



Certificate of Analysis

Batch Details

Product Name: APPLELIQUIDFRUITEXTRACT
Batch No: 4427001
Best Before End: MARCH 2023

Quality Control Results

Analytical Test Method No.	Characteristic	Specification Limit		Value	Unit	Status
		Lower	Upper			
	Addendum 00	PASS OR FAIL		Pass		p
	REVISION NUMBER	1.0		Pass		p
AC018000	ASPECT	LIQUID		Pass		p
AC018000	ASPECT	CLEAR TO SLIGHTLY OPALESCENT		Pass		p
AC018000	ASPECT	SLIGHT SEDIMENTATION POSSIBLE		Pass		p
AC018000	COLOUR	PALE YELLOW TO YELLOW		Pass		p
AC018000	ODOUR	CHARACTERISTIC		Pass		p
FC0031AO	SPECIFIC GRAVITY (20 °C)	0.995	1.025	1.024		p
FC0032AO	REFRACTIVE INDEX (20 °C)	1.320	1.350	1.342		p
FC0064AO	pH VALUE (20 °C)	4.5	6.5	4.8		p
JC0054B0	MOULDS/YEASTS	10 MAX CFU/G		Pass		p

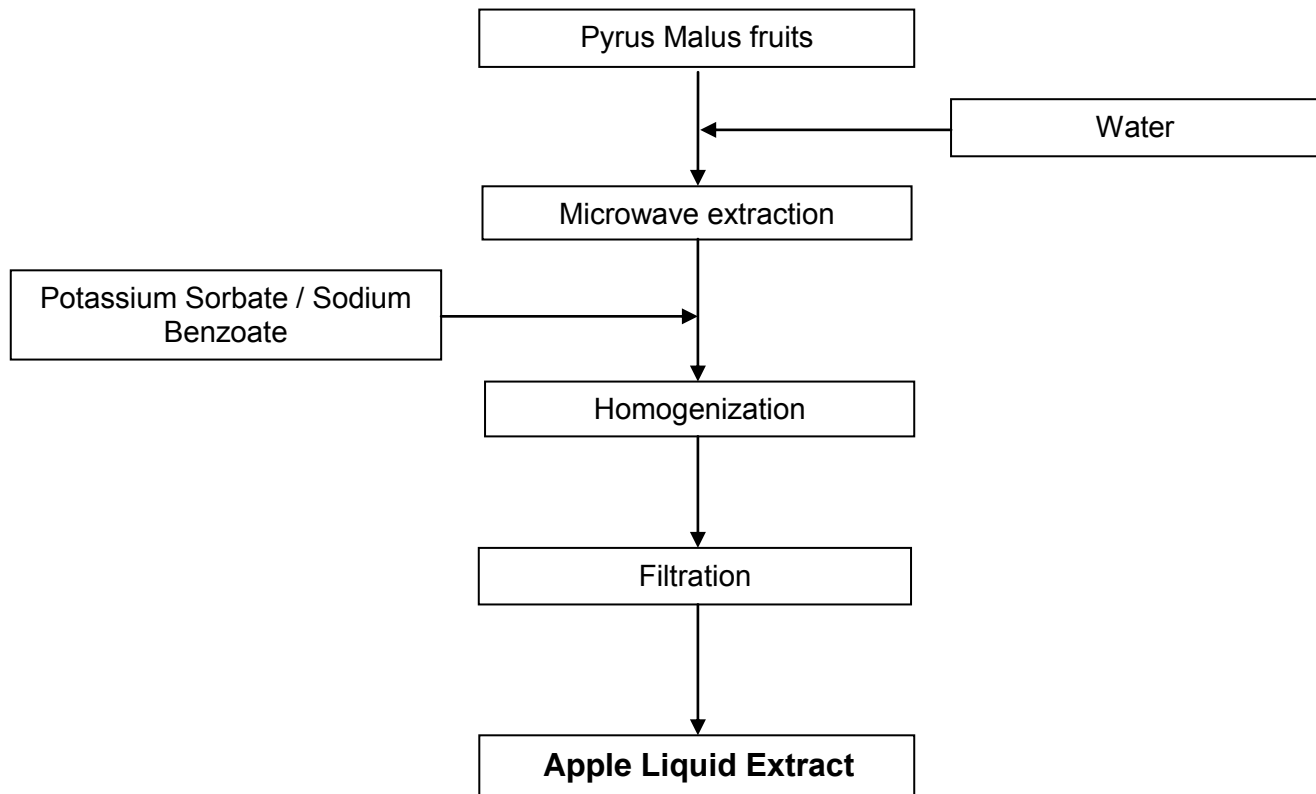
Long term storage between 15 - 25 °C, dark in closed containers
The performed analysis are guaranteed on original packaging

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 for any application beyond those contained in the specification. We recommend you perform your own quality and or identification checks on receipt

Flow Chart of Apple Liquid Fruit Extract

17/03/2020



Date : 31.05.2017

To whom it may concern :

ORIGIN STATEMENT

We herewith confirm that the product Fruit liquid Apple EC, is produced from synthetic and plants from organically cultivated origin raw materials, with reference to the confirmation of our raw materials suppliers.

This product is derived from non animal sources and does not contain material of bovine, ovine, caprine origin with reference to the confirmation of our raw materials suppliers.

According our knowledge and the confirmation of our suppliers, this product:

- Does not contain any genetically modified organism
- Is not produced with help of genetic engineering techniques

However, this confirmation does not permit any claims such as "produced without genetically modified organism" for products manufactures from our delivered product, according the EC regulations N° 1829/2003 and 1830/2003 because this law is not applicable to non-food products.

This information is given in good faith and is based on our knowledge to date. This correspondence will not be automatically updated in the future.



Composition Information

Product Name: **Apple Liquid Fruit Extract**

INCI Name : Water, Pyrus Malus (Apple) Fruit Extract

INCI Name EU : to follow Cosing, the European Commission database on <http://ec.europa.eu/consumers/cosmetics/cosing/>

Composition :

Water	58 - 61 %
Pyrus Malus (Apple) Fruit Extract*	38 – 42%

*Pyrus Malus (Apple) Fruit Extract is expressed as **fresh** fruits.

Preservatives : Potassium Sorbate approx. 0.4%
Sodium Benzoate approx. 0.1%

Antioxidant : None

03/20

REACH STATEMENT

MADAR Corporation 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.

Below listed product is so called preparation composed of ingredients (named under REACH as substances).

Apple Liquid Fruit Extract

INCI	CAS	EINECS	REACH status	Comment
Water	7732-18-5	231-791-2	/	/
Pyrus Malus (Apple) Fruit Extract	85251-63-4	286-475-7	Exempt	Production <1T/yr
Potassium sorbate	24634-61-5	246-376-1	Registered	01-2119950315-41
Sodium Benzoate	532-32-1	208-534-8	Registered	01-2119460683-35

If in the future the amount of a substance produced by our supplier would exceed the 1T/year limit, they will ensure its registration.

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

This information is given in good faith and is based on our knowledge to date.

Non-warranty

The information in this publication is believed to be accurate and is given in good faith but no representation or warranty as to its completeness or accuracy is made. Suggestions for uses or applications are only opinions. Users are responsible for determining the suitability of these products for their own particular purpose. No representation or warranty, express or implied, is made with respect to information or products including without limitation warranties of merchantability or fitness for a particular purpose or non-infringement of any third party patent or other intellectual property rights including without limit copyright, trademark and designs.



SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

APPLE LIQUID FRUIT EXTRACT

Version 1.0

Revision Date 13.01.2016

Print Date 18.03.2020

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

1.1 Product identifier

Trade name : APPLE LIQUID FRUIT EXTRACT

Substance name : BOTANICAL EXTRACT

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

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

1.3 Details of the supplier of the safety data sheet

Company : MADAR Corporation Limited
19-20 Sandleheath Industrial Estate
Fordingbridge
Hampshire
SP6 1PA
UK

Telephone : +44 1425 655555

E-mail address : sales@madarcorporation.co.uk

1.4 Emergency telephone number

USA: 24 Hour Emergency Response Information CHEMTREC toll free: 1-800-424-9300; direct/international: 1-703-527-3887. CANADA: CANUTEC 1-888-CAN-UTEC (226-8832), 613-996-6666 or *666. 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: Suatrans 0800 707 7022 / 0800 707 1767. LATAM: Suatrans (+55) 11 98149-0850 / (+55) 19 3833-5300. 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: Sağlık Bakanlığı Ulusal Zehir Merkezi - 114

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Classification (67/548/EEC, 1999/45/EC)

Not a hazardous substance or mixture.

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according to Regulation (EC) No. 1907/2006

APPLE LIQUID FRUIT EXTRACT

Version 1.0

Revision Date 13.01.2016

Print Date 18.03.2020

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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

Hazardous 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

Treatment : None known.

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.

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Revision Date 13.01.2016

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Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : 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.

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.

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APPLE LIQUID FRUIT EXTRACT

Version 1.0

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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

Other data : Recommended storage temperature
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

Contains no substances with occupational exposure limit values.

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, opalescent

Colour : yellow

Odour : characteristic

Odour Threshold : No data available

pH : 4.5 - 6.5, (20 °C)

Melting point : No data available

Boiling point : No data available

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Decomposition temperature	: No data available
Flash point	: No data available
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Density	: 0.995 - 1.025 g/cm ³ (20 °C)
Solubility(ies)	
Water solubility	: soluble
Solubility in other solvents	: not determined
Partition coefficient: n-octanol/water	: No data available
Thermal decomposition	: 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

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

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according to Regulation (EC) No. 1907/2006

APPLE LIQUID FRUIT EXTRACT

Version 1.0

Revision Date 13.01.2016

Print Date 18.03.2020

Hazardous reactions : 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

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

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Print Date 18.03.2020

Carcinogenicity

Product:

Carcinogenicity - Assessment : No data available

Reproductive toxicity

Product:

Effects on fertility :
Test substance: 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

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

APPLE LIQUID FRUIT EXTRACT

Version 1.0

Revision Date 13.01.2016

Print Date 18.03.2020

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:

Additional ecological information : Remarks: 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 Proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class

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 73/78 and the IBC Code

Not applicable for product as supplied.

SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

APPLE LIQUID FRUIT EXTRACT

Version 1.0

Revision Date 13.01.2016

Print Date 18.03.2020

SECTION 15: Regulatory information

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

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

CH INV : On the inventory, or in compliance with the inventory

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

For explanation of abbreviations see section 16.

15.2 Chemical Safety Assessment

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

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.



Specification

Date: 18/03/2020

Product Name: APPLE LIQUID FRUIT EXTRACT
Product Code: FEAPPL
Specification: 22/05/2014

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		Units
		Lower	Upper	
	REVISION NUMBER	1.0		
AC018000	ASPECT	LIQUID		
AC018000	ASPECT	CLEAR TO SLIGHTLY OPALESCENT		
AC018000	ASPECT	SLIGHT SEDIMENTATION POSSIBLE		
AC018000	COLOUR	PALE YELLOW TO YELLOW		
AC018000	ODOUR	CHARACTERISTIC		
FC0031A0	SPECIFIC GRAVITY (20°C)	0.995	1.025	
FC0032A0	REFRACTIVE INDEX (20°C)	1.320	1.350	
FC0064A0	pH VALUE (20°C)	4.5	6.5	
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

Apple Liquid Fruit Extract



PLANT INFORMATION

Latin name Pyrus malus

Family Rosaceae

Common names

English: Apple

Portuguese: Maçã

French: Pomme

Japanese: リンゴ

German: Apfel

Chinese: 蘋果

Spanish: Manzana

Russian: яблоко

History / Uses

Wild Apple (*Pyrus malus*), is native to Britain and is the wild ancestor of all the cultivated varieties of apple trees. It is known since the Genesis. In the Antiquity, doctors already prescribed apple wine as a cure-all. They are a traditional remedy for joint pain and stiffness due to rheumatism.

Apple contains proteins, starch, sugars, acids, vitamins and salts. The sugar content of a fresh apple varies from 6 to 10 per cent., according to the variety. All apples contain a varying amount of the organic acids, malic acid and gallic acid, and an abundance of as magnesium and iron.

In cosmetics, apples are claimed for emollient, hydrating, stimulating and tonifying properties.

Active molecules / Related properties

Carbohydrates (mainly fructose, glucose, sucrose)

Moisturising, smoothing, conditioning

Fruit acids

Mild keratolytic / bleaching, antibacterial

Vitamins, minerals

Regenerating

Used plant characteristics

Plant part	Certified geographic origin	Organic certified	Fair trade	FSC
Fruit	The Italian Alps	No	No	No

PRODUCT INFORMATION

<u>INCI Name</u>	Glycerin, Water, Pyrus Malus (Apple) Fruit Extract
<u>CAS Number</u>	56-81-5, 7732-18-5, 85251-63-4
<u>EINECS Number</u>	200-289-5, 231-791-2, 286-475-7
<u>Preservative</u>	Sodium benzoate, potassium sorbate
<u>Manufacturing process</u>	Maceration
<u>Appearance</u>	Pale yellow, clear liquid (has to be confirmed on industrial batch)

Guarantee / Certification

Organic certified	Natural validated	Certifiable	Chinese regulation	Active level	Proven effect
No	No	No	SFDA 2003 SFDA 2007	No	No

Application / Concept

Cosmetic application

Everyday-nourishing-care
After-sun care
After-shave products
Shampoos for dry hair and scalp
Mild facial cleansers
Shower gels

Concept / Trends

Refreshing concepts
Modesty trend (Earthy)

Formulation Advices

<u>Recommended level of use</u>	Max. 10%
<u>Solubility</u>	Water: soluble / Alcohol: soluble / Oil: insoluble (at T0)
<u>Stability</u>	pH3: not tested / pH10: not tested (at 2% in unpreserved water)
<u>Precaution</u>	Add to the formula at 40°C max.

Non-warranty

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Toxicological dossier

Product Name: **Fruitliquid Apple EC**

Water, Pyrus Malus (Apple) Fruit Extract

INCI Name :

to follow Cosing, the European Commission database on <http://ec.europa.eu/consumers/cosmetics/cosing/>

INCI Name EU:

Composition :

(A: > 50 %; B: 25 - 50 %; C: 10 - 25 %; D: 5 - 10 %; E: 1 - 5 %; F: 0.1 - 1 %; G: < 0.1 %)

Water	A
Pyrus Malus (Apple) Fruit Extract*	B

* Pyrus Malus (Apple) Fruit Extract is expressed as **fresh** fruits.

Origin of raw materials :

- Plant origin : Pyrus Malus
 - plant part : Fruit
 - from organic culture : Yes
 - free of GMO : Yes
- Synthetic origin : Preservatives
- Animal origin : No

Preservatives :

Potassium Sorbate approx. 0.4%
Sodium Benzoate approx. 0.1%

Antioxidant :

None

Manufacturing process :

Microwaves extraction of organically cultivated, dried, peeled apples in water followed by preservation, filtration, conditioning and filling

Microbiological Data :

⇒ Bacteria	< 100 cfu / g
⇒ Moulds and yeasts	< 10 cfu / g
⇒ Pathogenic Micro-organisms	Not tested

Contamination by trace elements :

⇒ 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 (according to "Rückstandshöchstmengenverordnung") Conclusion by analogy
⇒ Impurities :	Not expected – not tested

Impurities are residual monomer, dioxane, chloroacetic acid, 3-Chloropropanol, nitrosamines, amine, polychloro biphenyls, benzene, nuts, polychloro dibenzo dioxins and dibenzo furans and dimethyl aminopropylamine

⇒ Residual solvents:	Not expected – not tested
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The plants used for Apple Liquid Fruit Extract have been organically cultivated. Therefore pesticides, heavy metals or impurities are not expected.

Total volatile components / Allergens content :

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

CAS-No.	Allergen	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	Lyrar	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.

** The substances are not expected to be part of the fruits of *Pyrus malus*

None of the 26 identified allergen perfume compounds (Directive 2003/15 EC) 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.

The single contents are based on risk estimation which is based on botanical and phytomedicinal reference literature and conclusions by analogy.

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.

Apple Liquid Fruit Extract

The product fulfils the requirement of Article 15 of the European Regulation 1223/2009 and its amendments.

Botanical preparations which contain technically unavoidable traces or impurities of plant constituents listed as CMR in the European Regulation 1272/2008 are not affected by the exclusion listed in Article 15 of the European Regulation 1223/2009.

Animal testing

Our manufacturer confirms that since 1990, our 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 of MADAR Corporation.

MADAR Corporation 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.

Main actives in the plant : ⁽¹⁾⁽²⁾⁽³⁾

Apples contain mainly water, proteins, fats, fibers and :

- ⇒ Carbohydrates (mainly Glucose, Fructose, Saccharose, Sorbitol, Polysaccharides as Cellulose, Hemicellulose, Fucogalactosyloglucan, Pentosane and Pectin)
- ⇒ Fruit acids (mainly Malic Acid)
- ⇒ Provitamin A, Vitamin B types, C, H
- ⇒ Phenolics (mainly Hydroxycinnamic acids and Hydroxybenzoic acids, P-cumaric Acid, Caffeic Acid, Ferulic Acid, Catechin, Epicatechin, Gallocatechin)

Total phenol content in dried apples : approx 1000mg/100g **according to literature**

Main actives in the extract :

Not determined

Toxicological Data :

We do not see any danger in using Apple Liquid Fruit Extract in cosmetic agents taking into account the application form, the concentration, the amount used and the frequency of use.

We haven't carried out clinical studies on Apple Liquid Fruit Extract, but according to literature, Water and Pyrus malus don't contain potentially toxic compounds and they are safe when used appropriately.

Apples, fruits of Pyrus malus are eaten since hundreds of years. No adverse effects are reported. There is no data on the side effects and toxicology of the fruits.

- | | |
|-----------------------------------|-------------------|
| ⇒ Human skin irritation : | No data available |
| ⇒ Mucous membrane irritation : | No data available |
| ⇒ Sensitisation potential : | No data available |
| ⇒ Cytotoxicity : | No data available |
| ⇒ Phototoxicity : | No data available |
| ⇒ Mutagenicity (e.g. Ames Test) : | No data available |
| ⇒ Carcinogenicity : | No data available |
| ⇒ Acute toxicity : | No data available |

- ⇒ Inhalation toxicity : No data available
- ⇒ Chronic toxicity : No data available
- ⇒ Reproduction toxicity : No data available

Toxicological information about main actives of the plant:

- ⇒ Carbohydrates Toxic effects aren't reported.
- ⇒ Malic Acid ⁽⁴⁾ :
 - Dermal irritation on animals : Moderately irritant to rabbit skin and strong irritant to guinea pig.
 - Eye irritation : Severe ocular irritation in rabbit eyes.
 - Mutagenicity (e.g. Ames Test) : Ames test : not mutagenic
 - Acute toxicity : LD₅₀ (rat) = 1.60 – 3.5 g/kg bw by oral route
 LD₅₀ (mice) = 2.66 – 3.2 g/kg bw by oral route
 LD₅₀ (rabbit) = 3 – 5 g/kg bw by oral route
 LD₅₀ (rabbit) = 2.4 g/kg bw by intravenous injection
 - Chronic toxicity : No significant changes or lesions were observed when dogs were fed malic acid.
 - Reproduction toxicity: It did not cause reproductive toxicity in mice, rats and rabbits.
- ⇒ Apple polyphenols ⁽²⁾ :

Apple polyphenol extracts are listed in the FDA's approved additive/GRAS (Generally Recognized as Safe) database.

- Acute toxicity : LD50 (rat, subcutaneous) = 2000mg/kg
- Sensitisation potential : Tests using rabbits indicated that procyanidin B-2 containing preparations shows no primary irritation. Tests on guinea pigs shows no evidence of sensitization to this polyphenol. Topically, procyanidin B-2 is concluded as safe and acceptable.
- Mutagenicity (e.g. Ames Test) : Procyanidin B-2 is non mutagenic.

Applephenon is safe and no toxic at average dietary level.

Ecological Data :

Our product contains mainly water.

- ⇒ Environmental toxicity : Not expected to be toxic
- ⇒ Biodegradability : Easily biodegradable
- ⇒ Water hazard class: 1 (self classification)

Phytopharmaceutical Data :

- ⇒ External uses : used in everyday-nourishing-care, after-sun care, after-shave products, shampoos for dry hair and scalp, mild facial cleansers, shower gels
- ⇒ Contraindications : None known
- ⇒ Side effects : None known
- ⇒ Interactions: None known

References :

1. Hager CD Rom 2010 ; Springer Medizin Verlag Heidelberg; information regarding Pyrus malus
2. <http://www.mdidea.com/products/proper/proper00714.html>
3. Constituents of apple, parsley and lentil edible plants and their therapy treatments for blood picture as well as liver and kidneys functions against lipidemic disease, El-Beltagi, H.S et al. EJEAFChe, 9 (6), 2010. [1117-1127]
4. CIR Report, CTFA 2006 for toxicological information regarding Malic Acid

02/20

This toxicological dossier replaces the earlier one dated 08/11, 02/16



Date : 17.03.2020

To whom it may concern :

STATEMENT

We hereby confirm that the below mentioned product is derived from non-animal sources. We further confirm that since 1990, this product has 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.

Apple Liquid Fruit Extract

This information is given in good faith with our actual knowledge. This correspondence will not be automatically updated in the future.