

## EVOIL® AST

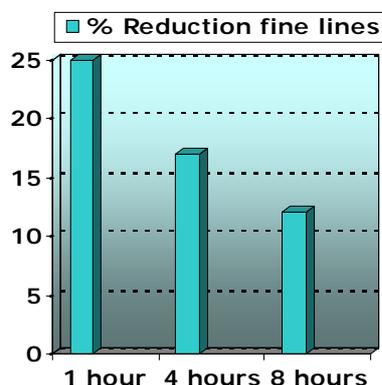
### PRODUCT DATA SHEET



**EVOIL® AST** is a Refined Vegetable Oil composition enriched with other ingredients and specifically developed to enhance anti stretch activity. The composition helps to prevent and eliminate stretch marks and wrinkles caused by pregnancy, lactation, obesity, diets and dry skin.

**EVOIL® AST** by combining the excellent properties of Soybean oil, Jojoba oil, Rose hip Oil, Sweet Almond oil and Sunflower oil; all of them are known for their excellent emollient and moisturising properties in skin-care. Soybean oil has great penetration and skin hydrating effect. Sunflower oil has moisturising properties, excellent skin feel and is easily absorbed. Rose hip Oil and Sweet Almond oil offers high hydration which protects stretched skin structure.

**SOYBEAN OIL** is rich in omega 3 ( $\alpha$ -Linolenic acid) and omega 6 (Linoleic acid), essential fatty acids. Every living cell in the body needs essential fatty acids. EFAs belong to the group of membrane forming phospholipids. EFAs are essential for rebuilding and producing cells. Omega 3 fatty acids are important components of cellular and membrane lipids. Omega 6 is part of Ceramide I, which is the most important barrier substance in the horny layer. Products containing omega 3 and 6 are the appropriate skin care for individuals suffering from neurodermitis as their skin generally shows a Ceramide I deficiency.



In dermatological tests done by Christensen and Packman<sup>1</sup> using **JOJOBA OIL**, it was shown that jojoba oil increases the skin's suppleness by 45% and after 8 hours the effect was still present.

It was also found that **JOJOBA OIL** softens and smoothes the skin with fine line reduction (see graphic). **JOJOBA OIL** controls transpiration water loss and helps to control flaking and dryness of the skin, thereby also helping to fight wrinkles.

**ROSE HIP OIL** is renowned for its ability to heal and lighten minor to severe stretch marks and scars. Used on individuals with degenerative tissues and keloid scarring, **ROSE HIP OIL** is considered one of the best massage oils for someone trying to prevent or reduce their stretch marks. **ROSE HIP OIL** is

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extremely moisturizing. Due to its natural content of trans-retinoic acids and a complex system of unsaturated essential fatty acids, **ROSE HIP OIL** has the ability to firm the skin, remove stretch marks, and keep the skin hydrated and supple. It also has the ability to fight stretch marks because it contains many minerals that help the skin regain elasticity.

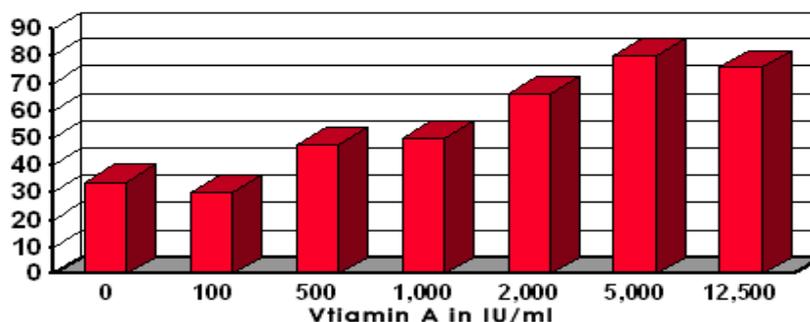
**SWEET ALMOND OIL** contains up to 30% of Linoleic Acid, an Omega 6 essential fatty acid. Studies have indicated that it is this high Linoleic Acid content that contributes to reduce the TEWL (Trans-Epidermal Water Loss), resulting in better moisture retention, which is the key to maintain a healthy skin.

**SWEET ALMOND OIL** also contains vitamins A, B1, B2, B6 with small amounts of Vitamin E and D. Antioxidants protect vital cell structures by neutralizing free radicals. Many studies have shown that they can help decrease the effects of psoriasis, erythema, and may help in reducing the risk of skin cancer.

**EVOIL® AST** is further enriched with Vitamin A and Natural Tocopherols. Vitamin A has a stimulating effect on cell proliferation, an action which finally results in a thickening of the epidermis thus improving the barrier function of the skin.

There are many studies on the activity of **Vitamin A** on skin. After daily application on an emulsion containing 1000 IU/ml of Vitamin A palmitate the epidermis was 50% thicker than placebo treated skin. In addition, an increase in collagen formation in the dermis<sup>2</sup> was observed. (Figure below)

Epidermis thickness in  $\mu\text{m}$

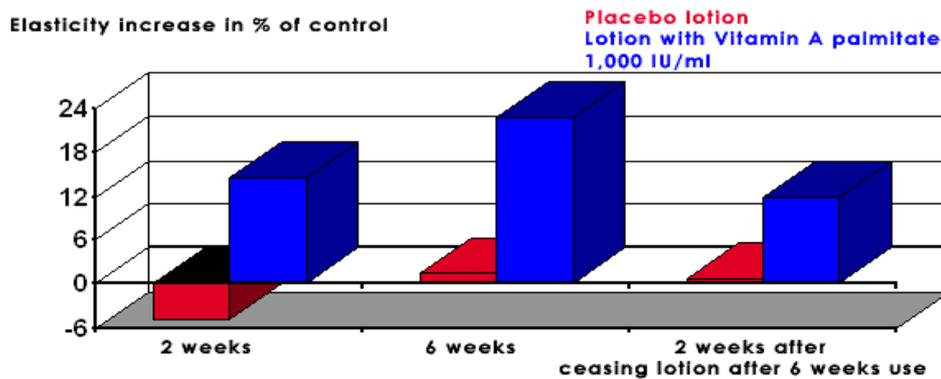


There is evidence that UV light has a strong effect on **Vitamin A** concentration in the skin. The regular use of Vitamin A containing cosmetics helps to stimulate the cell renewal process thus reducing the risk of photodamaged skin<sup>3</sup>.

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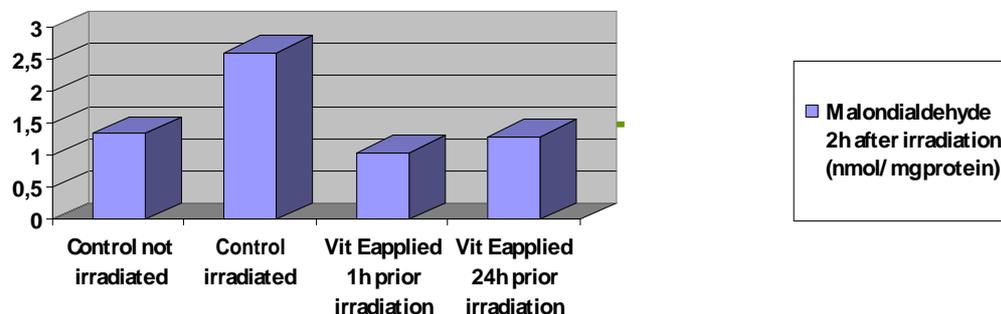
In the process of aging many aspects of skin structure are altered and the epidermis becomes thinner due to a slow-down in the metabolism of the skin. As a result, the skin loses part of its barrier function and, as a consequence of reduced water retention capacity; it often becomes dry, scaly or even cracked.

By stimulating the cell renewal process, **Vitamin A** thickens the epidermis and thus improves the barrier function of the skin. This reduces the transepidermal water loss which has a positive effect on the symptom of dry and brittle skin. Vitamin A not only improves the barrier function of the skin, but also its appearance and, in particular, its elasticity<sup>4</sup>. The study was done to the temples of a group of 40 to 60 years old volunteers and measured the elasticity of the skin. Elasticity improved by 14% after two weeks and by over 22% after six weeks.



The addition of

Natural Tocopherols in **EVOIL® AST** helps to prevent the premature ageing of the skin by absorbing free radicals formed both in the course of normal biological reactions and also from various external factors, such as oxygen, UV light from the sun or environmental aggressions. When the skin is attacked its lipids are damaged by peroxidation. Such impairment leads to changes in the structure of the skin. It becomes wrinkled and appears older<sup>5</sup>.



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Repeated application of **Vitamin E** to the skin reduces the number of sunburn cells formed as a consequence of UVB radiation.

### TECHNICAL DATA

<b>Appearance:</b>	Oily liquid, pale yellow with minimum odour
<b>Acidity index:</b>	≤ 0.50 mg KOH /1 g
<b>Peroxide value:</b>	≤ 10.0 meq O <sub>2</sub> /Kg
<b>Specific gravity:</b>	0.910 - 0.915 g/mL
<b>Saponification value:</b>	185 - 195
<b>Iodine value:</b>	100 110
<b>Lovibond:</b>	ca. 2.0R + 51Y

Fatty Acid	Composition
Palmitic acid	4.0 - 9.0 %
Oleic acid (Omega 9)	50 - 70 %
Linoleic acid (Omega 6)	20 - 30 %

### APPLICATION

**EVOIL<sup>®</sup> AST** can be used in anti stretch treatment for mixed and regular skin types. Apply **EVOIL<sup>®</sup> AST** directly on the skin with a light massage motion until totally absorbed. Morning and evening daily applications are recommended.

**EVOIL<sup>®</sup> AST** may also be formulated into body and skin care products, such as creams and lotions as anti-stretch mark treatment, to help repairing scars and to maximize the firming, moisturizing body care products preventing the apparition of stretch marks.

The application of **EVOIL<sup>®</sup> AST** will serve to either protect the skin from such damages or will help recovering a healthy, good looking body.

<sup>1</sup> Christensen, M.S. and E.W. Packman, Skin Surface Softening Effects of Jojoba and Its Derivatives, Proceedings from the Seventh International Conference on Jojoba and Its Uses, American Oil Chemists' Society, Champaign, IL, 1988.

<sup>2</sup> Counts DF, Skreko F, McBee J, et al. The effects of retinyl palmitate on skin composition and morphometry. J Soc Cosmet Chem 1988;39:235-40.

<sup>3</sup> Berne B., Nilsson M., Vahlquist A., UV irradiation and cutaneous vitamin A: an experimental study in rabbit and human skin. The Journal of Investigative Dermatology, 1984 Dec;83(6):401-4.

<sup>4</sup> Fthenakis CG, Maes DH, Smith WP. In vivo assessment of skin elasticity using ballistometry. J Soc Cosmet Chem 1991, 42: 211 216.

<sup>5</sup> Pathak M.A., Robins P., A response to concerns about sunscreens: a report from the Skin Cancer Foundation. The Journal of Dermatologic Surgery and Oncology. 1989 May;15(5):486-7.

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### OIL STABILITY INDEX (OSI)

The Oil Stability Index (OSI) was determined using a Rancimat instrument. The rapidity of oxidation of oil depends on the degree of unsaturation, the presence of antioxidants, and prior storage conditions. In the OSI analysis, the rate of oxidation is slow until resistance to oxidation is overcome. This time is known as the oxidation induction period and it is a tool to determine the useful life of the oil.

**EVOIL<sup>®</sup> AST OSI:** 22.45 hours (100 °C)

ISO 6886:2006

Animal and vegetable fats and oils  
Determination of oxidation stability

#### Conditions

Sample amount  $2.5 \pm 0.01$  g

Temperature  $100^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$

Gas flow 20 L/h

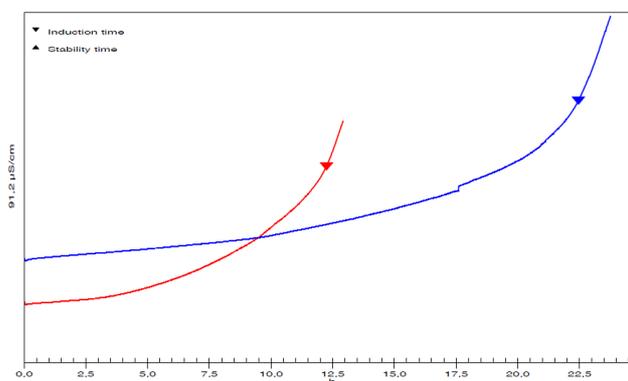
Vessel: 50 mL distilled water

Evaluation Conductivity

Induction time (tangent method)

Blue: determination at  $100^{\circ}\text{C}$

Red: determination at  $110^{\circ}\text{C}$



**INCI Name:** Prunus amygdalus dulcis Oil, Rosa Canina Oil, Helianthus annuus Seed Oil, Glycine Soja Oil, Simmondsia Chinensis Seed Wax, Retinyl Palmitate and Tocopherol.