

## Alphalimprove 4D Hair

### Amazing healthy hair

The **Alphalimprove 4D Hair** has proven effectiveness 4D: deep repair, redensification of capillary fiber in the cortex and cuticle (inside out), volume reduction/frizz and thermoprotection.

Recovers damaged surface, smoothing the scales, filling the cuticle and providing strength and resistance to wire structure. With effectiveness anti-frizz, reduces the volume of the yarns, providing intensive hydration and replacement of hair mass in damaged hair. Protects against damages caused by chemical processes, dryer, curling iron and external aggressor, like sun and pollution. Provides brightness, softness, combability and clearance and helps in the thermal realignment of the wires.

O desenvolvimento do **Alphalimprove 4D Hair** foi baseado na sinergia do Óleo de Babaçu (Orbignya oleifera seed oil), do Óleo de Pracaxi (Pentaclethra macroloba seed oil) e do Alpha Bisabolol Natural. Sua composição é rica em triglicérides de cadeia média (TCMs), ácido láurico e ácido behênico.

The development of the **Alphalimprove 4D Hair** was based on synergy of Babaçu Oil (Orbignya oleifera seed oil), of Pracaxi Oil (Pentaclethra macroloba seed oil) and the Alpha Bisabolol Natural. Your makeup is rich in médium chain triglycerides(TCMs), lauric acid and behenic acid.

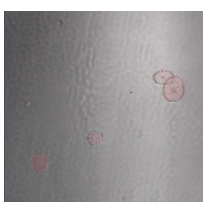
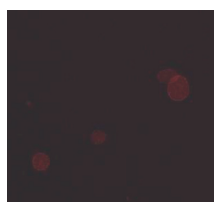
### Alphalimprove 4D Hair – Mechanisms of action

The vegetable oils have preventive activity against damages to cuticle (outer layer of wire coating). Coating, lubricating and fill the cuticle cavities. Have high affinity for the proteins and can penetrate the wires, reducing your propensity to dilate and preventing protein loss. They repair the wear caused by the ingress of water after successive washes and chemical processes, increasing the force and wire strength.

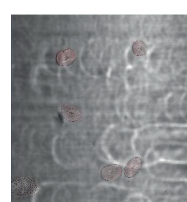
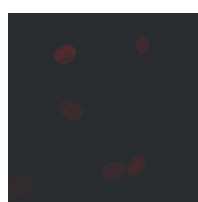
The action of **Alphalimprove 4D Hair** operates deeply in the hair fiber by acting in the cortex, which is the inner portion of the capillary mass and cuticle, filling cracks or cavities. The result is the treatment inside out( in out), providing balance to damaged hair and restoring wire structure, reducing the volume, the armed effect and the frizz of the hair.

#### Images of effectiveness in deep repair in the hair fiber, increased. Substantivity and restructuring of hair fiber (MEV)

Standard Shampoo



Alphalimprove 4D Hair

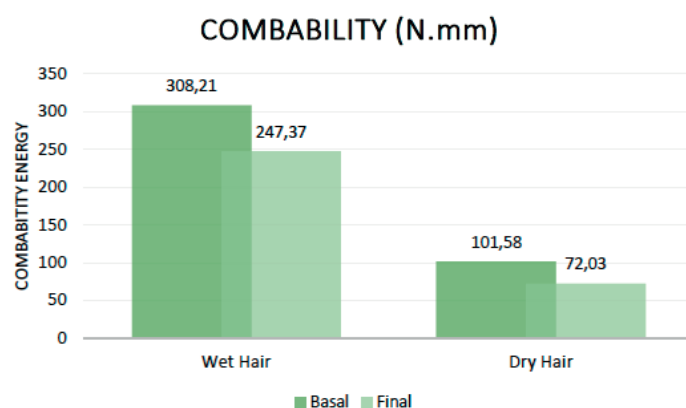


The treatment with the product Alphalimprove 4D Hair had bigger substantivity in relation to the control treatment (shampoo pattern), demonstrating that the product gives deep repair to the hair fiber by the mechanism of cortical mass replacement by restructuring and redensifying the hair fiber.

**Appeals: Restructuring and redensifying the hair fiber.**

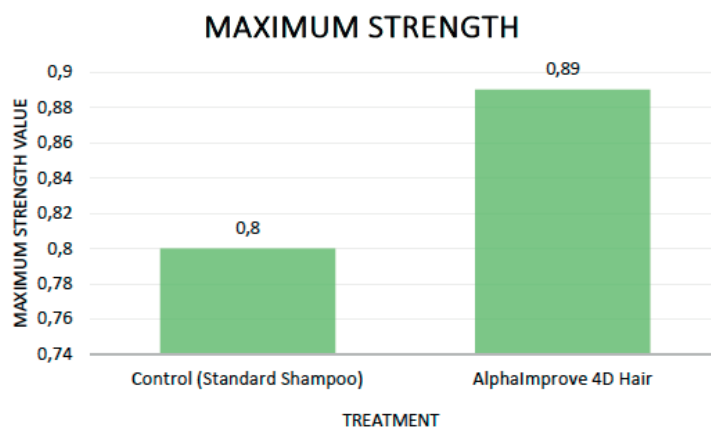
### Effectiveness for combability

The treatment with the product **Alphalimprove 4D Hair** demonstrated statistically significant efficacy ( $p < 0,05$ ) in reducing the energy of combing (that is, nodes reduction and improves yarn clearance) to wet and dry compared to the basal state.



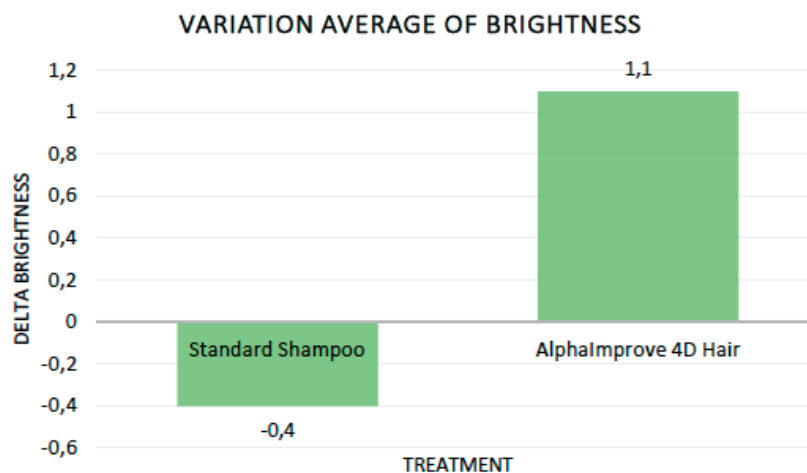
### Effectiveness in the force, resistance and thermoprotection of hair strand

The treatment with the product **Alphalimprove 4D Hair**, showed a statistically and significant improvement in the Newton strenght (N) of the hair strand in the control SHAMPOO PATTERN THE **Alphalimprove 4D Hair** supports the "thermoprotection" or "thermal protection".



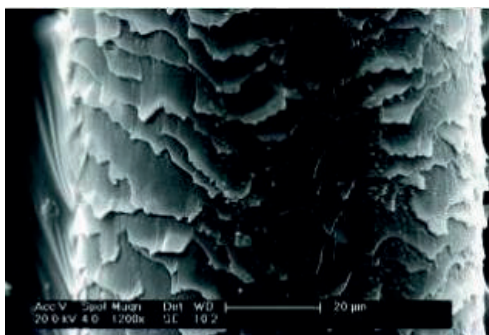
## Brightness intense and cuticle hydration

As the brightness of the hair is closely related to the hydration of the cuticle (fiber surface), it can be concluded that the product AlphaImprove 4D Hair presented a percentage of increase in hydration of 19,7% in relation to the control treatment (shampoo pattern).

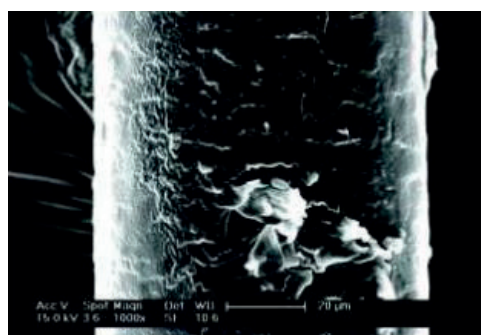


## EFFECTIVENESS IN REPAIRING DAMAGE AND RESTORING THE CUTICLE. SCANNING ELECTRON MICROSCOPY PICTURES (MEV)

### Standard Shampoo

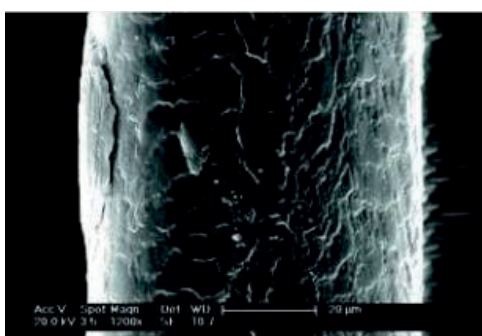


Control 1

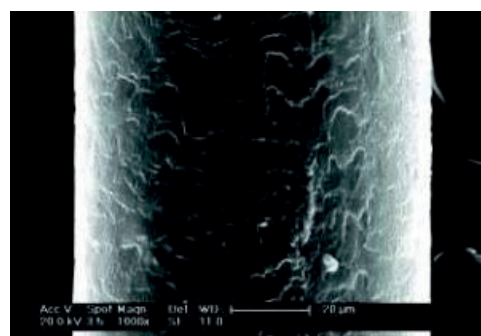


Control 2

### AlphaImprove 4D Hair



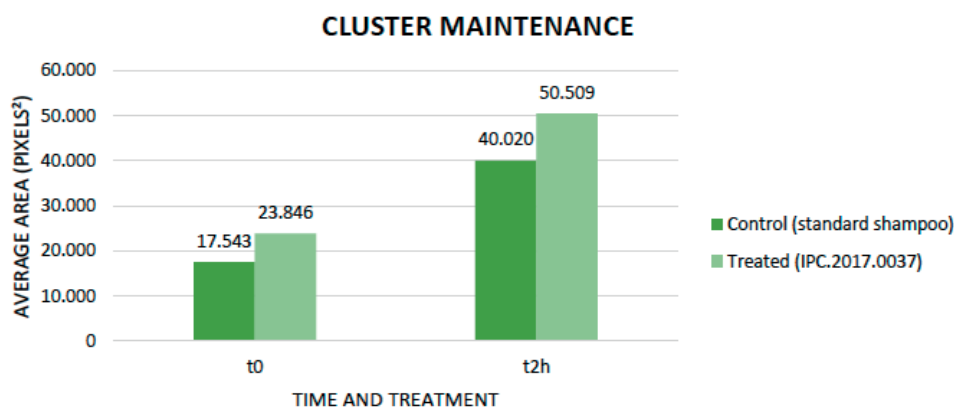
Control 1



Control 2

## Cluster maintenance

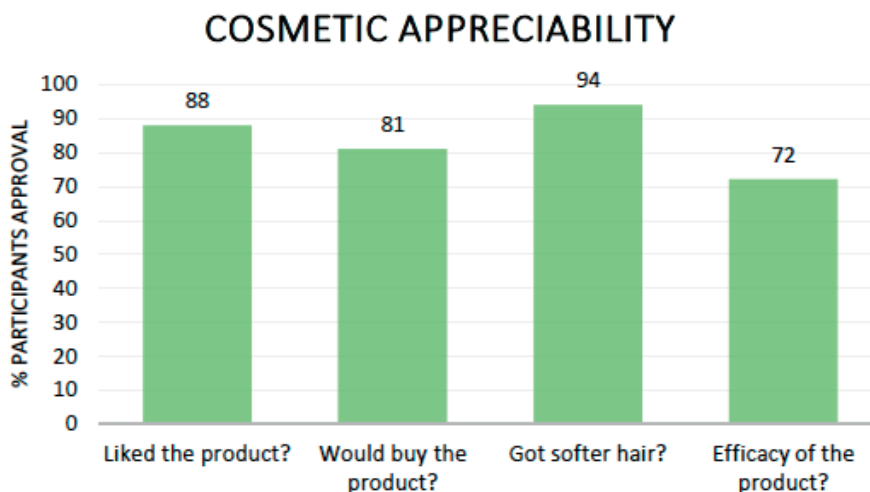
The use of **Alphalmprove 4D Hair** revealed that for both treatments (treated and control) there was an increase in the area of the wick after 2 hours. This is due to the fact that the curls give way over time. However, there was an area increase of 28% for the control treatment after 2 hours, and there was an area increase of 12% for the treated wick after 2 hours.



When comparing the area values of the wick between the times (t0 and t2h) for each treatment, Alphalmprove 4D Hair improved the maintenance of bunches of 16% after 2 hours, compared to the control (standard shampoo). aumento de área de 12% para a mecha tratada após 2 horas.

## Cosmetic Appreciability

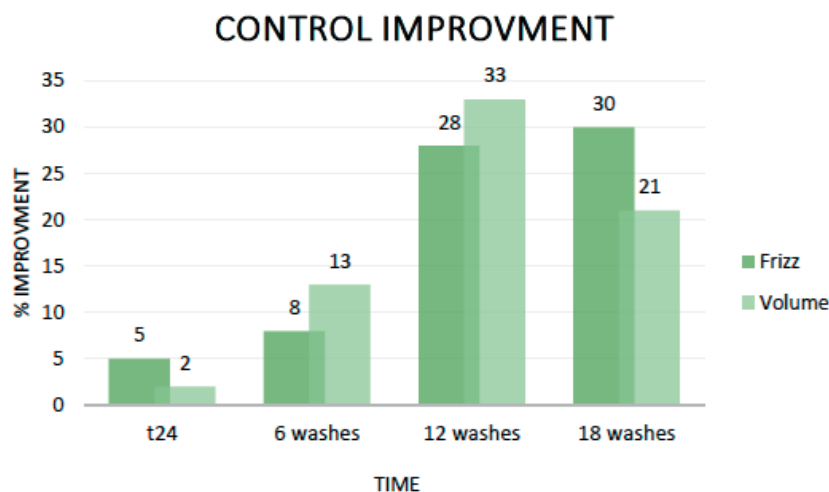
In evaluation of the participants opinion (cosmetic appreciability): after 30 days of use Alphalmprove 4D Hair, 88% liked the product; 81% would buy the product, 94% realized softer hair; 72% found that the product protected the scalp. aumento de área de 12% para a mecha tratada após 2 horas.





## Effectiveness n maintenance / Reduction of volume and frizz

The product **AlphaImprove 4D Hair** proved to be effective in maintaining/ reduction of volume and frizz, with a durability of up to 1 month of use.



## Conclusion

The treatment was tested in people of both gender, in dry hair and damp, presented statistically significant efficacy in capillary treatment. No participant reported feelings of discomfort and no clinical signs were detected after use of the product.

- Deep repair and restructuring of hair fiber inside out (cortex and cuticle);
- Recovers damaged surface, smoothing the scales and filling the cuticle;
- Provides strenght and resistance to wire structure;
- Confers anti-frizz efficacy and significantly reduces the volume of rebellious strands;
- Intensive hydration and replacement of hair mass in damaged hair;
- Improvement of the combability, nodes reduction and clearance dry and wet hair;
- To recover damages caused by chemical processes and external aggressors;
- Thermal protection of the scalp against effects "heat damage" (damage caused by equipment that produces heat);
- Silkiness, softness and brightness intense;
- Supports in the thermal realignment of the wires;
- With a lack of irritation;
- Natural alternative for silicones;
- Dermatologically tested;
- Preservatives free and synthetic additives;
- No animal tests performed.

### AlphaImprove 4D Hair – Toxicological Data

Was applied to **AlphaImprove 4D Hair** the Dermatological assessment of primary dermal irritability, accumulated dermal irritability and Skin Sensitization compared to a control (patch test).

- Were not detected adverse reactions in the areas of application of product and control during the study period;
- No volunteer mentioned feeling of discomfort to the product or control during the study;
- The **AlphaImprove 4D Hair** did not induce irritation and skin cutaneous sensitization, during the study period and, therefore, supports the appeal “**dermatologically tested**”.



POWERED BY NATURAL ALPHA BISABOLOL

Notice: All methodologies are assessed by the competent regulatory bodies and the obtained results were treated with adequate statistical robustness. The Citróleo, in partnership with Avisa e Ipcin (Laboratory including with Project FAPESP), sought to apply the best scientific protocols that support the real benefits of blends studied.