



THE NATURAL PERFORMANCE ENHANCER



## APPLICATION BULLETIN: PERSONAL CARE

### EXILVA SHOWS NATURAL HAIR CONDITIONING PERFORMANCE FOR GREY HAIR

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.

Grey hair is usually finer, drier and more roughly textured. One of the reasons for this is the fact that the oil glands produce less sebum with age, making it more difficult to comb grey hair. Generating the ability to make grey hair easier to comb after washing is important in a range of hair care products in order to avoid further hair damage. Exilva is a natural multifunctional additive for cosmetic formulations and we can now document its enhanced hair conditioning effect on grey hair. This effect can be explained by Exilva's highly advanced three-dimensional network

of microfibrils?. 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 Exilva's high performance in personal care and cosmetic formulations.

To verify the potential of Exilva as an ingredient with conditioning effect, the combing forces necessary for grey 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.

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

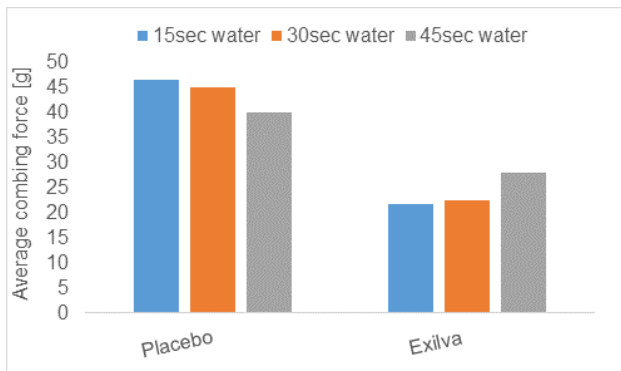


FIGURE 1. AVERAGE COMBING FORCE OF A HAIR CONDITIONER WITH EXILVA COMPARED TO A PLACEBO PRODUCT WITHOUT EXILVA. THE MEASUREMENTS WERE CARRIED OUT ON GREY HAIR MESHES AFTER 15, 30 AND 45 SECONDS RINSING TIME WITH WATER.

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			
Ketrol CG-RD	Xanthan Gum	0.30	CP Kelco
PHASE C			
demofeel 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			
Ketrol CG-RD	Xanthan Gum	0.30	CP Kelco
PHASE C			
demofeel 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

## Figure 2

### Conclusion

As one of its multifunctional properties, Exilva provides a conditioning effect on grey hair. The average combing force is reduced by more than 50% when Exilva is used in the formulation compared to the placebo.

#### Disclaimer

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