

DunCell

Antioxidant

Scalp health

Anti-photoageing

Barrier supporting

INCI: Caprylic/Capric Triglycerides (and) Dunaliella salina extract

About

DunCell is a lipophilic extract derived from biotechnologically propagated microalgae *Dunaliella salina*. The extract is rich in carotenoids and triglycerides, which protect the skin from environmental stress and strengthen its barrier function.

Activity

In vitro

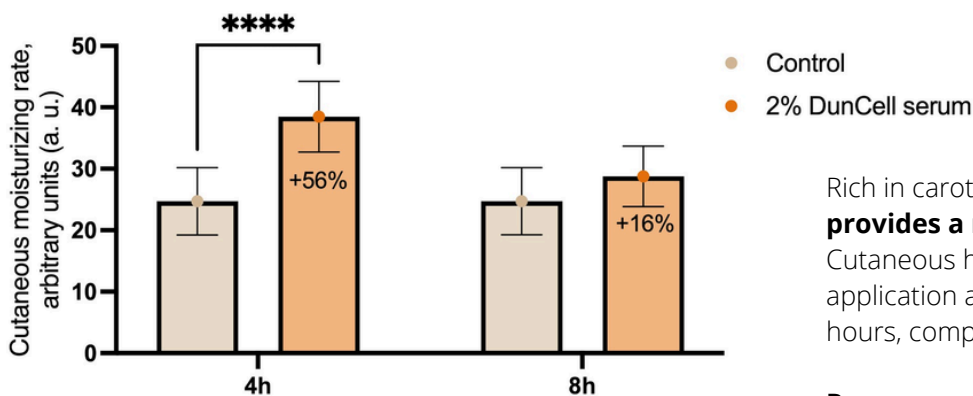
- Carotenoids are particularly good at quenching singlet oxygen, a major reactive oxygen species induced by UV. Through its effective anti-oxidative activity DunCell prevents lipid peroxidation in the skin barrier, protects cell membranes and proteins, and delays photo-ageing.
- When used in hair care DunCell contributes UV protection and reduces oxidative damage to keratin. Though lipophilic binding hair coating properties are assured. Antioxidative activity helps to reduce oxidative stress in hair follicles, supporting healthy hair growth.



Dunaliella salina: the extremophile microalga engineered by nature to thrive under intense environmental stress

In vivo data

Moisturising effect (Corneometer® CM 825)



Rich in carotenoids and triglycerides, **DunCell provides a rapid moisturizing effect.** Cutaneous hydration was 56% higher 4 hours after application and remained 16% higher after 8 hours, compared to untreated skin

Recommended use level: 1-5%

More Information:
www.alternativeplants.eu



Contacts:
products@alternativeplants.eu

DunCell

Born in Extreme Conditions

DunCell™ is derived from *Dunaliella salina*, a rare halophilic microalga that flourishes in hypersaline environments under:

- Intense UV radiation
- Extreme salinity
- Oxidative stress

Its ability to survive where most organisms cannot makes it a unique biological source of resilience.

Nature's Photoprotection Blueprint

When exposed to harsh sunlight, *Dunaliella salina* activates a natural defense mechanism:

- Produces exceptionally high levels of protective carotenoids

These adaptive molecules help protect against environmental damage and oxidative stress.

Why DunCell™ Matters in Skincare Innovation

DunCell™ enables next-generation formulations for:

- Bio-inspired photoprotection skincare
- Antioxidant defense
- Barrier support

From extreme survival comes extraordinary skin defense.

DunCell: algal carotenoid complex for genuine multi-target activity

Key carotenoids include:

β-Carotene • Lutein • α-Carotene • Cryptoxanthin • Violaxanthin • γ-Carotene • Zeaxanthin

Compound	Key Bioactivities	Skin Target
β-Carotene DOMINANT	Provitamin A · Keratinocyte differentiation · Epidermal renewal · UV radical quenching · Sebum regulation · Wound healing	Longevity · Barrier support · Photoprotection
Lutein (2 nd most abundant)	Blue-light filtering · MMP inhibition · Collagen & elastin protection · Fibroblast DNA defence · Scalp anti-inflammatory	Longevity · Collagen support · Photoprotection
α-Carotene	Provitamin A (50% potency) · High antioxidant per molecule · Synergistic radical quenching · Photoprotection	Antioxidant · Photoprotection
Cryptoxanthin	Provitamin A (oxygenated) · NF-κB anti-inflammatory · Skin barrier lipid support · Androgen modulation · Anagen phase support	Barrier support · Hair health ·
Violaxanthin	Anti-inflammatory · Photoprotection · Melanogenesis inhibition · Skin brightening (in vitro)	Brightening · Anti-inflammatory
γ-Carotene	Moderate antioxidant · Minor provitamin A · Synergistic radical quenching pool	Antioxidant
Zeaxanthin	Membrane-level oxidative protection · Keratinocyte lipid defence · Blue-light defence · Lutein synergy	Antioxidant · Photoprotection

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Technical specification – data sheet

Product	DunCell <i>INCI: Caprylic/Capric Triglycerides (and) Dunaliella salina extract</i>
Appearance	Yellow to orange. Formation of small amounts of precipitate might be observed and does not affect product quality.
Odour	Mild, characteristic
Solubility	Lipophilic
Density	0.92 – 0.97 g/cm ³ at room temperature (22... 25 °C)
Microbiological quality (total plate count)	Aerobic mesophilic bacteria < 100 cfu/g (ISO 21149) Yeasts < 100 cfu/g (ISO 16212)
Recommended concentration for use in cosmetic products	0.5 – 2%
Shelf life and storage conditions	12 months Store in room temperature, protect from light.