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KAFFE BUENO

KAFFAGE® BROCHURE



KAFFAGE®

Upcycled Multi-Functional Active Biopolymer Extract

PRODUCT NAME	PRODUCT CODES	INCI NAME	FORM
KAFFAGE®	03001-1	Coffea Arabica Seed Extract	Powder
KAFFAGE-D®	03001-2	Glycerine, Coffea Arabica Seed Extract	Liquid
KAFFAGE-B®	03002-1	Coffea Arabica Seed Extract	Powder
KAFFAGE-BD®	03002-2	Glycerine, Coffea Arabica Seed Extract	Liquid





01. PRODUCT DESCRIPTION

KAFFAGE® is an innovative amphiphilic biopolymer derived from upcycled defatted coffee by-products. Its unique composition, enriched with polyphenolic groups, provides unparalleled multi-functionality and exceptional performance.

With its abundant hydroxycinnamic acids, KAFFAGE® offers remarkable antioxidant activity and effectively prevents UV-induced glycation in human cells¹. Moreover, it acts as a natural SPF booster by absorbing UV light, including UV-B rays known to cause sunburn².

The natural brown color of KAFFAGE® and the yellow to brown shade of KAFFAGE-B™ contribute to their ability to mimic various skin tones, reducing the reliance on conventional color compounds like iron oxides.

Furthermore, KAFFAGE® exhibits high water solubility along with emulsifying and thickening properties, facilitating effortless formulation. Its inherent antimicrobial properties also reduce the necessity for additional preservatives^{1,3}.



03. RECOMMENDED APPLICATIONS

- Skin Care
- BB/CC Creams
- Body Care
- Foundations
- Self-tanners

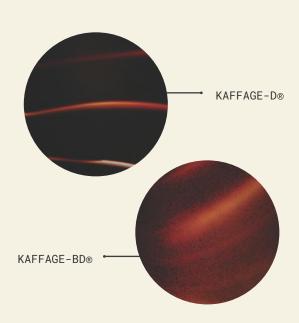
02. BENEFITS

Personal Care Benefits:

- Antiglycation¹
- Antioxidant
- Skin Microbiome Friendly
- SPF Booster²

Formulation Benefits:

- Emulsifying
- Highly Water Soluble
- Mimics Wide Range of Skin Tones
- Preservative Boosting
- Thickening Effect



SPECIFICATIONS

PARAMETER	K A F F A G E ® 0 3 0 0 1 - 1	K A F F A G E − D ® 0 3 0 0 1 − 2	K A F F A G E − B ® 0 3 0 0 2 − 1	K A F F A G E - B D ® 0 3 0 0 2 - 2
COLOUR INTENSITY (0.1% ABSORBANCE @610 NM)	0.40-0.7	0.2-0.3	0.1-0.35	0.05-0.15
COLOUR BY CIE LAB (L VALUE)	3 5 - 4 0	1 5 - 2 5	4 5 - 5 5	20-30
TINCTORIAL POWER (0.1% ABSORBANCE @560 NM)	0 . 5 - 0 . 8	0.2-0.3	0 . 1 - 0 . 3 5	0.05-0.15
TOTAL PHENOLICS CONTENT (GAL- LIC ACID EQUIVALENTS)	>40000 mg/kg	> 8 0 0 0 mg/kg	> 2 0 0 0 0 mg/kg	>4000 mg/kg
pH (1% SOLUTION IN WATER)	7 - 9	7 - 9	7 - 9	7 - 9
LOSS ON DRYING	< 5 %	< 5 %	< 5 %	< 5 %
DENSITY	0.55-0.65 g/ml	1.0-1.15 g/ml	0.55-0.65 g/ml	1.0-1.15 g/ml
TOTAL PLATE COUNT 30°C	≤ 10	≤ 10	≤ 10	≤ 10
YEASTS AND MOULDS	≤ 10	≤ 10	≤ 10	≤ 10
ESCHERICHIA COLI	N D	N D	N D	N D
STAPHYLOCOCCUS AUREUS	N D	N D	N D	N D

SOLUBILITY (% G PRODUCT/G SOLVENT):

WATER	ETHANOL	GLYCEROL
100%	4 0 %	7 0 %

ACTIVE CONTENT (%): TBD

RECOMMENDED DOSAGE (%): 1 - 6%



EFFICACY DATA

SKIN CARE - IN VITRO

To test the detoxifying and protective effects of KAFFAGE®, human keratinocytes (HaCaT) were exposed to UVA-light and the formed advanced glycation end-products (AGEs) were measured. These AGEs are formed under oxidative stress and have been linked to several chronic diseases, such as diabetes. Thus, inhibition of glycation has a preventive potential. The cells were for 24 hrs with 0.01% and 0.03% KAFFAGE®, this was enough to prevent damaging effects of UVA exposure (20 J/cm2) for 3.5 hrs. After 3 hrs exposure, cells treated with 0.03% and 0.01% KAFFAGE®, respectively 49.6% and 28.3%, than the control. The amount of AGEs in the 0.03% KAFFAGE® treated cells was comparable to the amount in unexposed cells.

The treatment with 0.01% and 0.03% KAFFAGE® for 24 hrs, significantly reduced the formation of AGEs under UVA exposure.

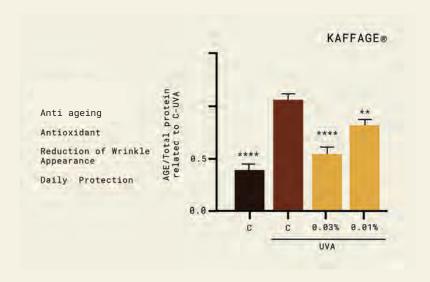


FIGURE 11: Advanced glycation end-products formed per total protein in HaCaT-cells after UVA exposure. Test conditions: no treatment (C), 0.03% KAFFAGE® , 0.01% KAFFAGE® .

CLAIMS:

By preventing UVA-induced glycation KAFFAGE helps preserve collagen and elastane.

MODE OF ACTION:

KAFFAGE® is an antioxidant that absorbs UV-light. This reduces the impact of UV-radiation on cells and its sugars and proteins, resulting is less formation of AGEs. The ability to absorb UV-light, makes KAFFAGE® a natural sun blocker. KAFFAGE® showed higher absorbance in all the UV-regions than the mineral sun blocker zinc oxide (ZnO), this was less in the UVA-region (315-380 nm) and more in the UVB-region (280-315 nm). KAFFAGE-B® did not absorb notable UVA and UVB radiation.

ABSORBANCE IN THE UV-REGION

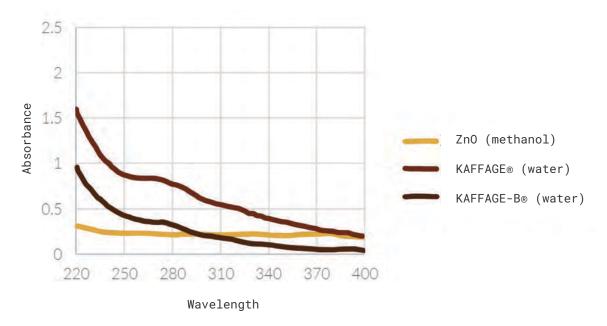


FIGURE 12: Absorption in the UV-region at 100 μ g/mL for KAFFAGE®, KAFFAGE-B® and ZnO.

SKIN CARE - IN VIVO

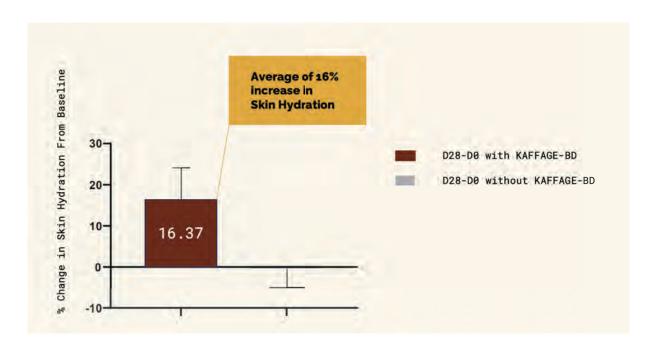


FIGURE 13: For KAFFAGE-BD®, the sample size for testing included 30 individuals using a formula with KAFFAGE-BD® and 20 without it. The testing method involved performing five repeated measurements on the cheek of each volunteer at various time points. The results demonstrated that after 28 days of use, the formula containing 3% KAFFAGE-BD® showed an average of 16% increase in skin hydration compared to a BB cream without KAFFAGE-BD®.

VISIA-CR IMAGING IMPROVEMENT IN APPEARANCE OF WRINKLES IN OCULAR REGION

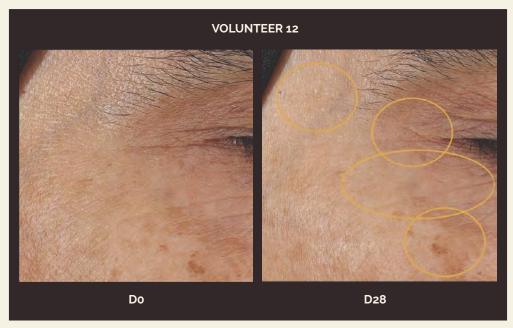


FIGURE 14



FIGURE 15

CLAIMS:

KAFFAGE® improves fine lines, enhances hydration of the skin by 16%, and allows for a bettered appearance of hyperpigmentation.

POST USE CONSUMER SATISFACTION SURVEY BB CREAM WITH KAFFAGE-BD®

of users felt their skin was more radiant, with a 90% healthy-looking glow.

93% of users felt their skin was more moisturised.

agreed the treatment nourished their skin. 97%





REFERENCES

 1 Moreira, A.S., et al., (2012). Coffee melanoidins: structures, mechanisms of formation and potential health impacts. Food & Function. 3:903-915

² Own data

³ Own data

