OLIVOIL FRUTTOSIDE

SURFACTANT

Innovative and Mild surfactant

Higly hydrophilic molecule

Considerable moisturizing foam

Nourishing action

Emollience and silky features

Hair and skin conditioning

Kalichem Italia s.r.l.

OLIVOIL
FRUTTOSIDE
SURFACTANT

From fruit - natural and innovative "sweet" surfactants, *for delicate skin and hairs*

Innovative, mild surfactant, based on the combination of lipidic chains derived from olive and coconut oil with pentose sugar Fructose and oat amino-acids. A new product that joins the concept of the ”interrupted soap” to an ingredient based on two hydrophilic moieties with different crypto-anionic hydration sphere aimed to improve functionality, sensory profile and mildness.

Fructose, the main carbohydrate present in the fruit, is a highly hydrophilic molecule, able to produce considerable moisturizing and eudermic effects on the skin: these properties, linked to its mild and nourishing action, integrate the emollience and silky features of olive oil and oat. The expansion to several chemical structures has been created in order to increase the spectrum of functionality of the ingredient, which provides further more hair and skin conditioning properties by improving the quality of skin and hair surface.

COMPOSITION

ACYL AMINO FRUCTOSE

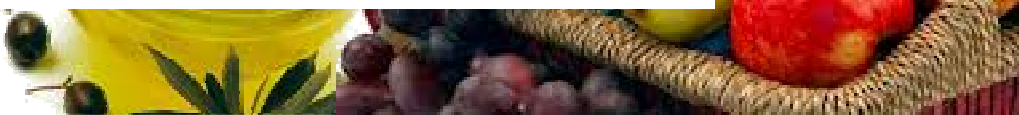
It is from the rigorous respect of the eco-compatibility principles that comes the concept with which Kalichem has decided to develop the Acyl Amino Fructose: **highly foaming surfactants** derived from fruit sugar, condensed through an appropriate reaction with the fatty acids derived from coconut oil and olive oil and their partial sodium salt – a completely natural specialty, completely environmentally friendly, obtained from highly bio-degradable substances, in full conformity with the current eco -sustainability requirements.

OLIVE OIL

The extra virgin olive oil is obtained by cold pressing the pulp of the Olea Europaea (olive) fruit, vegetal species belonging to the Oleaceae family, native to the coastal area of the oriental Mediterranean region.
Compared to the other edible oils, the Olive Oil is widely preferred because of its high content of mono-unsaturated fatty acids (75%) and has noticeable lipo-structural similarities with the human sebum. These fatty components, associated with well known hydrophilic substances, allow the development of cosmetic raw materials with a **very mild action.**
The monounasatured moiety of the fatty acids has maximum values of dermo-compatibility, and is able to guarantee a **soft, but efficient detergent action**, by producing at the same time considerable eudermic effects.
Another interesting aspect of the peculiarity of this oil regards its unsaponifiable fraction containing **antioxidant vitamins and sterols**, responsible of its toning and antioxidant actions.ù

FRUCTOSE

Pentose sugar, largely present in nature, represents the prominent element of the fruit’s sugar component, mainly present in honey and in varied vegetal derivates. Beside the well know alimentary properties, fructose guarantees remarkable benefits in cosmetics as well: thanks to its peculiar chemical structure, it is a molecule that is able to bond numerous water molecules, thus guaranteeing high moisturizing levels, that makes it an ideal agent to incorporate in a surfactant structure: this last effect (that trace the mechanism of action of the Natural Moisturising Factor’s components, intrinsically constituted of a significant glucose component), renders the action much more delicate, by reducing considerably its aggressiveness and protecting the skin from an excessive trans-epidermal water loss (TEWL) . After all, fructose represents an innovative base for the design of totally natural surfactants, from completely eco-sustainable sources, guaranteeing the maximum activity in terms of softness and eudermic action.



OLIVOIL
FRUTTOSIDE
SURFACTANT

CHARACTERISTICS OF THE PRODUCT

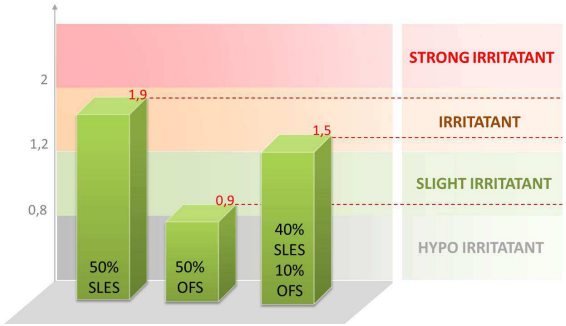
This innovative specialty is able to guarantee a very wide spectrum of functionality combined with an outstanding mildness, due to its balanced composition.

The richness of eudermic effects provided by fructose and physiological aminoacids (the composition of the aminoacids has been selected following the composition of the dermic proteins of the skin, elastic and collagen fibers), and the suitability of olive oil and coconut oil fatty acids, gives birth to a revolutionary surfactant.

The raw material shows a high profile detergent power, combined with a very strong foaming power and the capability to boost the quality of the foam. This feature renders the product fitted also for hair care products, where there is a great need to combine delicate detergent properties, with physiological eudermic effects and technological benefits, linked to the foam produced and the ease of the thickening process (the surfactant is easy to thicken and increases thee thickening properties of other surfactants). The eudermic benefits are translated into a soft touch and brightness induced to the surface of hair, where the frucose and the aminoacids provide a moisturazion and an improvement of the local phsyological condition,: these characteristics, ascribable to the conditioning properties of the ingredient, can be extended to the skin, too. For this reason the product covers a large range of applications (sensitive skin, baby care products and all the traditional products used in detergency)

IRRITATION TEST

OLIVOIL FRUTTOSIDE
in comparison with SLES



The HET CAM test procedure is based on the one suggested by Luepke in 1985.

The test analyses the appearance of irritative reactions on the chorioallantoic membrane of fertilised chicken eggs, as a response to the exposition of the membrane to the test sample. The potential irritancy of a substance is assessed by observing the adverse reactions which occur in the chorioallantoic membrane of a fertile hen's egg after exposure to the tested substance.

The chorioallantoic membrane (CAM) of fertilised chicken eggs is a highly vascularised structure inside the egg. Its exposure allows the direct observation of blood vessels. It is possible to apply a test sample onto the CAM surface and to observe the onset of haemorrhage, lysis and coagulation occurring on the vascular system and the albumin.

The severity of the vascular damage of the chorioallantoic membrane provides indications about the irritation potential of a test sample.

USE AND DOSAGE

The Acyl-Amino-Fructose can be advantageously used together with classic chemical surfactants as it significantly reduces their cutaneous irritation, while at the same time it can be used in baby care products as main surfactant – in this case one can take full advantage of its cutaneous softness that distinguish it from a technological point of view, thus an extremely versatile product, to be used both as primary and as secondary surfactant, with cosmetic active proprieties.

These surfactants can be used in the production of a wide range of cosmetic finished products (such as emulsions, creams, milks, balms, shampoos, face and body detergents, bubble bath, products for sensitive skin baby care, delicate mousse, products with volumizing, conditioning and emollient action, oral care), food, pharmaceutical and chemical-pharmaceutical products (solvents, dispersants, emulsifiers for: aerosols, inhalation and environmental deodorants).

OLIVOIL
FRUTTOSIDE
SURFACTANT

Kalichem Italia s.r.l.

Head Office and Production:

Via G.Pastore, 1 - 25082 Botticino Sera (BS) ITALY
Tel: +39.030.26.93.532 - Fax: +39.030.21.93.581
kalichem@kaliche.it

www.kalichem.it