

SOFTISAN[®] conditionHAIR

NATURAL HAIR & SKIN CONDITIONER



IOI OLEOCHEMICAL

IOI Oleo GmbH
PERSONAL CARE

SOFTISAN[®] conditionHAIR

A natural hair & skin conditioner

Developing certified natural shampoo formulations is a challenging task for formulators. Due to industrial restrictions for the use of standard conditioning cationic polymers and silicone oils, it is difficult to develop natural shampoos with high care level and good sensorial quality. IOI Oleo Research & Development has identified a molecule enabling the right balance between caring properties and sensory profile of natural shampoos. SOFTISAN[®] conditionHAIR has been developed to meet the requirements of natural cosmetics products. It is 100% natural made of natural glyceryl monooleate with pyrrolidone carboxylic acid (PCA) derived from the natural glutamic acid. At our production facility, the two well-known raw materials are chemically linked to form the new and unique ingredient: SOFTISAN[®] conditionHAIR. At physiological pH (5.5), it provides positive charges, hence shows high substantivity on skin and hair. At other pH levels, it shows good affinity to hair due to hydrophobic interaction. SOFTISAN[®] conditionHAIR works, like conventional cationic polymers, as a conditioning agent and deposition aid for hydrophobic caring material, e.g. natural esters, by forming coacervates.

Characteristics



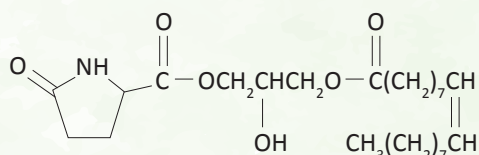
INCI: PCA Glyceryl Oleate

- 100% natural
- Appearance: pale yellow highly viscous liquid
- Recommended dosage: 0.5–2%

Properties

- Improvement of wet and dry combability
- Deposition aid
- No build-up

Chemical structure



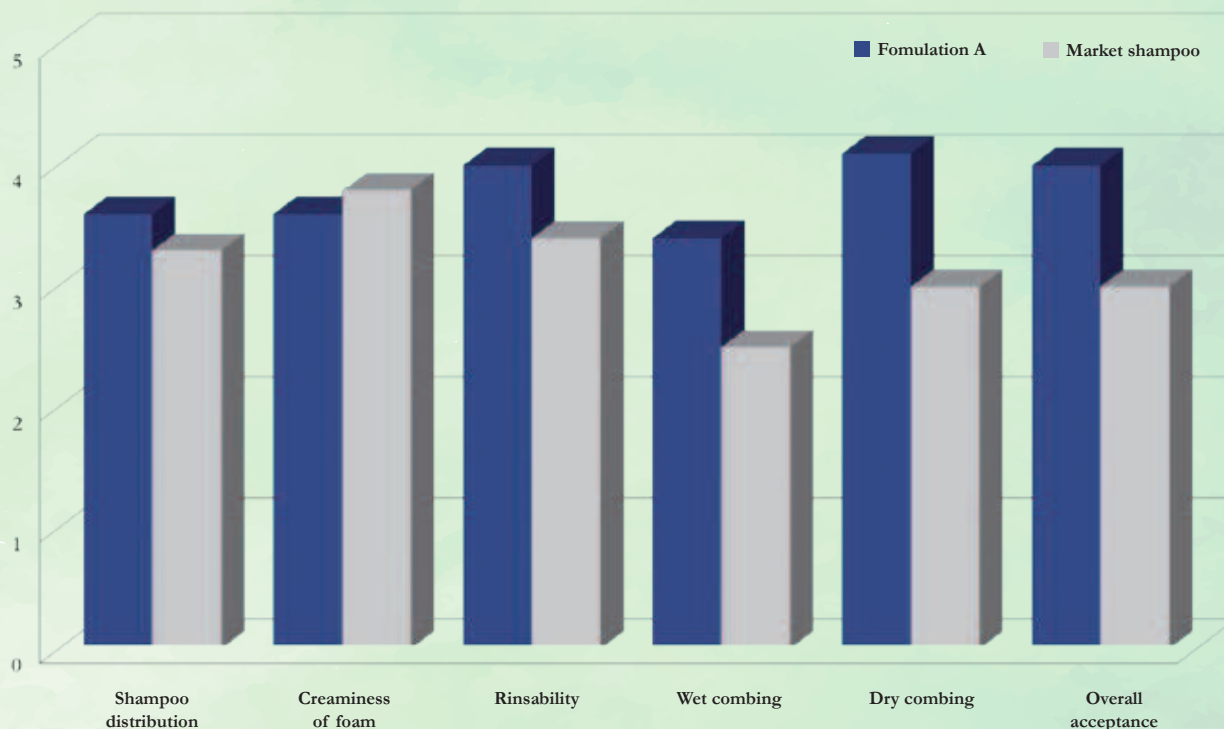
Formulations used for evaluation

Tradename	INCI	Shampoo A %	Shampoo B %	Shampoo C %
Keltrol [®] SFT-Gel 1.2%	Xanthan Gum	62.8	–	–
Keltrol [®] CG-T-Gel 1%	Xanthan Gum	–	70.8	70.5
Glycerin	Glycerin	5.0	–	–
Euxyl [®] K 700	Phenoxyethanol, Benzyl Alcohol, Potassium Sorbate, Aqua, Tocopherol	1.0	1.0	1.0
SOFTISAN [®] conditionHAIR	PCA Glyceryl Oleate	0.7	0.7	0.7
MIGLYOL [®] Coco 810	Coco-Caprylate/Caprates	–	–	0.5
EcoSense [™] 1200	Lauryl Glucoside	4.0	2.0	2.0
EcoSense [™] 919	Coco Glucoside	10.0	12.0	12.0
Sulfetal LS-U	Sodium Lauryl Sulfate	13.5	12.0	12.0
Ethanol	Ethanol	3.0	–	–
Sodium chloride	Sodium Chloride	–	1.5	1.5
Citric acid	Citric Acid	q.s.	q.s.	q.s.
Aqua dem.	Aqua	ad 100.0	ad 100.0	ad 100.0

Consumer evaluation on slightly damaged hair

A comparison of two blinded shampoos was done in a home use test by consumers with slightly damaged hair (n=8). A formulation containing SOFTISAN® conditionHAIR and a natural market shampoo were evaluated.

Home use test – results



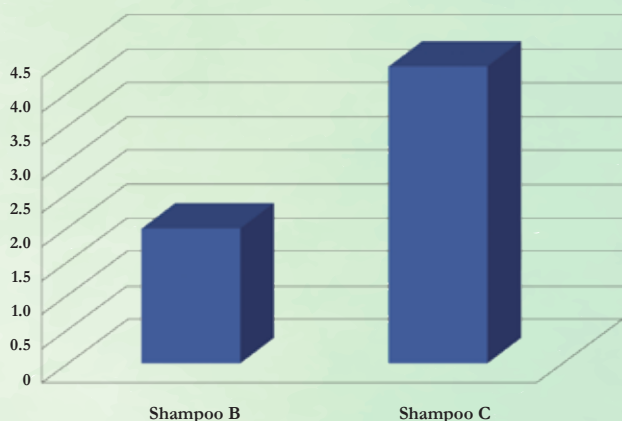
Shampoo A, containing SOFTISAN® conditionHAIR, showed the following performance compared to the market shampoo:

- Better rinsability
- Better dry combing
- Better wet combing
- Higher overall acceptance

Deposition of hydrophobic conditioners

A comparison of the wet combing of standardized hair tresses, 3h bleached, treated with two shampoos (Shampoo B and C, see table on page 1) was conducted. Five panelists had to choose the shampoo with the best combability. The two formulations have the same shampoo base. They differ in the concentration of MIGLYOL® Coco 810 (INCI: Coco-Caprylate/Caprate).

Result of wet combing comparison:



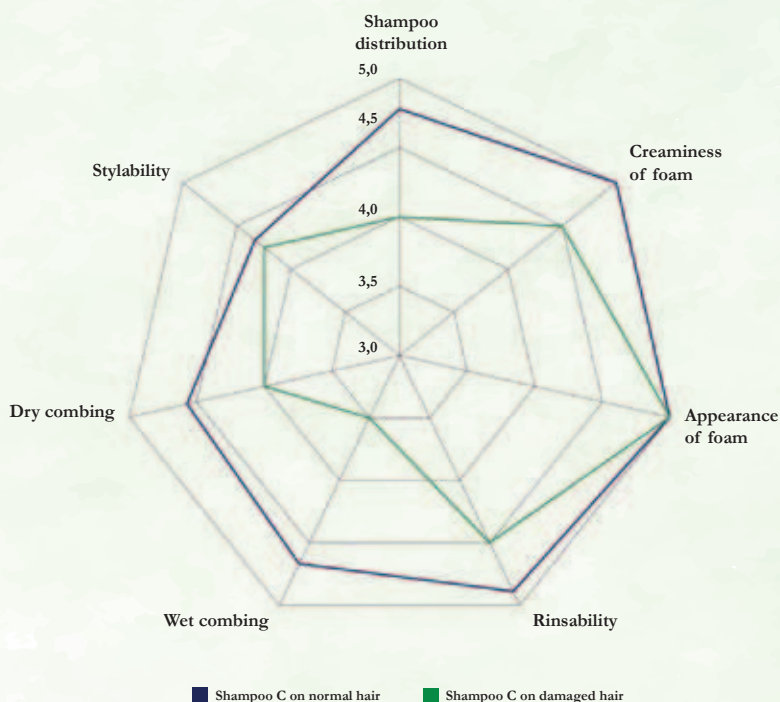
For 100% of the panelists, hair tresses treated with Shampoo C (combination SOFTISAN® conditionHAIR with MIGLYOL® Coco 810) showed better wet combing compared to hair tresses treated with Shampoo B (SOFTISAN® conditionHAIR alone). This shows the ability of SOFTISAN® conditionHAIR to deposit hydrophobic materials like MIGLYOL® Coco 810 via coacervation.

MIGLYOL® Coco 810 can be used as a boosting agent like silicone oils for the care performance of your natural shampoo formulations.

Hairdresser's evaluation

Shampoo C was tested by a hairdresser on normal and damaged hair. The goal of the study was to get feedback from a professional perspective.

Results of hairdresser's evaluation:



Shampoo C shows on both hair types:

- Creamy foam with fine structure
- Very good rinsability
- Good stylability after use of the shampoo

The care level in wet and dry hair is different for the various hair types. It is higher for normal hair and on a very good level for damaged hair.

Typical use of PCA Glyceryl Oleate



Shampoos



Wet Wipes



Hair Conditioners



Emulsions

SOFTISAN[®] conditionHAIR can be used as a skin conditioner because of its high substantivity to skin. Due to the presence of pyrrolidone carboxylic acid, also part of the Natural Moisturizing Factor (NMF), SOFTISAN[®] conditionHAIR has a positive influence on the humidity level of the skin. That is why it fits very well into natural cosmetics concepts.

Moreover, recent formulation developments have shown that SOFTISAN[®] conditionHAIR can also be used to positively influence the sensory properties of wet wipes.

SOFTISAN[®] conditionHAIR is a multifunctional ingredient for natural cosmetics.

Raw material approved by ECOCERT GREENLIFE, compliant with the COSMOS standard.

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IOI Oleo GmbH

Hamburg, Germany | T: +49 40 28 00 31-0 | E: personalcare@ioioleo.de | W: www.ioioleo.de