

Anti-oxidant

Energizing

Scalp-health

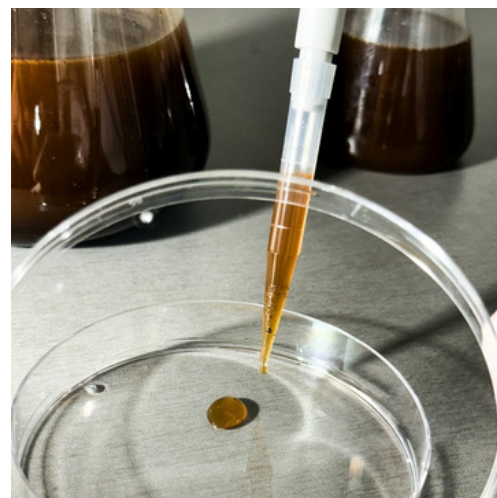
Upcycled

Longevity

INCI: Water, Coffea arabica seed extract, potassium sorbate, sodium benzoate

Transforming Waste into Beauty: The Power of Spent Coffee Grounds

CaffiCell is an advanced cosmetic ingredient derived from spent coffee grounds through an upcycling and biorefinery process. Every day, over 2.25 billion cups of coffee are consumed worldwide. This massive consumption generates a significant amount of waste in the form of spent coffee grounds, which still contain numerous beneficial plant compounds. To fully harness the potential of coffee beans, we employ tailored extraction techniques to recover skin-energizing and protective compounds from these grounds. This innovation aligns with the principles of the circular economy, transforming waste into a high-value ingredient rich in bioactive compounds.



Efficacy

- Skin Protection - antioxidative, barrier supporting
- Enhanced Microcirculation for Energized Skin
- Scalp Health

From spent coffee grounds...



...to highly efficient extracts...



...with characterized bioactivities...



...for outstanding skin and hair-care formulations

Efficacy

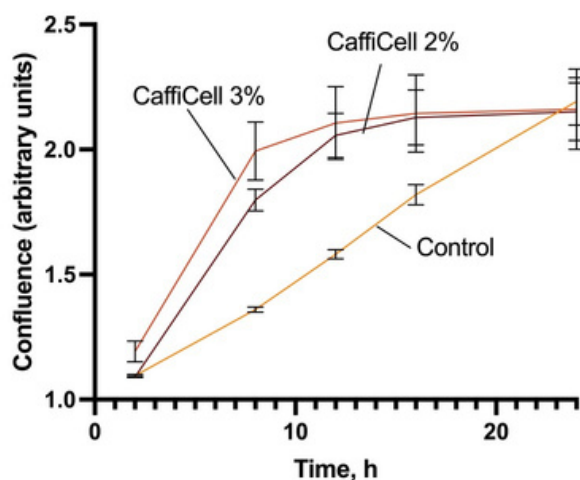
Antioxidative effect

The antioxidants derived from coffee effectively neutralize free radicals, protecting the skin from oxidative stress and contributing to the prevention of photoageing.

Stimulating effect on keratinocytes

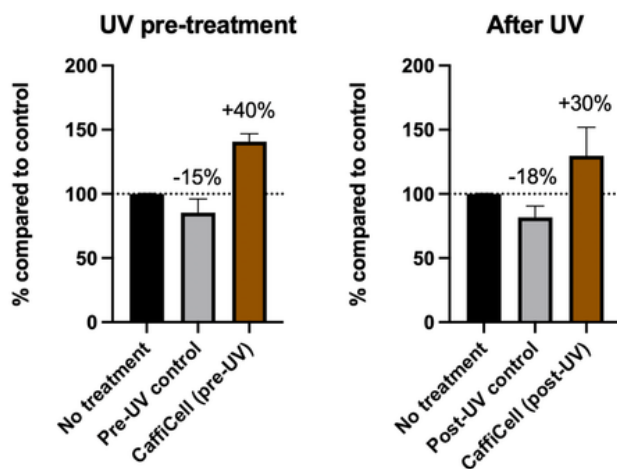
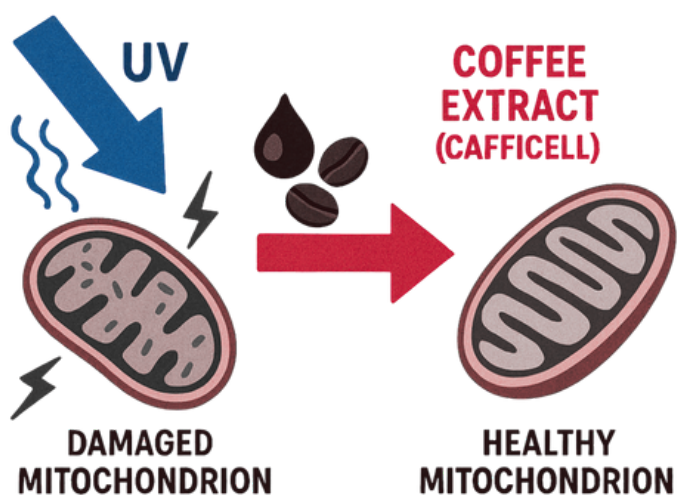
Treatment with CaffiCell significantly enhances keratinocyte growth activity, demonstrating a clear stimulatory effect that plays a crucial role in supporting a healthy epidermal barrier.

Proliferation of keratinocytes



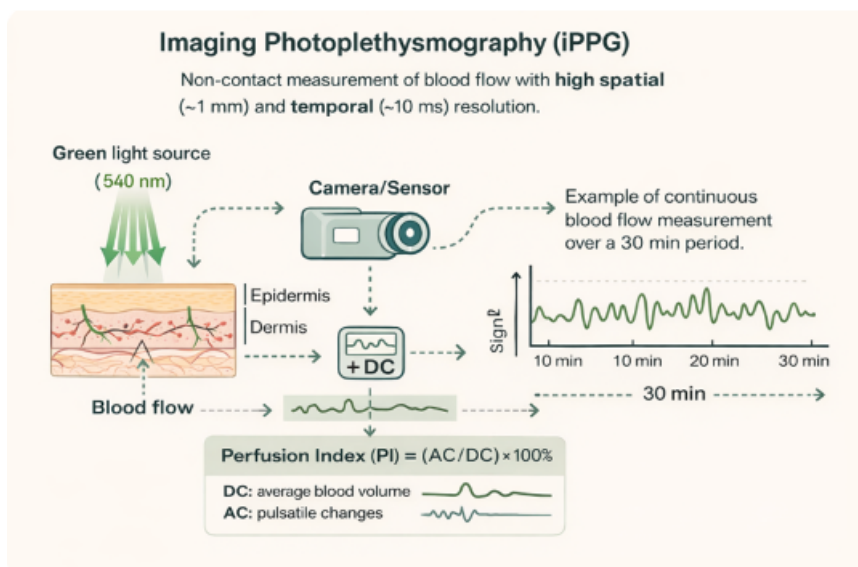
Support healthy mitochondria

As the powerhouses of the cell, mitochondria play a central role in cellular vitality, and their functional decline is a well-known hallmark of ageing. CaffiCell enhances mitochondrial activity and energy metabolism, even under UV-induced stress, supporting long-term skin longevity.



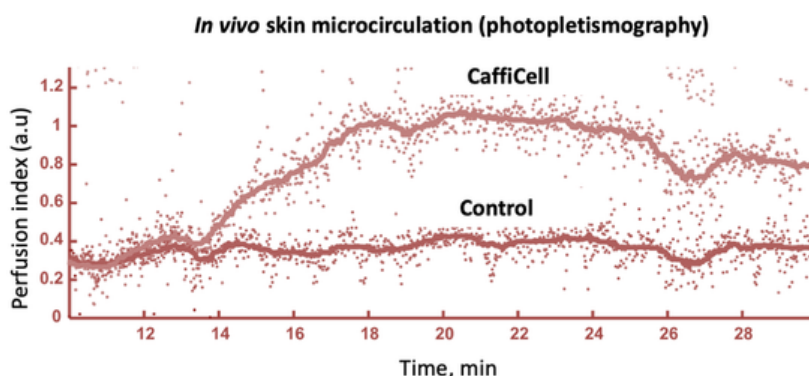
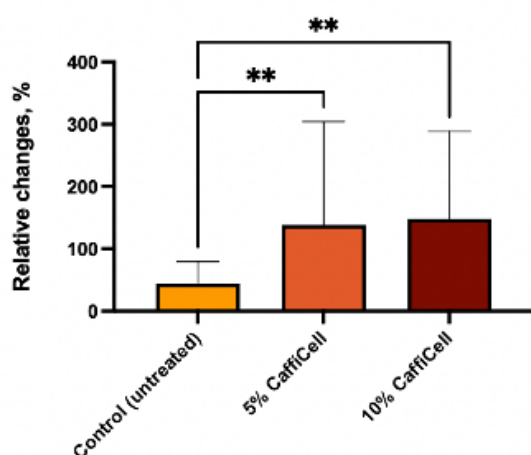
Changes in mitochondrial membrane potential (higher = healthier, more active mitochondria)

Effect on skin microcirculation



Imaging photoplethysmography (iPPG) was used to evaluate CaffiCell's effect on microcirculation in vivo (n=30). iPPG is a non-invasive optical technique that measures microcirculatory blood flow by detecting subtle, periodic changes in skin color caused by pulsatile blood volume variations. Using a camera and controlled illumination, iPPG captures these changes over time and converts them into signals reflecting blood perfusion and vascular dynamics.

CaffiCell significantly stimulates skin microcirculations which leads to enhanced skin vitality and oxygenation while reducing puffiness. Improved circulation also supports scalp health and promotes stronger, healthier hair growth.



Technical specification – data sheet

Product	CaffiCell <i>INCI: Aqua (and) Coffea arabica seed extract (and) sodium benzoate (and) potassium sorbate</i>
Appearance	Light brown to dark brown, slightly opalescent. Formation of small amounts of precipitate might be observed and does not affect product quality.
Odour	Characteristic
pH	5.5 ± 1 at room temperature (22... 25 °C)
Solubility	Water soluble
Density	0.95 – 1.10 g/cm ³ at room temperature (22... 25 °C)
Total phenolic content	>400 µg/ml gallic acid equivalents (Folin-Ciocalteu method)
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	2 – 5 %
Shelf life and storage conditions	12 months Store in room temperature, protect from light.

CaffiCell — registered in the China National Medical Products Administration (NMPA) ingredient submission system.

NMPA submission code– 228274-14381-2714