



CRODAMAZON Maracujá

DS-167

May 3, 2002

PERSONAL CARE

# CRODAMAZON Maracujá

## *Passion Fruit Emollient*

**INCI Name: Passiflora Edulis Seed Oil (and) Passiflora Incarnata Seed Oil**

**CRODAMAZON Maracujá** is a emollient oil harvested from the seeds of the fruit of the Passionflower. This climbing plant is native to Tropical America, but is known throughout the world for its flower, as well as for the edible passion fruit it produces. In Brazil itself, 150 different species of Passionflower can be found. Passion fruit is rich in Vitamin C, calcium, phosphorus and iron besides being a good source of carbohydrates, Vitamins A and B Complex. Aside from its nutritional value, the Passionflower plant and its fruit are reported to have medical applications. Some of the pharmacopoeia list such therapeutic properties as sedative action (leaves and juice) and diuretic effects (tea) for the plant. Substances found in the Passion fruit (*Passiflora edulis*) include glycoside bioflavonoids which have sedative action and *Passiflorina* and *Maracujina* which have calming and anti-depressant properties. The Passion fruit is also rich in the indolic alkaloids Armine, Armol and Armane. Sedative and anti-spasmodic activity are among the medical properties attributed to the roots and seeds of the Passionflower.

**CRODAMAZON Maracujá** has been refined without chemicals or solvents, using a natural process that eliminates impurities like oxidation products and organic peroxides to yield a purified, clear, and nearly odorless material. Free fatty acids, which can be skin damaging and irritating, are also reduced by this refining process.

### **Fatty Acid Composition of CRODAMAZON Maracujá**

<i>Fatty Acid:</i>	<i>Approximate %:</i>
Stearic Acid	2.0
Palmitic Acid	8.0
Oleic Acid	12.0
<b>Linoleic Acid</b>	<b>77.0</b>
Linolenic Acid	1.0

**Croda Inc** 300-A Columbus Circle, Edison, NJ 08837 Tel 732-417-0800 Fax 732-417-0804 Website www.crodausa.com **Sederma Inc.** Tel 732-692-1652 Fax 732-417-0804 **Croda Inc West Coast Sales Office** 385 S Acacia Avenue Fullerton CA 92831-4748 Tel 714-526-1162 Fax 714-526-0637 **Croda Miami Inc** 200 South Park Road, Suite, 303, Hollywood, FL 33021 Tel 1-888-84CRODA Fax 954-989-8186 **Sol Kaplan & Son** PO Box 240234 Memphis TN 38124-0234 Tel 901-685-0323 Fax 901-763-3612 **Croda Canada Ltd** 221A Racco Parkway, Vaughan, Ontario L4J8X9 CANADA Tel 905-886-1383 Fax 905-886-4753

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## CRODAMAZON Maracujá

Linoleic Acid ( $\alpha$  C18:2) and linolenic acid ( $\gamma$  C18:3) are essential fatty acids important to the barrier function of the skin and are present in epidermal lipid as triglycerides. Essential fatty acids are so-called because they are essential to health but cannot be synthesized by the human body itself and must be obtained from other sources. Plants are the primary source. The absence of these two essential fatty acids in the diet can cause a variety of skin disorders, broadly classified as eczematic.

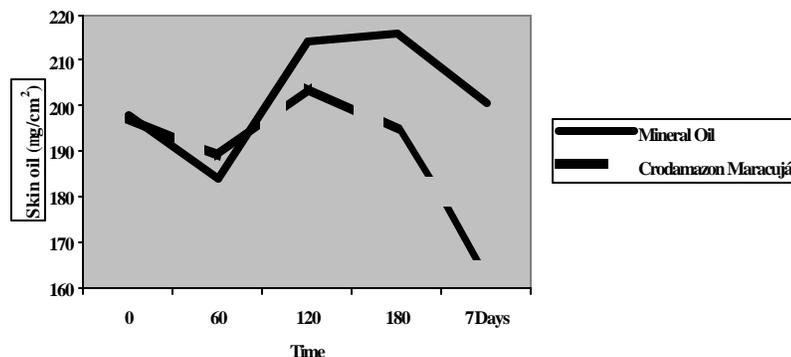
In investigating the effects of topically applied essential fatty acids on transepidermal water loss (TEWL), Prottey stated, "Results indicate that the increased permeability of the skin (excess water loss) is restored towards normal only by  $\alpha$ -linoleic (C18:2) acid and  $\gamma$ -linolenic (C18:3) acid, both of which are essential fatty acids of the  $\Omega$  (omega) 6 configuration. Other unsaturated fatty acids either exaggerate the deficiency or have no effect as measured by transepidermal water loss. Thus, this would exclude the possibility that cutaneously applied oils had merely a physical occlusive effect in lowering skin water loss for, if this were the case, then all should be as effective as  $\alpha$ -linoleic or  $\gamma$ -linolenic acids."<sup>1</sup>

Given the fact that the fatty acid composition of **CRODAMAZON Maracujá** is made up of 77% Linoleic Acid, the product may have great benefits as a skin care active in barrier creams, treatment products and dermatological preparations. The bioflavonoids in passion fruit oil have been reported to help regulate the level of sebaceous gland activity, lending **CRODAMAZON Maracujá** use in skin creams, cleansers, and wipes for oily skin.

### Sebum Regulation

Clinical studies were conducted to evaluate the sebum regulating activity of **CRODAMAZON Maracujá** in a cream at 5%, compared to the same cream containing 5% Mineral Oil. From the results shown in the graph on the following page, it is clear that the efficacy of **CRODAMAZON Maracujá** in regulating sebum production is considerably higher than that of mineral oil.

### Sebum Regulation by CRODAMAZON Maracujá



As the Sebometer readings indicate, volunteers treated with the **CRODAMAZON Maracujá** cleanser had substantially lower sebum levels.

**CRODAMAZON Maracujá**

In the sebum study, testing was conducted using a panel of 20 volunteers with oily skin who were instructed to cleanse their face 12 hours before application of the test creams. Sebum levels were then measured with a Sebumeter at 60, 120 and 180 minute intervals and then again on the seventh day.

*Test Formula:*

<b>A</b>	
POLAWAX (Emulsifying Wax NF)	3.00
*CRODAMAZON Maracujá (Passiflora Edulis Seed Oil (and) Passiflora Incarnata Seed Oil	5.00
Phenoxyethanol and Parabens (Phenova)	0.50
<b>B</b>	
Deionized water	60.90
<b>C</b>	
Carbomer (Carbopol® ETD2001)	0.30
TEA	0.30
Deionized water	30.00

\* Control contains 5% Mineral Oil.

Due to the activity attributed to its plant components, especially its bioflavonoids, **CRODAMAZON Maracujá** may be used as an active principle, as a vehicle for other actives in the oil phase, or as an emollient.

1 Hartop and C. Prottey, *British Journal of Dermatology*, 95, 255, 1976.

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#### About the CRODAMAZON Range

**CRODAMAZON Maracujá** is one of a series of products developed from sustainable resources growing in the rain forests of Brazil and manufactured by Croda do Brazil, a division of Croda International Plc. The **CRODAMAZON** Range represent Croda's commitment to study, research and develop plant derived products and subproducts with a permanent policy towards preserving the natural resources of the Amazon rain forest while promoting the social and economic development of the regions involved in this venture.

## CRODAMAZON Maracujá

**Spray-on Body Lotion with CRODAMAZON Maracujá** **SC-314**

Spray on this body lotion and imagine yourself being wrapped in moisture from the rain forest. **CRODAMAZON Maracujá** is an emollient oil sustainably harvested from the seeds of the fruit of the Passionflower, a plant native to the Brazilian rain forest. **CRODAMAZON Maracujá** contains Linoleic Acid, an essential fatty acid important to the barrier function of the skin. The lotion provides a soft, emollient after-feel. As the primary emulsifier CRODAFOS CS-20 ACID is able to produce a lotion that is thin enough to spray.

<b>Ingredients</b>	<b>%</b>
<b>PART A</b>	
Mineral Oil	10.00
CRODAFOS CS-20 ACID (Cetearyl Alcohol (and) Dicetyl Phosphate (and) Ceteth-20 Phosphate)	4.00
<b>CRODAMAZON Maracujá</b> (Passiflora Edulis Seed Oil (and) Passiflora Incarnata Seed Oil)	3.00
CROMOLLIENT SCE (Di-PPG-2 Myreth-10 Adipate)	3.00
<b>PART B</b>	
Deionized Water	68.92
Glycerin	10.00
Sodium Hydroxide, 98%	0.08
<b>PART C</b>	
Propylene Glycol (and) Diazolidinyl Urea (and) Methylparaben (and) Propylparaben (1)	1.00

pH: 5.8 ±0.5

Viscosity: 50 cps ±10% (RVT Spindle #3 @ 10 RPM)

**PROCEDURE**

Combine Part A and Part B ingredients separately with mixing and heat each to 75-80°C. Add Part B to Part A, mixing well. Cool to 45°C and add Part C. Cool to room temperature and fill.

- 1) Germaben II (ISP Sutton Labs)

TS2678