

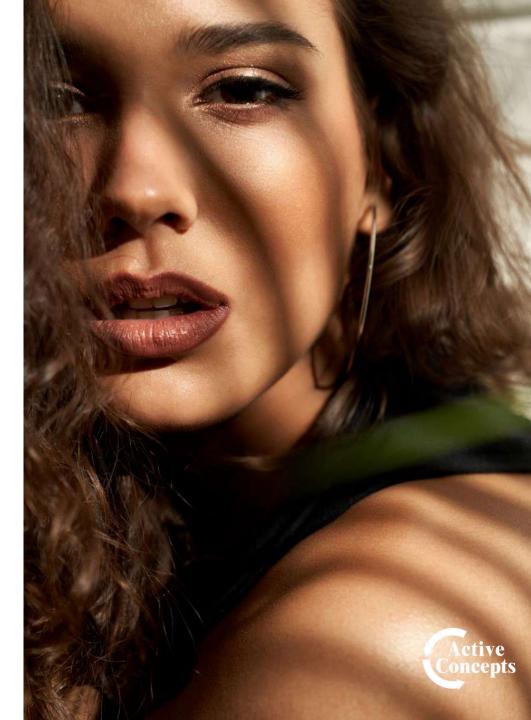
Jina Aldia



AC Pina Colloida

New beauty protection against global warming: a film-forming pineapple biopolymer, safeguarding both skin and hair while promoting environmental sustainability. AC Pina Colloida repurposes pineapple crown leaf waste to create a shield against environmental factors with a cross-linking technology based on yeast, addressing environmental pollution and contributing to a greener future.

Natural Biopolymen Environmental Protection Moisturization



Kenefits



AC Pina Colloida is a **new biopolymer** that improves the **skin's protective** barrier function, helping to **lock in moisture** and **prevent micro-pollution** attacks. By working on the dermal-epidermal junction integrity, it could **prevent** visible **signs of aging**.

AC Pina Colloida enhances the structural integrity of hair by preventing the harmful effects of UV irradiation resulting in healthier hair.

AC Pina Colloida demonstrates effective pigment dispersing properties which improves overall skin coverage and product appearance.



Formulation



Xanthan Gum Compatible at 5% - increases viscosity (by 45% in our trial)

Guar Hydroxypropyltrimonium Chloride

Clear/slightly hazy at 5% - decreases viscosity (by 23% in our trial, may be partially due to dilution effect)

Carbopol (Ultrez 10)

Slightly hazy at 5% - decreases viscosity (by 31%, may be more partial incompatibility effect due to hazy appearance)

SDA-40

We successfully added approximately 40% alcohol into a 10% Pina Colloida solution.

Hyaluronic Acid

We successfully added approximately 10% of a 1% HYA solution to a 10% Pina Colloida solution.



Summary

WHAT.

Cosmetic formulations utilize diverse raw materials, including **biopolymers**, to shield the body from environmental factors. Our aim was to develop an **eco-friendly solution** using **natural polymers** sourced **sustainably**.



The rise in **global temperatures**, leading to record highs, directly impacts skin and hair quality as well as aging. **Pollution** and **waste reduction** are increasingly crucial concerns in our daily management.



Inspired by **cellulose-based** polymers and **PALF** technologies, our focus on **waste reduction** led to exploring **pineapple crowns**, resulting in AC Pina Colloida. Our **biofermentation** expertise helped us in crafting this **upcycled natural active** delicately.



AC Pina Colloida prevents visible signs of aging by enhancing dermalepidermal junction integrity and providing moisturizing benefits. It also protects hair from UV damage, improving hair health, and disperses pigment effectively, enhancing skin coverage and product appearance.



