



THE NATURAL PERFORMANCE ENHANCER



APPLICATION BULLETIN: PERSONAL CARE

LOOKING FOR A NATURAL HAIR CONDITIONER? EXILVA IS YOUR NEW CHOICE OF FUNCTIONAL ADDITIVE

Exilva is a completely natural and infinitely sustainable microfibrillated cellulose that improves rheology and stability in product formulations, as well as increasing your formulation efficiency, reducing your CO2 footprint and creating exciting opportunities for innovation.

Bleaching your hair causes damage due to oxidation of the hair by chemicals such as hydrogen peroxide and ammonia. These treatments lead to dry, inelastic and brittle hair. Generating the ability to make combing of bleached hair after washing easier is important in hair care products in order to avoid hair breakage. Exilva is a multifunctional additive in personal care and cosmetic formulations and we can now document its enhanced hair conditioning effect on bleached hair. This effect can be explained by the highly advanced three-dimensional network of

microfibers. Exilva's three-dimensional network has a high available surface area and functional OH-groups, enabling it to both physically and chemically interact with its surroundings. This is the secret behind the high performance of Exilva in cosmetic and personal care formulations.

To verify the potential of Exilva as an ingredient with conditioning effect, the combing forces necessary for bleached, European hair meshes after washing with and without an Exilva formulated conditioner were

measured. The performance of the hair conditioner with Exilva is better than the reference/placebo.

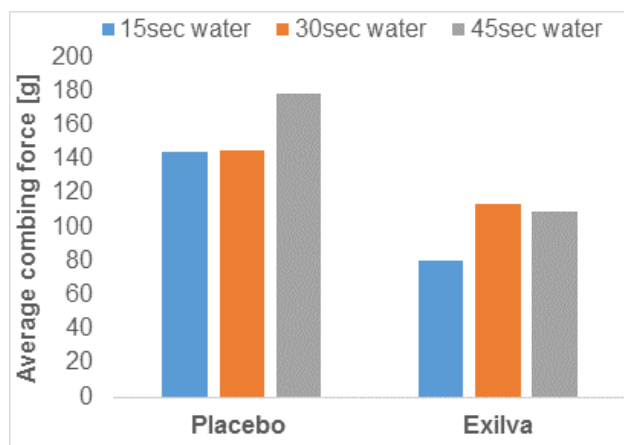


FIGURE 1. AVERAGE COMBING FORCE OF A HAIR CONDITIONER WITH EXILVA COMPARED TO A PLACEBO PRODUCT WITHOUT EXILVA. THE MEASUREMENTS WERE CARRIED OUT ON BLEACHED HAIR AFTER 15, 30 AND 45 SECONDS RINSING TIME WITH WATER.

Conditioner Placebo Formula (no conditioner) 09-10.001			
INGREDIENTS	INCI NAME	% w/w	SUPPLIER
PHASE A			
Water	Aqua	89.20	
dermosoft 1388	Water (and) Glycerin (and) Sodium Levulinate (and) Sodium Anisate	2.00	Dr. Straetmans
PHASE B			
Keltrol CG-RD	Xanthan Gum	0.30	CP Kelco
PHASE C			
dermofeel GSC	Glyceryl Stearate Citrate	2.50	Dr. Straetmans
Sunflower Oil	Helianthus Annuus (Sunflower) Seed Oil	2.00	Gustav Heess
Lanette O	Cetearyl Alcohol	4.00	BASF
Specification: PEG-free, paraben-free			

TABLE 1: CONDITIONER PLACEBO FORMULA

Conditioner Formula with EXILVA 09-10.003			
INGREDIENTS	INCI NAME	% w/w	SUPPLIER
PHASE A			
Water	Aqua	39.20	
dermosoft 1388	Water (and) Glycerin (and) Sodium Levulinate (and) Sodium Anisate	2.00	Dr. Straetmans
EXILVA 2%	Cellulose	50.00	BORREGAARD
PHASE B			
Keltrol CG-RD	Xanthan Gum	0.30	CP Kelco
PHASE C			
dermofeel GSC	Glyceryl Stearate Citrate	2.50	Dr. Straetmans
Sunflower Oil	Helianthus Annuus (Sunflower) Seed Oil	2.00	Gustav Heess
Lanette O	Cetearyl Alcohol	4.00	BASF
Specification: Easy to apply, light, smooth skin feeling, PEG-free, paraben-free Conditioning effect proven for bleached hair and grey hair			

TABLE 2: CONDITIONER FORMULA WITH EXILVA

Conclusion

As one of its multifunctional properties, Exilva provides a conditioning effect on bleached European hair. The average combing force is significantly reduced when Exilva is used in the formulation compared to the placebo. In addition, the conditioner with Exilva spreads well on the hair allowing for

uniform effect on the total hair volume and easier handling for the consumer.

The formulation used as background for the data presented is available on demand, by sending an enquiry to: exilvasales@borregaard.com

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