Întreprindere Individuală Garda Andrea Ilona
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Marigold Flower CO2-to extract (integr)
Type No. 018.001

Raw material:	*Calendula officinalis* -Flowers, dried,from controlled integr. cultivation
Production:	By supercritical fluid extraction with natural carbon dioxide, no solvent residues, no inorganic salts, no heavy metals, no reproducible microorganisms [1].
Description:	Contains all CO2-soluble lipohilic components. Dark red - brown colour, waxy consistency, liquid at 40 °C, characteristic hay-like smell.
D/E - ratio:	13 - 17 kg raw material yield 1 kg product.
Declaration:	INCI-Name (CTFA): Calendula Officinalis (Marigold) Flower Extract, CAS-No. 84776-23-8, EINECS-No. 283-949-5
Certification:	- HALAL certified by Halal Certification Services (HCS) - KOSHER certified by Beth Din Kashrut Division (KLBD) - Approved by ECOCERT GREENLIFE, conform to the COSMOS Standard
Transport:	No dangerous good in the sense of the transport regulations.
Ingredients:	Pentacyclic triterpene alcohols and triterpendiol monoesters including 17 - 25 % faradiol esters esterified with mainly myristic- and palmitic acids. Other ingredients are sterols, carotenes and cuticular waxes.
Application:	Traditional Use: Marigold flowers (Calendula officinalis) and its preparations have a long tradition in self-medication of skin diseases and in cosmetics. The therapeutic use of calendula flowers and ointments goes back at least to Hildegard von Bingen in the 12th Century and has been mentioned in many popular medical books for almost a hundred years.

In Cosmetics:
Faradiol esters have a significant anti-inflammatory effect [2]. Marigold flower CO2-extracts are recommended for treatment of hurts, bruises, inflammations and damaged skin, for wound healing, for dry sensitive skin, in face creams, sun lotions, lipsticks and hair shampoos [3].
Dosage: 0,1 - 0,3 %.
Calendula extracts stimulate granulation, enhance formation of cell tissue, accelerate wound healing and have anti-inflammatory and pain killing effects. They are used to cure decubitus, burns, eczema, bee stings, swelling and inflammation of e.g. veins, varicose veins and hemorrhoids.
The anti-inflammatory [4-6] and cancer-preventing efficacy [7-8] of calendula officinalis is related to the

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activity of triterpene alcohols, especially to faradiol esters, taraxasterol, amyrins and lupeol. Anti-inflammatory mechanisms which play an important role in anticarcinogenic activity include inhibition of NF-kappa B, COX-2, arachidonic acid metabolism, decreased expression of inflammatory cytokines IL-1 beta, IL-6, and TNF alpha, resulting in growth inhibition of cancer cell lines and down-regulation of enzymes, such as protein kinase C which mediates inflammation and tumour-cell proliferation.
The product has also a relatively high concentration of phytosterols which stimulate the collagen synthesis and thus help to protect the skin against harmful environmental stress. A recent human study confirmed the photoprotective effect of phytosterols [9]. It has been demonstrated that phytosterols inhibit UV-induced MMP-1 expression and downregulation of COL1A1 and COL1A2 genes responsible for collagen synthesis.

Toxicology:
It should be pointed out that calendula extracts, against widespread opinion, do not contain any sesquiterpene lactones which may cause allergies [10].

(Statements summarise literature evidence and have informative character. They might be derived from in vitro or animal tests and thus not be substantiated for humans. Statements have not been evaluated by competent authorities and do not refer to finished products. The marketer of any finished product containing any FLAVEX extract as ingredient is responsible for assuring that the claims made for his product are lawful and comply with all applicable laws and regulations of the country in which the product is to be sold.)

Naturalness:

The product is manufactured from the named raw material and 100 % natural. It contains no additives and no other technical adjuncts, it is not blended and not formulated.

Stability:

Unopened container under cool and dry storage conditions and exclusion of light at least 5 years.

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