



Certificate of Analysis

Batch Details

Product Name: APPLELIQUIDFRUITEXTRACT
Batch No: 4354503
Best Before End: MARCH 2021

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	1.023		p
FC0032AO	REFRACTIVE INDEX (20 °C)	1.320	1.350	1.342		p
FC0064AO	pH VALUE (20 °C)	4.5	6.5	4.9		p
JC0054B0	MOULDS/YEASTS	10 MAX CFU/G		Pass		p
JC0054B0	TOTAL GERMS	100 MAX CFU/G		Pass		p

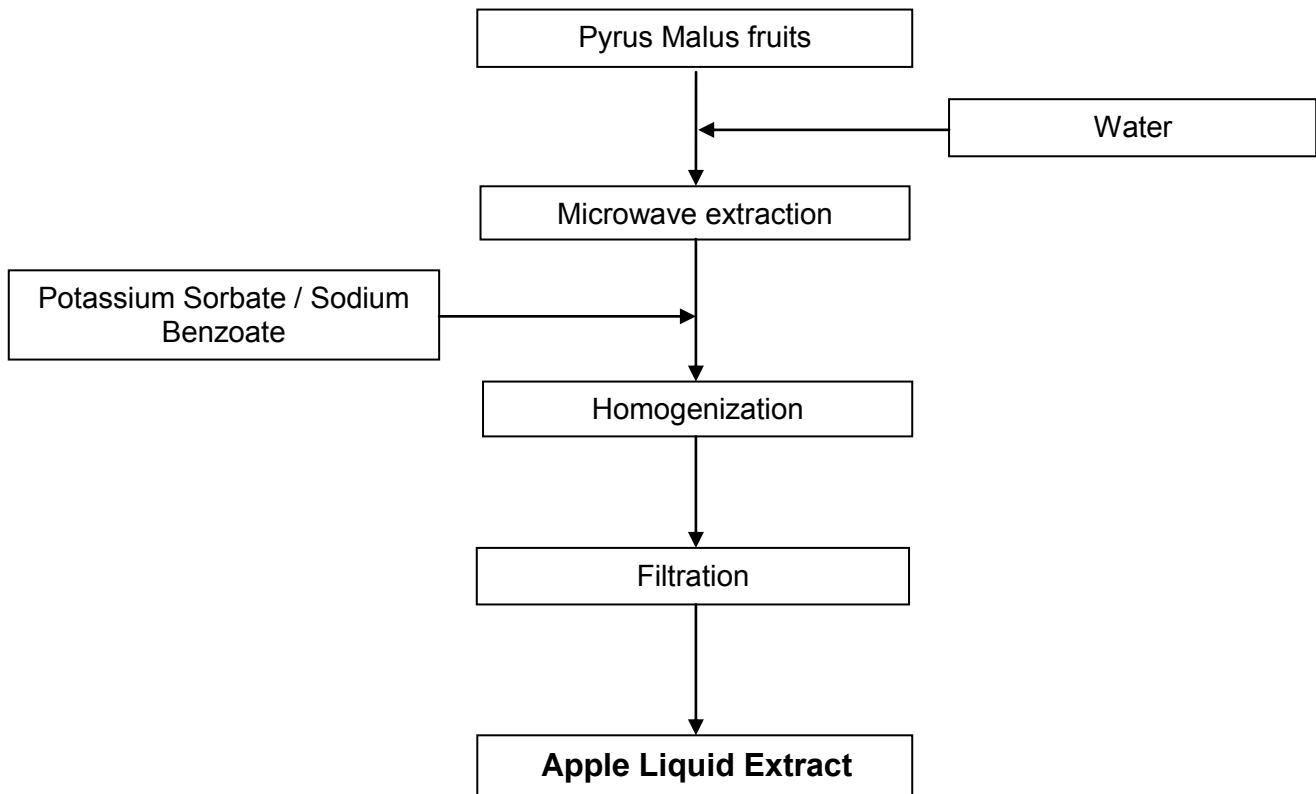
Long term storage between 15 - 25 °C, dark in closed containers
The performed analysis are guaranteed on original packaging

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



1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE

1. 1. Product identifier: Fruittliquid Alpine Apple D22700
1. 2. Relevant identified uses of the substance or mixture and uses: Personal and/or home care products (according to in force regulations)

2. HAZARDS IDENTIFICATION

2. 1. Classification of the substance or mixture: The product does not need to be labelled in accordance with regulation (CE) 1907/2006 - 1999/45 with their modifications and adaptations on classification, packaging and labelling of dangerous substances
2. 2. EC number: Not applicable.
2. 3. Label elements (R - S):
2. 3. 1. Symbol(s): None according to the regulation (EC) No 1907/2006 - 1999/45 with their modifications and adaptations.
2. 3. 2. R-phrases: None according to the regulation (EC) No 1907/2006 - 1999/45 with their modifications and adaptations.
2. 3. 3. S-phrases: None according to the regulation (EC) No 1907/2006 - 1999/45 with their modifications and adaptations.
2. 4. Most important hazards: none
2. 5. Other hazards: Not determined.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3. 1. Component(s) contributing to the hazard:
- Benzoate de sodium
 - CAS nr: 532-32-1
 - Conc. (weight %): $0 < C \leq 0,3$
 - SGH : SGH07 - Irr. oc. 2A - Exclamation mark - Warning - H319
 - sel de potassium de l'acide 2,4-Hexadiène-oïque
 - CAS nr: 24634-61-5
 - Conc. (weight %): $0 < C \leq 0,3$
 - R-S : Symbol(s): Xi - R-phrases: 36/37/38
 - SGH : SGH07 - Skin Irrit. 2 - Exclamation mark - Warning - H315 - Irr. oc. 2A - H319
 - Citric Acid
 - CAS nr: 5949-29-1
 - Conc. (weight %): $0 < C \leq 0,3$
 - R-S : Symbol(s): Xi - R-phrases: 36
 - SGH : SGH07 - Irr. oc. 2A - Exclamation mark - Warning - H319 - Irr. oc. 2B

The wording of the sentences are mentioned at heading 16.

4. FIRST AID MEASURES

4. 1. Description of first aid measures:
4. 1. 1. General advice: In case of doubt or persistent symptoms, consult always a physician.

4. 1. 2. Inhalation:	Move to fresh air in case of accidental inhalation.
4. 1. 3. Skin contact:	Wash skin with plenty of water and soap.
4. 1. 4. Eye contact:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
4. 1. 5. Ingestion:	If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.
4. 2. Most important symptoms and effects, both acute and delayed:	There is no data available on the product itself.
4. 2. 1. Inhalation:	No data available.
4. 2. 2. Skin contact:	No data available.
4. 2. 3. Eyes contact:	No data available.
4. 2. 4. Ingestion:	No data available.
4. 3. Indication of any immediate medical attention and special treatment needed :	Notes to physician

5. FIREFIGHTING MEASURES

5. 1. Extinguishing media:	foam, powder, carbon dioxide (CO ₂)
5. 2. Special hazards arising from the substance or mixture:	In case of fire and/or explosion do not breathe fumes.
5. 3. Advice for firefighters:	Standard
5. 4. Specific method(s):	Do not allow run-off from fire fighting to enter drains or water courses.
5. 5. Extinguishing media which must NOT be used for safety reasons:	Do not use water jet.

6. ACCIDENTAL RELEASE MEASURES

6. 1. Personal precautions, protective equipment and emergency procedures:	Concerning personal protective equipment to use, see item 8.
6. 2. Environmental precautions:	Dike and contain spill. Prevent product from entering drains. Concerning disposal elimination after cleaning, see item 13.
6. 3. Methods and material for containment and cleaning up:	Contain and collect spillages with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth
6. 4. Reference to other sections:	Concerning personal protective equipment to use, see item 8.

7. HANDLING AND STORAGE

7. 1. Handling:	
7. 1. 1. Precautions for safe handling:	Smoking, eating and drinking is prohibited in areas of storage and use. For personal protection, see Section 8.
7. 1. 2. Technical condition(s):	The product should only be used in areas from which all naked lights and other sources of ignition have been excluded.
7. 1. 3. Safe handling advice(s):	Opened containers must be carefully closed and kept upright to avoid leakage.
7. 2. Storage:	
7. 2. 1. Conditions for safe storage, including any incompatibilities:	Keep container tightly closed. Store always product in container of same material as original container.
7. 2. 2. Technical condition(s):	Not applicable
7. 2. 3. Storage condition(s):	Recommended storage temperature: 15-25 °C
7. 2. 4. Separation of incompatible product(s):	No incompatible products to be specially mentioned.
7. 2. 5. Packaging / tank material:	made of the same material as the supply container.

7. 3. Specific end use(s): Not determined.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8. 1. Control parameters:

8. 1. 1. Exposure limit(s):

No data available.

8. 2. Exposure controls:

8. 2. 1. Respiratory protection: No personal breathing protective equipment is normally required.

8. 2. 2. Hand protection: Wear suitable gloves. (natural rubber gloves., Latex gloves, PVC or other plastic material gloves)

8. 2. 3. Skin and body protection: protective clothing

8. 2. 4. Eye protection: Eye protection designed to protect against liquid splashes should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

9. 1. Information on basic physical and chemical properties:

9. 1. 1. Appearance: Clear liquid

9. 1. 2. Colour: pale yellow

9. 1. 3. Odour: characteristic

9. 1. 4. PH: Approx. 4,6 (20 °C)

9. 1. 5. Boiling point/range: Not determined.

9. 1. 6. Flash point: > 100 °C

9. 1. 7. Explosion limits: Not determined.

9. 1. 8. Relative density (water = 1): Approx. 1.133 (20 °C)

9. 1. 9. Viscosity: Not determined.

9. 2. Other information:

9. 2. 1. Water solubility: Yes

9. 2. 2. Fat solubility: No

9. 2. 3. Solvent solubility: soluble in most organic solvents

10. STABILITY AND REACTIVITY

10. 1. Reactivity: Stable under the recommended storage and handling conditions. (See Section 7).

10. 2. Chemical stability: Stable in use and storage conditions as recommended in item 7.

10. 3. Possibility of hazardous reactions: Stable in use and storage conditions as recommended in item 7.

10. 4. Conditions to avoid: None under normal use.

10. 5. Incompatible materials: No data available.

10. 6. Hazardous decomposition products: No data available.

11. TOXICOLOGICAL INFORMATION

11. 1. Information on toxicological effects: Health injuries are not known or expected under normal use.

11. 2. Acute toxicity:

- | | |
|-------------------------|--------------------|
| 11. 2. 1. Inhalation: | No data available. |
| 11. 2. 2. Skin contact: | No data available. |
| 11. 2. 3. Eyes contact: | No data available. |
| 11. 2. 4. Ingestion: | No data available. |

12. ECOLOGICAL INFORMATION

- | | |
|--|--|
| 12. 1. Toxicity: | Ecological problems are not known or expected under normal use. |
| 12. 2. Persistence and degradability: | Contains no substances known to be not biodegradable in wastewater treatment plants. |
| 12. 3. Bioaccumulative potential: | Not determined. |
| 12. 4. Mobility in soil: | Not determined. |
| 12. 5. Results of PBT and vPvB assessment: | Not determined. |
| 12. 6. Other adverse effects: | Not determined. |
| 12. 7. General information(s): | The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters. |

13. DISPOSAL CONSIDERATIONS

- | | |
|---------------------------------|--|
| 13. 1. Waste treatment methods: | Collect all waste in suitable and labelled containers and dispose according to local legislation. |
| 13. 2. Contaminated packaging: | Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. |

14. TRANSPORT INFORMATION

- | | |
|---|--|
| 14. 1. General information(s): | Not classified as dangerous in the meaning of transport regulations. |
| 14. 2. UN number: | Not applicable. |
| 14. 6. Environmental hazards: | Ecological problems are not known or expected under normal use. |
| 14. 7. Special precautions for user: | For personal protection, see Section 8. |
| 14. 8. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: | Not applicable. |

15. REGULATORY INFORMATION

- | | |
|--|--|
| 15. 1. Safety, health and environmental regulations/legislation specific for the substance or mixture: | The user is always responsible for ensuring that the requirements of relevant legislation are complied with. |
| 15. 2. Chemical safety assessment: | Not applicable. |
| 15. 3. Important remarks: | WGK Class : 1 (self classification) |

16. OTHER INFORMATION

- | | |
|---|--|
| 16. 1. Text of R phrases listed in section 3: | R36/37/38 Irritating to eyes, respiratory system and skin.
R36 Irritating to eyes.
H319 Causes serious eye irritation.
H315 Causes skin irritation. |
| 16. 2. Important remarks: | As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. |
| 16. 3. References and / or bibliography: | Code ED6.08.06b |



SAFETY DATA SHEET

Apple Liquid Fruit Extract

Version: 1

First edition date: 17/09/2013

16. 4. 1. First edition date:	17/09/2013
16. 4. 2. Version:	1
16. 5. Written by:	Crodarom

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.



Specification

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

Apple Liquid Fruit Extract

Article No: FEAPPL

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 :

(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	< 1ppm*
101-85-9	Amyl cinnamic alcohol	< 1ppm*
105-13-5	Anisyl alcohol	< 1ppm*
100-51-6	Benzyl alcohol	< 1ppm*
120-51-4	Benzyl benzoate	< 1ppm*
103-41-3	Benzyl cinnamate	< 1ppm*
118-58-1	Benzyl salicylate	< 1ppm*
104-55-2	Cinnamic aldehyde	< 1ppm*
104-54-1	Cinnamic alcohol	< 1ppm*
5392-40-5	Citral	< 1ppm*
106-22-9	Citronellol	< 1ppm*
91-64-5	Coumarin	< 1ppm*
97-53-0	Eugenol	< 1ppm*
4602-84-0	Farnesol	< 1ppm*
106-24-1	Geraniol	< 1ppm*
101-86-0	Hexyl cinnamaldehyde	< 1ppm*
107-75-5	Hydroxycitronellal	< 1ppm*
97-54-1	Isoeugenol	< 1ppm*
80-54-6	Lilial	< 1ppm*
5989-27-5	d-Limonene	< 1ppm*
78-70-6	Linalool	< 1ppm*
31906-04-4	Lyral	< 1ppm*
111-12-6	Methyl heptine carbonate	< 1ppm*
127-51-5	Methyl ionone alpha iso	< 1ppm*
90028-68-5	Oakmoss	< 1ppm*
90028-67-4	Tree Moss	< 1ppm*

*not expected as a component 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

MADAR Corporation confirms that 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

02/16

This toxicological dossier replaces the earlier one dated 08/11

Non-warranty

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