

# ORMAGEL XPU

PROTECTS FROM PHOTOCHEMICAL DAMAGE

# ASSESSA

INNOVATION FOR A GREENER WORLD



**ORMAGEL XPU** helps protect the scalp against irritation caused by chemicals alkali or oxidants used to dye and/or straighten the hair.

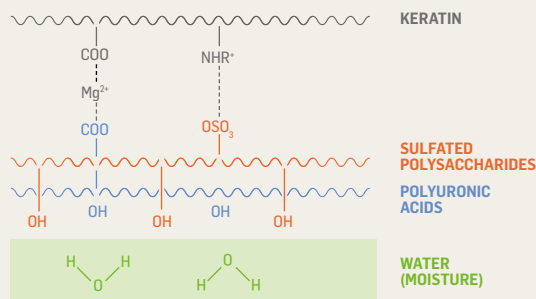
## USAGE LEVEL

PRODUCT	%
HAIR DYE	0.8 to 2.0
SHAMPOO	0.8 to 3.0
CONDITIONER	0.8 to 3.0
LEAVE ON	0.8 to 3.0
HAIR MASK	1.5 to 3.0
STRAIGHTENING	2.0 to 5.0
AMPOULE	2.0 to 5.0

## ORMAGEL XPU

Ormigel XPU is a high-performance active ingredient for the treatment of hair, developed through the extraction of red and brown algae in special conditions, using a proprietary technology (MPCS) that modifies the plant cell structure and allows for the extraction of highly active fractions.

The careful combination of molecules extracted from different algae results in an ingredient with enhanced cosmetic activity.



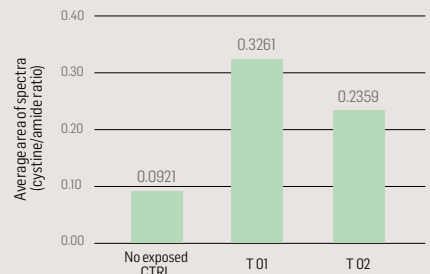
Ormigel XPU is substantive to hair due to the affinity between sulphated polysaccharides present in the algae with the keratin amino radicals, forming a protective, moisturizing mesh over the hair fibers.

## HAIRCARE

### PROTECTION AGAINST PHOTOCHEMICAL OXIDATION DAMAGE

A recent study has revealed a new pathway of hair damage involving Cystine photolysis mediated by UV-activated Tryptophan. According to the study, Tryptophan present in the fibers is photo-activated by UV and transfers the energy to the Cystine double bond, leading to its rupture and generating Cysteine. After a series of photo-oxidations Cysteine is oxidized to Cysteic Acid. The ability of ORMAGEL XPU to react with hair proteins and block the photoactivation of Tryptophan was already known by the scientists at Assessa who carried out a new study to verify if this effect would be efficient to block the photo-oxidative damage pathway to the hair.

### PROTECTION AGAINST HAIR PHOTOCHEMICAL OXIDATION



The results showed that hair treated with 0.8% in shampoo and conditioner and 2% in leave-on showed a 38% reduction in Cystine degradation when compared to a placebo, demonstrating THE EFFECTIVENESS of ORMAGEL XPU in the PROTECTION OF HAIR against the DAMAGE caused by UV-INDUCED OXIDATION.





# SUSTAINABLE BEAUTY



Respecting the **environment** is part of the company's values and taking actions that result in **environmental protection** is part of the **corporate culture**.



## SUSTAINABLE SEAWEED

The seaweed used in our products comes from communities in northeastern Brazil.

- All are fishing communities in remote areas of the Brazilian coast.
- Areas are free from industrial pollution
- Women are 80% of the individuals in the activity.
- Assessa pays a fair price for the seaweed collected.
- Profits generated by the activity represent an important complement to the family's income.
- Assessa has an agreement with the community to purchase minimum annual quantities of seaweed in order to guarantee a minimum income.





## SUSTAINABLE FARMING

Assessa is also developing projects for cultivating algae in the first area granted for sea weed mariculture in the open sea by the Brazilian Government.



## SUSTAINABLE COLLECT

Assessa trained the communities to collect the seaweeds sustainably. Part of the collected Hypnea is left on top to protect the seaweed bank. This practice guarantees that the community can collect seaweeds again in the next tide. They internalized this collection process, and absorbed the importance of this action for the future of the activity.



## SUSTAINABLE HAPPINESS

During the rainy seasons or unfavorable tides, Assessa supports other activities for the people who collect seaweeds, like producing hand-made lace fabric with guaranteed purchase.



## WHY SEAWEED?

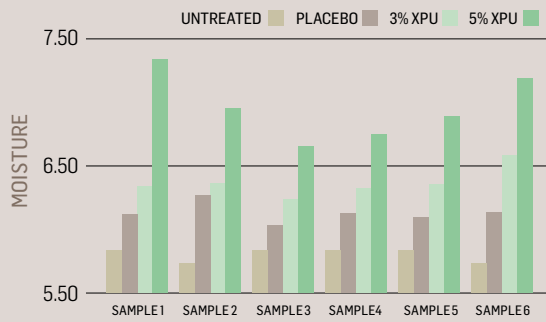
- Seaweed does not compete with food production.
- Seaweed does not consume water or fertilizers.
- Seaweed production does not require pesticides.
- Seaweeds have a high biomass capacity.
- Seaweed is underused and undervalued.
- Seaweed is a unique source of biological activity.



# ORMAGEL XPU

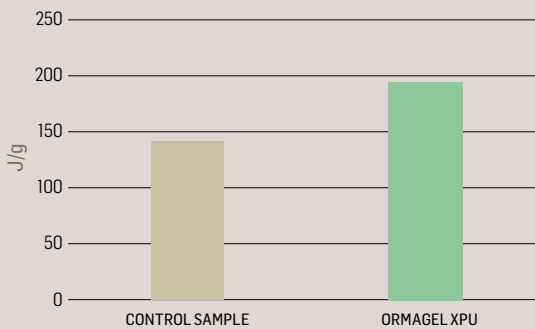
PROTECTS FROM PHOTOCHEMICAL DAMAGE

## MOISTURIZATION OF THE CHEMICALLY DAMAGED HAIR



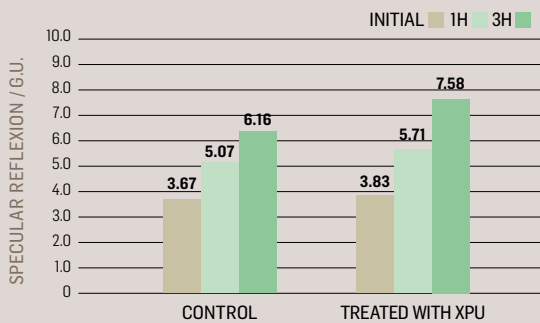
ORMAGEL XPU increases hair moisture by 18% in chemically damaged hair.

## WATER RETENTION ENTHALPY OF VAPORIZATION



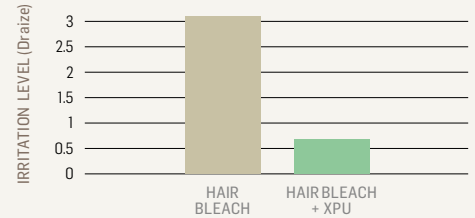
ORMAGEL XPU increases water retention in the hair. This difference in evaporation profiles shows that the water retained in the hair treated with products formulated with ORMAGEL XPU is adsorbed in a more complex form than the water adsorbed in the hair treated with products formulated without ORMAGEL XPU.

## MEASUREMENT OF GLOSS



The substantive mesh of polysaccharides of ORMAGEL XPU aligns the cuticles of the hair, recovering its gloss and healthy/natural look.

## SCALP PROTECTION

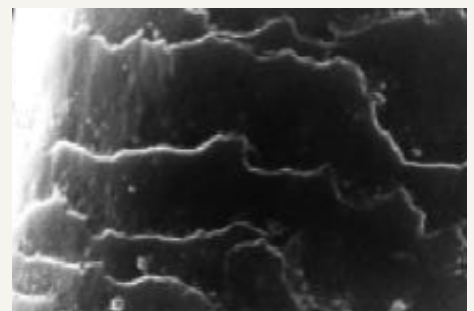


ORMAGEL XPU helps protect the scalp against irritation caused by aggressive chemicals.

## CUTICLE ALIGNMENT

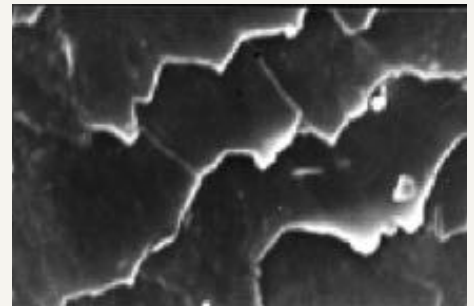
ORMAGEL XPU protects and aligns the cuticles of the hair.

### CONTROL



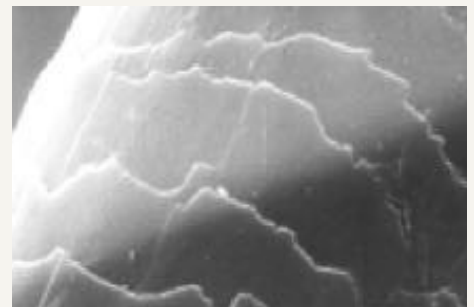
Intact cuticle, positioned along the hair strand

### HAIR STRAIGHTENED WITHOUT ORMAGEL XPU



Damaged and open cuticles

### HAIR STRAIGHTENED WITH ORMAGEL XPU

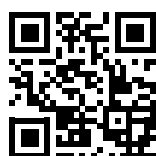


Intact cuticles, protected and positioned along the hair strand

**ORMAGEL XPU IS A HIGH-PERFORMANCE ACTIVE INGREDIENT FOR THE TREATMENT OF HAIR.**

#### INCI NAME

Hypnea Musciformis Extract, Gelidiella Acreosa Extract, Sargassum Filipendula Extract, Sorbitol, Sodium Benzoate and Potassium Sorbate.



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