

# PHYTOCARE-AL

*From the almond a unique green emulsifier for your natural cosmetics*

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## PHYTOCARE-AL

**Almond oil** has several potential benefits for skin and hair health. Almond oil is a potent source of antioxidants, vitamins, and other nutrients vital for skin health. It has been used in medicine since ancient times for the treatment of chronic dry skin conditions thank to the properties of oleic acid and ursolic acid that are known to have anti-inflammatory properties and a restorative healing effect on the outer layer of skin.

**PHYTOCARE-AL** is an O/W emulsified completely of vegetal origin that can also act as an active ingredient with moisturizing and soothing capabilities at the same time. It combines the unique beneficial properties of Sweet Almond Oil with the moisturizing and protective effects of Polyglycerin.

**PHYTOCARE-AL** is free of ethylene oxide or any other chemical solvent offering excellent dermo-compatibility and total biodegradability. The exceptional toxicological profile (do not cause any denaturing of the skin's proteins) and biodegradability, allows to get emulsions with the maximum safety for the skin and for the environment.

**PHYTOCARE-AL** mimics the multi-lamellar hydro-lipid structure of the stratum corneum, strengthening the barrier function of the skin and protecting the epidermis from water loss.

**PHYTOCARE-AL** can be also used to formulate cold process emulsion.

### Fatty acid composition of Sweet Almond Oil

Fatty acid	%
Oleic acid	62 - 74
Linoleic acid	14 - 30
Palmitic acid	5 - 7,5
Stearic acid	1,46 - 2,72
α-Linolenic acid	0,1- 1,4

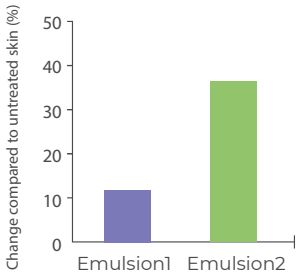
## Gel network structure

Gel network structure formed by **PHYTOCARE-AL** provides many other interesting cosmetic properties as:

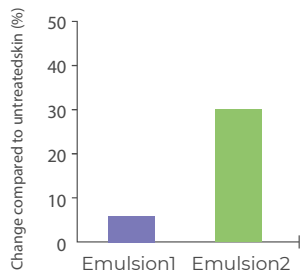
1. High stability for long period of storage in wide range of temperature. Gel network form a rigid barrier preventing oil droplets coalescence.
2. Short and long lasting moisturizing effects thanks to the fact that the water is more easily released on the skin.

	Emulsion 1	Emulsion 2
PHYTOCARE-AL	-	4,0
Ceteareth-25	4,0	-
Ethyl Hexylpalmitate	15,0	15,0
Cerearyl Alcohol	5,0	5,0
Germaben II	0,5	0,5
Water	76,0	76,0
<b>TOT</b>	<b>100</b>	<b>100</b>

Short term hydration (30 min.)

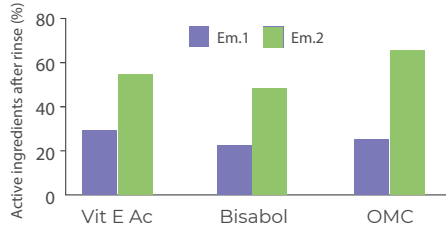


Long term hydration (28 days)



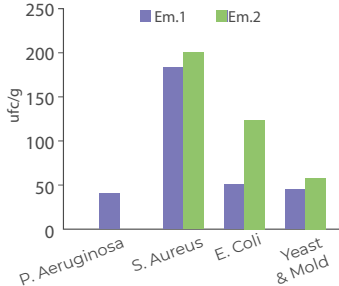
3. Water resistance. Gel network makes emulsions more resistant to rinse.

Water resistant of active ingredients

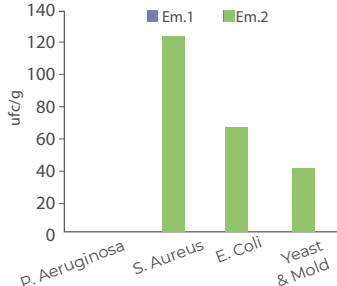


4. It enable to reduce preservatives. In fact thanks to the high number of hydroxyl groups of polyglycerol, there are less free water molecules and this allows to reduce the amount of preservative.

challenge test after a week



challenge test after two week

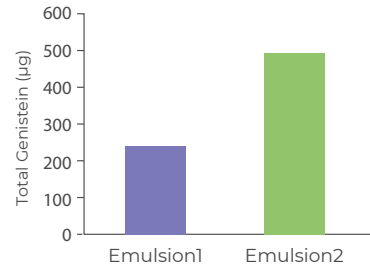


## Inci Name

Sweet almond oil polyglyceryl-6 esters

5. Enhances the absorption of active ingredients through the skin.

Skin absorption study by tape stripping test



6. Improves protection from UV rays thanks to a better dispersion of the physical and chemical sunscreens.

## Main features and applications

**PHYTOCARE-AL** is a versatile and high performance emulsifier for all types of applications. It has an excellent compatibility:

- With any oil phase: vegetable oil, mineral oils, esters, silicones.
- With physical sunscreens (TiO<sub>2</sub> and ZnO) and pigments as iron oxide and lakes.
- With any kind of active ingredients: plant extracts, vitamins, hair dyes, etc.

**PHYTOCARE-AL** is suitable for :

- All product types: skin care, sun care, make-up and hair care.
- All skin types: oily, dry, sensitive, baby, young and mature skin.
- Complete range of viscosity: sprays, lotions, milks, fluid emulsions, creams.
- Full range of texture: light, soft, smooth, rich and very rich.

## Formulation suggestions

**Dosage:** 3-5% (15% of the total lipid phase)

**Range pH compatibility:** 3-8

**Solubility:** dispersible in water phase

**Applications:** Gels, lotions, W/O and O/W emulsions, shampoos, soap, shower gels

**Shelf Life:** 24 months

**Storage:** Store in a cool and dry place, avoid light and heat. Keep containers closed when not in use.

**SAFETY & TOXICITY:** Reference COMMISSION REGULATION (EC) No 987/2008 of 8 October 2008 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH): non-irritating, non-toxic.

## Certifications

Cosmos

## Compliant

EU - US - China