs, n=10/sex, 0.1% and 1%) (4)

⇒ Cytotoxicity:

Sorbic Acid:	At the highest concentration of 2000 µg/mL sorbic acid, a visible microscopic alteration of the cell morphology was observed indicating cytotoxicity. (4)

⇒ Phototoxicity: No data available

⇒ Genotoxicity:

Glycerin:	Not mutagenic (Ames test on *S. typhimurium* at a maximum concentration of 10000 µg/plate) (1) (5) In a bone marrow chromosomal aberration assay, glycerin was not clastogenic when administered by injection into the abdomens of rats (n=10) at 1000 mg/kg (1)
Potassium Sorbate:	Not mutagenic (Ames test on *S. typhimurium* at a maximum concentration of 200 µg/plate) (3)
Sorbic Acid:	Not clastogenic according to micronucleus test (mice, n=10, oral, 0- 5000 mg/kg bw) (4)

⇒ Carcinogenicity:

Glycerin:	No indication of a carcinogenic response in rats fed with 8000 mg/kg bw/d glycerol in the diet for 2 years Did not increase the incidence of tumours when glycerin administered in the feed of rats at concentrations up to 20% for 1 year or up to 10000 mg/kg for 2 years (5)
Potassium Sorbate:	NOAEL (rats, oral, 0.1% in the diet or 0.3% in drinking water, 100 weeks) = 1400 mg/kg bw/d with no adverse effects observed (3)
Sorbic Acid:	Overall, dietary levels up to 10% of sorbic acid for 80 weeks in mice and 2 years in rats caused no carcinogenic effects. NOAEL (mice and rats, oral) = 1400 mg/kg bw/d with no adverse effects observed (4)

⇒ Acute toxicity:

Glycerin:
LD_{50} (mice, oral) = 4090 - 38000 mg/kg
LD_{50} (rats, oral) = 27 200 mg/kg (5)
LD_{50} (rats, topical application) >21900 mg/kg
LD_{50} (rabbits, topical application) >18700 mg/kg (1)

Potassium Sorbate and Sorbic Acid*:
LD_{50} (rats, n=10, oral) = 10500 mg/kg bw (3) (4)

⇒ Inhalation toxicity:

Glycerin: The NOAEL of glycerin following aerosol exposure was 167 mg/m^3 based on local irritant effects on the upper respiratory tract (rats, air, Glycerin concentrations: 33, 165 and 660 mg/m^3, 6 hours/ day for 5 days/week for 13 weeks). (1) (5) (6)

⇒ Systemic toxicity:

Glycerin:
NOAEL (rats, n=22/sex/dose, oral, exposition for 2 years) = 8000-10000 mg/kg bw/d, based on the absence of treatment related effects in high dose animals (5) (6)
NOAEL (rabbits, dermal, exposition for 8 hours/day, 5 days/week for 45 weeks) = 5040 mg/kg bw/d based on no sign of irritation (5)

Potassium Sorbate and Sorbic Acid*:
NOAEL (rats, n=40, oral, 28 days) = 8600 mg/kg bw/d
This value is based on no overt clinical signs of toxicity, no mortalities, no-treatment related effects on food consumption and no changes in neurotoxicological measurements were observed during the study. (3) (4)

⇒ Reproduction toxicity:

Glycerin: No effect noted on growth, fertility and reproductive performance through two generations (rats, n=10, oral, ~2000 mg/kg/day for 8 weeks). (1) (5)

Potassium Sorbate and Sorbic Acid*:

NOAEL (rats, oral, two generation study) = 1000 mg/kg bw/d
This NOAEL is based on a 2-generation study, with different concentrations: 0, 300, 1000, 3000 mg/kg bw/d (n=30/sex/dose for generation 1, n=25/sex/dose for generation 2). (3) (4)

* The extrapolation from Sorbic Acid to Potassium Sorbate or vice versa is considered not to be restricted in any way, since the determinant of potential toxicity is on the "sorbate" anion. (3) (4)

VII. CONCLUSION AND RECOMMENDATIONS

According to available information from test results or bibliography, we recommend to use the product at a maximum level of: 5% in leave on / rinse off products.

Contraindications: None known

Remarks: None

VIII. REFERENCES

1. **CIR**. Safety Assessment of Glycerin as Used in Cosmetics. *International Journal of Toxicology*. 2014, Vol. 38, Supplement 3, pp. 6S-22S.

2. **CIR**. Annual Review of Cosmetic Ingredient Safety Assessments:2005/2006. *International Journal of Toxicology*. 2008, Vol. 27, Supplement 1, pp. 77-142.

3. **ECHA**. Potassium sorbate. [En ligne] [Citation : 05 07 2021.] https://echa.europa.eu/fr/registration-dossier/-/registered-dossier/11008.

4. **ECHA**. Hexa-2,4-dienoic acid. [En ligne] [Citation : 06 07 2021.] https://echa.europa.eu/fr/registration-dossier/-/registered-dossier/11476.

5. **ECHA**. Glycerol. [En ligne] [Citation : 24 06 2021.] https://echa.europa.eu/fr/registration-dossier/-/registered-dossier/14481.

6. **OECD**. SIDS Initial Assessment Report on Glycerin. 2002.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : **Blueberry Liquid Fruit Extract**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Manufacture of soap and detergents, cleaning and polishing mixtures
Cosmetic additive

1.3 Details of the supplier of the safety data sheet

Company : **Madar Corporation Limited**
19 - 20 Sandleheath Industrial Estate
Fordingbridge
SP6 1PA

Telephone **: +441425 655 555**

E-mail address **: technical@madarcorporation.co.uk**

1.4 Emergency telephone number

Emergency telephone number : USA: 24 Hour Emergency Response Information CHEMTREC toll free: 1-800-424-9300; direct/international: 1-703-527-3887. CANADA: GFL 1-877-898-7222. EUROPE: 00 32 3575 5555. ASIA PACIFIC - excl. China:+65 6542-9595. CHINA: +86 816-635 2206. AUSTRALIA: +61 2 7808 3390. SOUTH AFRICA: +32 3 575 55 55. BRASIL: Ambipar 0800 117 2020. LATAM: Suatrans (+55) 11 98149-0850 / (+55) 19 3833-5300. COLOMBIA: +312 586 2890 / 310 588 1555. INDIA: +91 22 30948601/2. JAPAN: +65 6542 9595 (24 時間日本語対 応無料通話, シンガポール). TÜRKIYE: Sağlik Bakanliği Ulusal Zehir Merkezi 114

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Not a hazardous substance or mixture.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Remarks : No hazardous ingredients

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled : If breathed in, move person into fresh air.
If symptoms persist, call a physician.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed : If large quantities of this material are swallowed, call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : None known.

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : In case of fire hazardous decomposition products may be produced such as:
Carbon oxides

Do not use a solid water stream as it may scatter and spread fire.

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Specific extinguishing methods : Standard procedure for chemical fires.

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Ensure adequate ventilation.
Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.
Sweep up and shovel into suitable containers for disposal.

6.4 Reference to other sections

None.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container. Keep container tightly closed in a dry and well-ventilated place.

Advice on common storage : No special restrictions on storage with other products.

Recommended storage temperature : 15 - 25 °C

Further information on storage stability : Stable under recommended storage conditions.

7.3 Specific end use(s)

Specific use(s) : Manufacture of chemical products

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses with side-shields

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.

Skin and body protection	:	Impervious clothing
Respiratory protection	:	No personal respiratory protective equipment normally required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	clear, liquid
Colour	:	light yellow
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	4.0 - 6.0 (20 °C)
Melting point	:	No data available
Boiling point	:	No data available
Decomposition temperature		No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	1.115 - 1.145 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	soluble
Solubility in other solvents	:	not determined

Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	Classification Code: No data available
Oxidizing properties	:	No data available

9.2 Other information

Self-ignition	:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Stable under recommended storage conditions.
		Stable under recommended storage conditions.

10.4 Conditions to avoid

Conditions to avoid	:	None known.

10.5 Incompatible materials

Materials to avoid	:	Strong oxidizing agents

10.6 Hazardous decomposition products

No data available
In case of fire hazardous decomposition products may be produced such as:
Carbon oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : No data available:

Acute inhalation toxicity : No data available:

Acute dermal toxicity : No data available:

Skin corrosion/irritation

Product:

Remarks : No data available

Serious eye damage/eye irritation

Product:

Remarks : No data available

Respiratory or skin sensitisation

Product:

Remarks : No data available

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Carcinogenicity

Product:

Carcinogenicity - Assessment : No data available

Reproductive toxicity

Product:

Reproductive toxicity - Assessment : No data available

STOT - single exposure

Product:

Assessment : No data available

STOT - repeated exposure

Product:

Assessment : No data available

Aspiration toxicity

Product:

No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

12.4 Mobility in soil

Product:

Distribution among environmental compartments : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Endocrine disrupting potential	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Additional ecological information	:	No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Dispose of in accordance with local regulations.
Contaminated packaging	:	Empty remaining contents. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant EU provisions transposed through retained EU law

The components of this product are reported in the following inventories:

DSL	:	All components of this product are on the Canadian DSL
AICS	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of

Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GB / EN

Specification
Manufacturing site is certified according to ISO9001, EFfCl, ISO14001 and ISO45001 standards.

Date: 11.07.2023

Product Name: **Blueberry Liquid Fruit Extract**

Specification: 26/11/2020

Period of validity of Certificate of Analysis for material stored in unopened containers and stored in cool dry conditions (unless otherwise specified): 730 days.

Analy. Test Method No.	Characteristic	Specification Limits Lower	Upper	Units
	REVISION NUMBER	1.0		
AC018000	ASPECT	CLEAR LIQUID		
AC018000	COLOUR	VERY PALE YELLOW TO YELLOW		
AC018000	COLOUR	POSSIBLE PINK NUANCE		
AC018000	ODOUR	CHARACTERISTIC		
FC0031A0	SPECIFIC GRAVITY (20°C)	1.115	1.145	
FC0032A0	REFRACTIVE INDEX (20°C)	1.385	1.415	
EC003000	WATER CONTENT KARL FISCHER	47.0	52.0	%
FC0064A0	pH VALUE (20°C)	4.0	6.0	
JC0054B0	MOULDS/YEASTS	10 MAX CFU/G		
JC0054B0	TOTAL GERMS	100 MAX CFU/G		

Long term storage between 15 - 25°C, dark in closed containers
The performed analysis are guaranteed on original packaging
When stored accordingly, stable for 24 months.

Raw material certified as organic by Ecocert Greenlife according to COSMOS standard available at http://COSMOS.ecocert.com.

We hereby certify that the plants used for this production are
originated from certified organic culture according to last version of EEC Council Regulation for organic agriculture.

Future deliveries will be tested to this specification and the results reported on Certificate of Analysis

Date: 26.09.2022

STATEMENT

We hereby confirm that the below mentioned product is derived from non-animal* sources nor animal* by-products (including dairy products, honey, eggs, pearls).

We further confirm that since 1990, this product has not been tested on animals* in order to meet the requirements of the Cosmetic Regulation neither by nor on the request of Crodarom and we will not carry out animal tests in the future to meet the requirements of the Cosmetic Regulation.

Blueberry Liquid Fruit Extract

Cross-contamination cannot be excluded considering that some of the raw materials used in our production site are from animals' origins, but the risk is expected to be very low as adequate quality measures are implemented to limit the occurrence of contamination.

This information is given in good faith with our actual knowledge and with reference to our raw materials suppliers.

** The word 'animal' is understood to refer to the entire Animal Kingdom, that is all vertebrates and all multi-cellular invertebrates.*