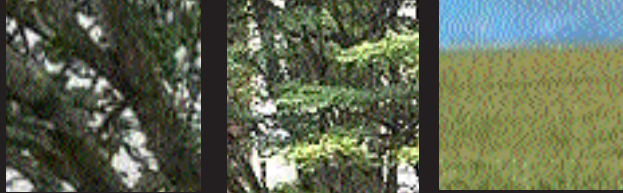


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Bois II for Hair Care

- Enhances Moisture Content of Hair
- Repair Split Ends
- Improves Hair Aesthetics



DESCRIPTION

Bois II is a proprietary raw material composed of various polar and non-polar lipids of physiological origin. The composition has been optimized to stimulate those membranes found in the outer layers of the stratum corneum and hair cuticle to facilitate and encourage penetration into these layers and integration into and supplementation of existing membrane structures in these tissues.

Bois II has excellent applications in the cosmetic industry for use in hair care, make-up, skin treatment, and cleansing products. It is cost-efficient and readily available, easy to use and a high margin of safety.

PROPERTIES

Bois II was tested at 1% in a shampoo and shown to improve the water-holding capacity of healthy hair after two weeks compared to a control shampoo without Bois II. Another test proved that 1% Bois II also improves the water-holding capacity of permed or bleached hair.

An aesthetic evaluation of hair washed with 1% Bois II and the control shampoo (no Bois II) showed that moisture, shine and luster, body and manageability and combability all improved noticeably using the Bois II shampoo, while the control shampoo actually diminished these parameters.

FORMULATION

Bois II is a clear to slightly hazy translucent liquid. Suggested use level in a shampoo is 1%. Bois II is heat stable and can easily be incorporated into the heated oil phase.

LEGISLATION

INCI Name: Santalum Album (Sandalwood) Extract, Phellodendron Amurense Bark Extract, Hordeum Distichon (Barley) Ext.

CAS #: 84787-70-2, 164288-52-2, 94349-67-4 EINECS: 284-111-1, 423-720-0, 305-187-5

ECOCERT Status: Complies with the ECOCERT Standard for natural ingredients.



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Bois II for Hair Care

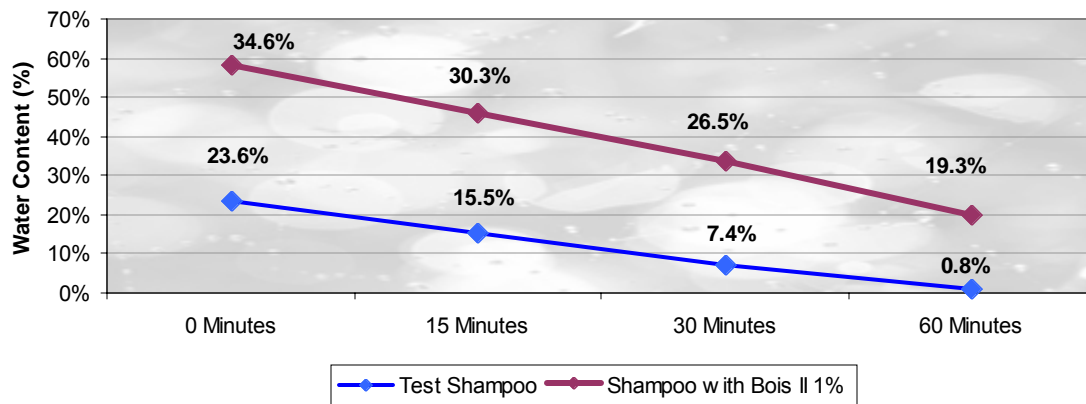
BOIS II ENHANCES WATER HOLDING CAPACITY OF HAIR

Individual hair fibers (about 10 per subject, per evaluation) from subjects participating in the above clinical in-use study were removed and assessed for moisture content with the gas-bearing electrodyneometer. At low force elongation, the extensibility of hair is directly proportional to water content there at a fixed force, the ratio of elongation over force (x/F) was plotted as an indication of changes in water content. All values were corrected for hair diameter, and treated samples were compared to the base shampoo control. If we re-establish lipids in the hair it will hold more water and appear as more visco-elastic.

When test subjects treated their hair for a month under real-life conditions and mechanical properties were assessed via the GBE (Gas Bearing Electrodyneometer), we observed that the 1% Bois II in a shampoo resulted in hair with much water holding properties than the control. When assessed at relatively low (15%) humidity, dramatic increases in hair extensibility were observed, demonstrating the Bois II (at 1%) treated hair had a better water barrier.

Protocol: Hair fibers (about 10) were removed from test subjects who had used the various test materials for about two weeks. After removal, samples were soaked in water for five minutes, attached to the GBE (Gas Bearing Electrodyneometer) and extension properties were measured at about a 5-gram load, over a one-hour test period.

Change in Hair Water Content (After 2 Weeks Treatment)



BOIS II - AESTHETIC EVALUATION

Test subjects evaluated the dryness of their hair on a 0-10 visual-analog scale at the start of the study and after use of the test products for one month (using the product at least 5 times per week). A clinician also evaluated hair condition with respect to dryness on the same scale. Evaluations were combined for an overall average score since we observed that both evaluations correlated quite well. At the start of the study evaluations were made 4 hours after a morning shampoo with a designated non-conditioning shampoo and after subjects had equilibrated at 30% RH (Relative Humidity) for 2 hours.

Test materials used included an experimental non-conditioning shampoo and the same shampoo supplemented with 1% Bois II. After four weeks of use of a test shampoo with Bois II, hair properties were evaluated by the test subjects and clinicians. Results demonstrate that while the control shampoo did not improve the properties of the hair, and diminished them somewhat, the test material with 1% Bois II improved the clinical assessment of each of the parameters tested. The key parameters of Shine/Luster and Dryness showed marked improvements.

Parameter	Control Shampoo Baseline	Control Shampoo 4 Weeks' Use	Bois II Shampoo Baseline	Bois II Shampoo 4 Weeks Use	Added Value with Bois II
Moisturizing Effect	4.56	4.23	4.76	6.89	+ 45%
Shine/Luster	5.66	5.45	5.43	7.02	+ 30%
Body / Manageability	7.55	7.45	7.25	7.68	+ 6%
Combability	8.02	8.00	7.89	8.23	+ 4%
Overall Condition	7.01	6.89	7.10	8.03	