



### Certificate of Analysis

**Batch Details**

**Product Name:** ACAI LIQUID FRUIT EXTRACT  
**Batch No:** 4358803  
**Best Before End:** May 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		2.0			Pass	P
AC018000	ASPECT		CLEAR LIQUID			Pass	P
AC018000	COLOUR		PALE PINK TO PINK/ YELLOW			Pass	P
AC018000	ODOUR		CHARACTERISTIC			Pass	P
FC0031A0	SPECIFIC GRAVITY (20°C)	1.120	1.150	1.131			P
.FC0032A0	REFRACTIVE INDEX (20°C)	1.385	1.415	1.400			P
FC0064A0	pH VALUE (20°C)	4.0	6.0	5.3			P
JC0054A0	TOTAL GERMS		100 MAX CFU/ML			Pass	P
JC0054A0	MOULDS/YEASTS		10 MAX CFU/ML			Pass	P

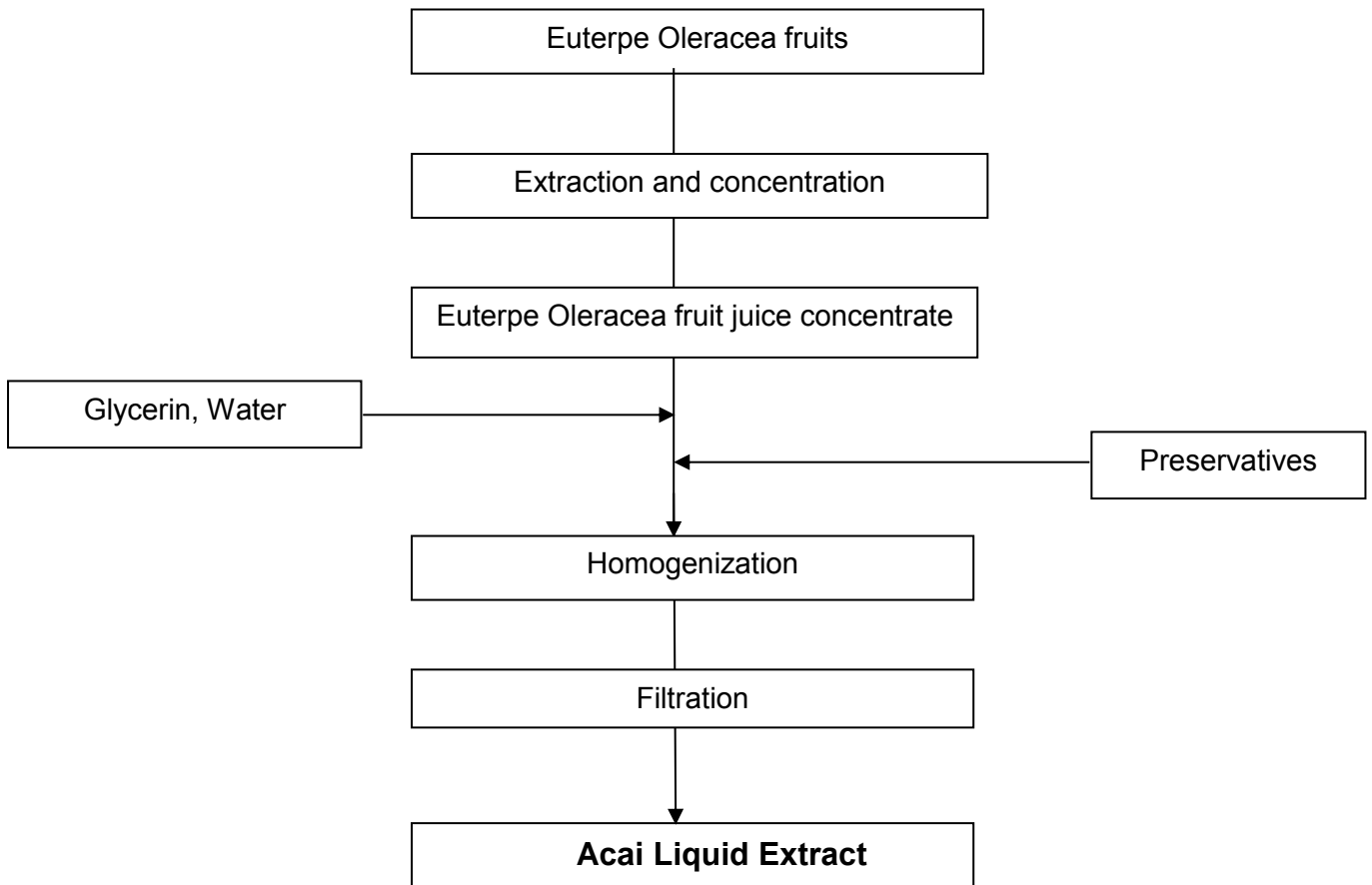
Between 15-25°C, dark in closed containers  
the performed analysis are guaranteed on original packaging when stored accordingly, stable for 12 months

**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 for any application



## Flow Process of Acai Liquid Fruit Extract





## Composition Information

**Product Name: Acai Liquid Fruit Extract**

**INCI Name:** Glycerin, Water, Euterpe Oleracea Fruit Extract

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

**Composition (%):**

Glycerin	48-52
Water	47-51
Euterpe Oleracea Fruit Extract	0.5-0.8*

\* Euterpe Oleracea Fruit Extract has been concentrated in a preliminary extraction step. 1kg Acai Liquid Fruit Extract corresponds to approx. 15kg fruit pulp.

<b>Preservatives:</b>	Potassium Sorbate	0.3%
	Sorbic Acid	0.1%

**Antioxidant:** None

05/15

This composition replaces the earlier one dated 11/12

***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. Any trademarks identified herein are trademarks of the MADAR Corporation.



## PRODUCT INFORMATION

<b><u>INCI Name</u></b>	Glycerin, Water, Euterpe Oleracea Fruit Extract
<b><u>CAS Number</u></b>	56-81-5, 7732-18-5, 879496-95-4
<b><u>EINECS Number</u></b>	200-289-5, 231-791-2, 618-093-7
<b><u>Preservative</u></b>	Potassium Sorbate, Sorbic Acid
<b><u>Manufacturing process</u></b>	Multistep extraction
<b><u>Appearance</u></b>	Red brown to dark red brown, clear liquid

### Guarantee / Certification

Organic certified	Natural validated	Certifiable	Chinese regulation	Active level	Proven effect
No	Ecocert	No	IECIC 2015	No	No

### Application / Concept

#### Cosmetic application

An exotic alternative to red wine or berries for anti-ageing and soothing skin care  
Men care  
Make-up

#### Concept / Trends

Superfruit concept  
Awakening of the senses  
Women market  
Cosmetics in colour  
Amazonian rituals  
Dark fables trend (Black)  
Paradisio trend (Tropical Jungle)

### Formulation Advice

<b><u>Recommended level of use</u></b>	Max. 5%
<b><u>Solubility</u></b>	<b>Water:</b> soluble / <b>Alcohol:</b> soluble / <b>Oil:</b> insoluble (at T0)
<b><u>Stability</u></b>	<b>pH3:</b> stable / <b>pH10:</b> stable (6 months) (at 2% in unpreserved water)
<b><u>Precaution</u></b>	Add to the formula at 40°C max.

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## 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).

### **Acai Liquid Fruit Extract**

<b>INCI</b>	<b>CAS</b>	<b>EINECS</b>	<b>REACH status</b>	<b>Comment</b>
Glycerin	56-81-5	200-289-5	Exempt	Annex V
Water	7732-18-5	231-791-2	/	/
Euterpe Oleracea Fruit Extract	879496-95-4	618-093-7	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 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.

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# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## Acai Liquid Fruit Extract

Version 2.0      Revision Date: 09.01.2019

Date of last issue: -      Print Date :  
Date of first issue:      09.05.2019  
09.01.2019

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### 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 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.

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### 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.

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### 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.

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 : Recommended storage temperature

Stable under recommended storage conditions.

#### 7.3 Specific end use(s)

Specific use(s) : Manufacture of chemical products

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### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Glycerine	56-81-5	TWA (Mist)	10 mg/m <sup>3</sup>	GB EH40
Further information	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			

#### 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.

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

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### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Appearance : liquid, clear  
Colour : light pink  
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 : 1.120 - 1.150 g/cm<sup>3</sup> (20 °C)  
Solubility(ies)  
    Water solubility : soluble  
    Solubility in other solvents : not determined  
Partition coefficient: n-octanol/water : No data available

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Auto-ignition temperature      :    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

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reactions

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

No data available

In case of fire hazardous decomposition products may be produced such as:

Carbon oxides

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Product:

Acute oral toxicity              :    No data available:

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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 - Assess-      :    No data available  
ment

### STOT - single exposure

**Product:**

Assessment      :    No data available

### STOT - repeated exposure

**Product:**

Assessment      :    No data available

### Aspiration toxicity

**Product:**

No data available

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### 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:**

Additional ecological information : No data available

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### 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.



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da); 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

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





Date: 11.04.2019

### Specification

**Product Name:** ACAI LIQUID FRUIT EXTRACT  
**Product Code:** FEACAI

Analy. Test Method No.	Characteristic	Specification Limits		Units
		Lower	Upper	
	REVISION NUMBER	2.0		
AC018000	APPEARANCE FORM	LIQUID		
AC018000	APPEARANCE CLARITY	CLEAR		
AC018000	ODOUR	CHARACTERISTIC		
AC018000	APPEARANCE COLOUR	PALE PINK TO PINK/ YELLOW		
FC0031A0	SPECIFIC GRAVITY (20°C)	1.120	1.150	
FC0032A0	REFRACTIVE INDEX (20°C)	1.385	1.415	
FC0064A0	pH VALUE (20°C)	4.0	6.0	
JC0054B0	MOULDS/YEASTS	10 MAX CFU/G		
JC0054B0	TOTAL GERMS	100 MAX CFU/G		

Between 15-25°C, dark in closed containers the performed analysis are guaranteed on original packaging when stored accordingly, stable for 12 months

## Toxicological dossier

### Product Name: Acai Liquid Fruit Extract

**INCI Name :** Glycerin, Water, Euterpe Oleracea 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 %)

Glycerin	B
Water	B
Euterpe Oleracea Fruit Extract	F**

\*\*Euterpe Oleracea Fruit Extract has been concentrated in a preliminary extraction step. 1kg Fruitliquid Acai corresponds to approx. 15kg fruit pulp.

#### Origin of raw materials :

- Plant origin : Glycerin
  - from organic culture : No
  - free of GMO : Yes
- Plant origin : Euterpe Oleracea
  - plant part : Fruits
  - from organic culture : No
  - free of GMO : Yes
- Synthetic origin : Potassium Sorbate, Sorbic Acid
- Animal origin : No

**Preservatives :** Potassium Sorbate approx. 0.3%  
Sorbic Acid approx. 0.1%

**Antioxidant :** None

**Manufacturing process :** Açaí fruit juice concentrate made from fresh fruits is solubilised in an glycerin/aqueous carrier, conditioned, preserved and filled.

**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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## Total volatile components / Allergens content :

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

CAS-No.	Allergen	Content expected
122-40-7	Amyl cinnamic aldehyde	< 1 ppm*
101-85-9	Amyl cinnamic alcohol	< 1 ppm*
105-13-5	Anisyl alcohol	< 1 ppm*
100-51-6	Benzyl alcohol	< 1 ppm*
120-51-4	Benzyl benzoate	< 1 ppm*
103-41-3	Benzyl cinnamate	< 1 ppm*
118-58-1	Benzyl salicylate	< 1 ppm*
104-55-2	Cinnamic aldehyde	< 1 ppm*
104-54-1	Cinnamic alcohol	< 1 ppm*
5392-40-5	Citral	< 1 ppm*
106-22-9	Citronellol	< 1 ppm*
91-64-5	Coumarin	< 1 ppm*
97-53-0	Eugenol	< 1 ppm*
4602-84-0	Farnesol	< 1 ppm*
106-24-1	Geraniol	< 1 ppm*
101-86-0	Hexyl cinnamaldehyde	< 1 ppm*
107-75-5	Hydroxycitronellal	< 1 ppm*
97-54-1	Isoeugenol	< 1 ppm*
80-54-6	Lilial	< 1 ppm*
5989-27-5	d-Limonene	< 1 ppm*
78-70-6	Linalool	< 1 ppm*
31906-04-4	Lyral	< 1 ppm*
111-12-6	Methyl heptine carbonate	< 1 ppm*
127-51-5	Methyl ionone alpha iso	< 1 ppm*
90028-68-5	Oakmoss	< 1 ppm*
90028-67-4	Tree Moss	< 1 ppm*

\*not expected as a component of the fruits of *Euterpe oleracea*

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 can not 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.

Acai 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 Directive 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 :

⇒ Polyphenols approx 300ppm (R&D spotcheck)

**Main actives in the extract :** Not determined

## Toxicological Data :

We do not see any danger in using Acai 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 Acai Liquid Fruit Extract, but according to literature, Glycerin and Euterpe oleracea don't contain potentially toxic compounds and they are safe when used appropriately.

Acai (Euterpe oleracea) is commonly used in food and since centuries. Acai has consumed by humans for an unknown amount of time in Amazonia, even before the arrival of the Europeans.

⇒ Human skin irritation :

Glycerin : Skin irritation studies on albino rabbit showed that no skin irritation appeared after 90 days of application.<sup>(2)</sup>

⇒ Mucous membrane irritation :

Glycerin : Eye irritation studies on albino rabbit showed that there was no measurable eye irritation.<sup>(2)</sup>

⇒ Sensitisation potential :

Glycerin : Sensitization tests on guinea pigs showed that no sensitization occurred.<sup>(2)</sup>

⇒ Cytotoxicity : No data available

⇒ Phototoxicity : No data available

⇒ Mutagenicity (e.g. Ames Test) :

Euterpe oleracea fruit:

Schauss and al have conducted safety studies on a freeze-dried acai fruit pulp. It was not found to be mutagenic in the bacterial reverse mutagenicity assay (Ames test)<sup>(3)</sup>

- ⇒ Carcinogenicity : No data available
- ⇒ Acute toxicity :
  - Glycerin : LD<sub>50</sub> (mice, oral) = 23 g/kg
  - LD<sub>50</sub> (rats, oral) = 27.2 g/kg
  - LD<sub>50</sub> (guinea pigs, oral) = 10 g/kg <sup>(2)</sup>
- ⇒ Inhalation toxicity : No data available
- ⇒ Chronic toxicity :
  - Euterpe oleracea fruit: No adverse effects were seen at acute doses up to 2.000mg per kilogram body weight in laboratory animals(similar to a human consumption of 140 grams at one time) <sup>(3)</sup>
- ⇒ Reproduction toxicity : No data available

### Ecological Data :

Our product contains mainly (Glycerin/Water):

- ⇒ The ecological information about Glycerin is :

Environmental toxicity :

- LC<sub>50</sub> (fish – 96 hours ) > 1000 mg/l
- EC<sub>50</sub> (Daphnia magna– 24 hours ) > 10 g/l
- EC<sub>50</sub> (Pseudomonias putida – 16 hours ) > 10 g/l

Biodegradability : Totally biodegradable

- ⇒ Water hazard class: 1 (self classification)

### Phytopharmaceutical Data :

- ⇒ External uses : used as an exotic alternative to red wine or berries for anti-ageing and soothing skin care, men care and make-up
- ⇒ Contraindications : None known
- ⇒ Side effects : None known
- ⇒ Interactions: None known

### References :

- (1) Martindale, The Extra Pharmacopoea, 30<sup>th</sup> Edition for toxicological information regarding Glycerin.
- (2) Comparative study of synthetic and natural Glycerin.
- (3) Schauss, A. G., (2006c). Acai (Euterpe oleracea): An Extraordinary Antioxidant-Rich Palm Fruit. Biosocial Publications . *Not available*

05/15

This toxicological dossier replaces the earlier one dated 05/08, 03/11, 04/15

#### *Non-warranty*

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