

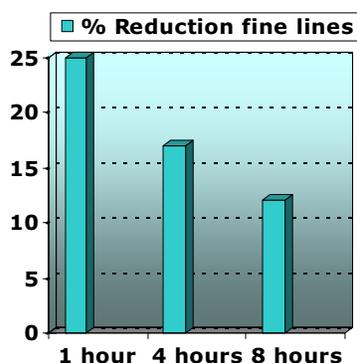
EVOIL® AST

PRODUCT DATA SHEET

EVOIL® AST is a Refined Vegetable Oil composition enriched with other ingredients to enhance anti stretch activity. The composition helps to prevent and eliminate stretch marks and wrinkles.

EVOIL® AST contains Soybean oil, Jojoba 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.

SOYBEAN OIL is rich in omega 3 (α -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 Packman¹ 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.

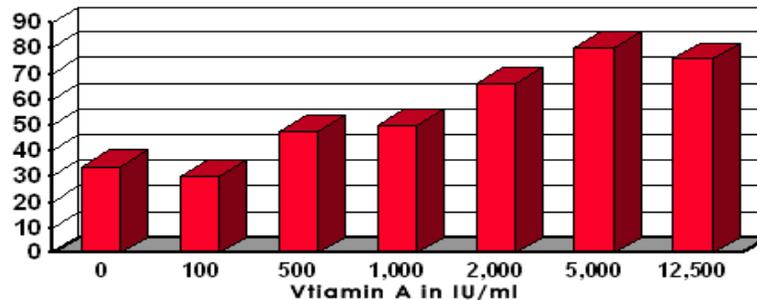
It was also found that **JOJOBA OIL** softens and smoothes the skin with fine line reduction (see graphic). **JOJOBA OIL** controls transpiration water loss and helps to control flaking and dryness of the skin, thereby also helping to fight wrinkles.

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.

EVOIL[®] AST

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 dermis² was observed. (Figure below)

Epidermis thickness in μm

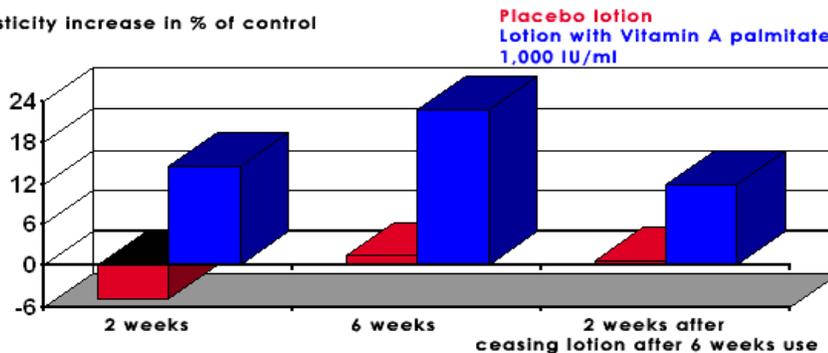


There is evidence that UV light has a strong effect on Vitamin A concentration in the skin. The regular use of Vitamin A containing cosmetics helps to stimulate the cell renewal process thus reducing the risk of photodamaged skin³.

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.

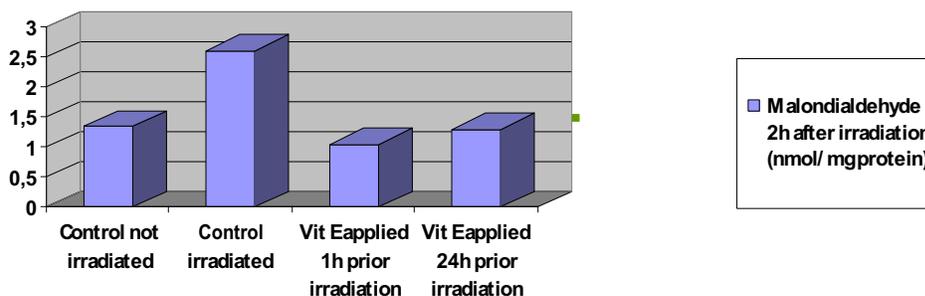
By stimulating the cell renewal process, Vitamin A thickens the epidermis and thus improves the barrier function of the skin. This reduces the transepidermal water loss which has a positive effect on the symptom of dry and brittle skin. Vitamin A not only improves the barrier function of the skin, but also its appearance and, in particular, its elasticity⁴. 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.

Elasticity increase in % of control



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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 older⁵.



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

APPLICATION

EVOIL[®] AST can be used in anti stretch treatment for mixed and regular skin types. Apply **EVOIL[®] AST** directly on the skin with a light massage motion until totally absorbed. Morning and evening daily applications are recommended. **EVOIL[®] AST** may also be formulated into body and skin care products, such as creams and lotions.

¹ 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.

² 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.

³ 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.

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

⁵ 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.

EVOIL[®] AST

OIL STABILITY INDEX (OSI)

The Oil Stability Index (OSI) was determined using a Rancimat instrument. The rapidity of oxidation of an 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[®] AST OSI: 58.6 hours (100 °C)

ISO 6886 (1996)

Animal and vegetable fats and oils

Determination of oxidation stability

Conditions

Sample amount 2.5 ± 0.01 g

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

Gas flow 20 L/h

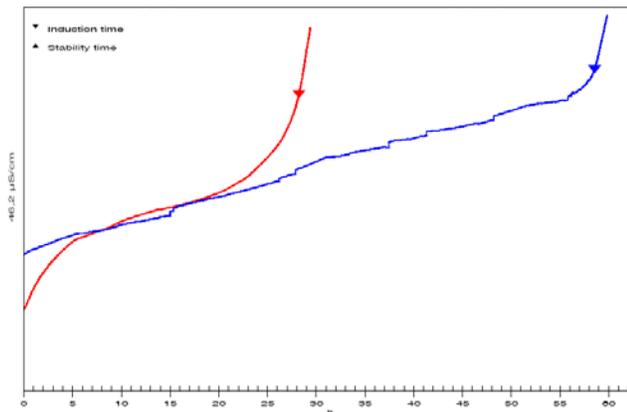
Vessel: 50 mL distilled water

Evaluation Conductivity

Induction time (tangent method)

Blue: determination at 100 °C

Red: determination at 110 °C



INCI Name: Helianthus annuus Seed Oil, Glycine Soja Oil, Simmondsia Chinensis Seed Wax, Retinyl Palmitate and Tocopherol.

EVOIL AST**CODE** 008354 **SPECIFICATION** **Nº** 00835401

PARAMETERS	SPECIFICATIONS	EDITION - 01/04/2005
Appearance	Oily liquid, yellow colour and characteristic odour	
Acid value	Max. 1.00 mg KOH/g	
Peroxide value	Max. 10 meq O ₂ /kg	
Specific gravity	0.89 - 0.92 g/ml	

PACKING**REMARKS**KEEP FULL AND WELL CLOSED IN A DRY PLACE AND AWAY FROM LIGHT
