

20977.

AC Vegan Keratin SF

Hydrating
Antioxidant
Rejuvenating



VEGAN



SEPHORA
CLEAN



CREDO
CLEAN



GLOBALLY
COMPLIANT



ISO 16128



PRODUCT
PASSPORT



THE FEATURES.

AC Vegan Keratin SF is a water-soluble, plant-based alternative to traditional animal-derived keratin, developed to support hair hydration and provide antioxidant benefits for the skin. Combining lentil, hydrolyzed chickpea, and quinoa proteins with *Lactobacillus* ferment, this vegan ingredient helps retain hair moisture while supporting protection against environmental oxidative stress for a multifunctional approach to hair and skin care.

INCI: Water & Lens Esculenta (Lentil) Seed Extract & Hydrolyzed Cicer Seed Extract & Chenopodium Quinoa Seed Extract

TECHNICAL DATA SHEET.

THE STORY.

Keratin is a structural protein with important roles in both hair and skin, making protein-based ingredients relevant across a range of cosmetic applications.¹ Consumers have traditionally sought animal-derived keratin proteins for their conditioning and hydrating properties; however, the continued growth of vegan beauty has encouraged the development of functional alternatives from botanical sources. Active Concepts meets the ethos of the modern consumer with AC Vegan Keratin SF, a vegan and sustainable hydrolyzed keratin alternative in a water-soluble form designed for both hair care and skin care applications.

AC Vegan Keratin SF consists of lentil, hydrolyzed chickpea, and quinoa proteins selected to provide a plant-based alternative to traditional hydrolyzed keratin. Published research has characterized chickpeas as a protein rich legume with a nutritionally valuable amino acid profile,² while lentil proteins have been studied for their diverse amino acid composition and functional properties.³ Quinoa has similarly been recognized in the literature for its high quality protein and well balanced amino acid profile.⁴ Together, these plant-derived protein sources provide a relevant foundation for protein-based cosmetic innovation while aligning with growing consumer interest in vegan beauty and ingredient transparency.



THE SCIENCE.

Keratin is a fibrous structural protein with important roles in both hair and skin. In the epidermis, keratins are major structural proteins that form part of the keratinocyte cytoskeleton and contribute to the mechanical strength and resilience of these cells.¹ Within the hair fiber, keratin contributes to structural integrity and is particularly rich in cysteine, a sulfur-containing amino acid involved in protein structure and stability.⁵ The keratinized cuticle forms the protective outer layer of the hair fiber, helping protect the underlying cortex from stresses associated with thermal styling, chemical processing, and daily maintenance.⁵

Because intact proteins have relatively high molecular weights, hydrolysis can be used to generate smaller protein and peptide fractions with properties relevant to cosmetic applications.⁵ Protein hydrolysates and their resulting peptides have been investigated for a range of functional properties, including interactions with hair fibers and antioxidant activity associated with certain hydrolyzed plant protein systems.^{3,6} In hair care, keratin hydrolysates have been specifically studied for their interaction with the hair fiber and conditioning effects, while research on hydrolyzed lentil protein provides additional scientific context for the antioxidant potential of plant-derived protein systems.^{3,6}

Chickpea, lentil, and quinoa provide diverse plant-derived protein and amino acid profiles.^{2,3,4} Research evaluating enzymatically hydrolyzed lentil protein isolate has reported antioxidant properties, providing further scientific context for the exploration of hydrolyzed plant proteins in cosmetic formulations positioned around oxidative stress.³ Together, these findings provide a scientific foundation for the use of plant-derived protein systems across both hair care and skin care applications.

AC Vegan Keratin SF is produced from lentil, chickpea, and quinoa proteins, which undergo processing and fermentation with *Lactobacillus*, followed by isolation of resulting peptide fractions. This process creates a plant-derived protein system designed as an alternative to traditional animal-derived keratin while maintaining a water-soluble format suitable for cosmetic formulation.

THE TECHNICAL DETAILS.

INCI. Water & Lens Esculenta (Lentil) Seed Extract & Hydrolyzed Cicer Seed Extract & Chenopodium Quinoa Seed Extract

CAS. 7732-18-5 & 90063-40-4 & 92113-26-3 & 225234-01-5

EINECS. 231-791-2 & 289-998-9 & 295-631-3 & N/A

EUROPE. Compliant

USA. Compliant

CHINA. Compliant

Origin. Botanical/Bacteria

Natural Antimicrobial. Lactobacillus Ferment

Preservatives. None

Solvents Used. Water

Appearance. Clear to Slightly Hazy Liquid

THE FORMULATION TIPS.

pH Stability. 4 - 7

Temperature Stability. Product may change appearance if exposed to cold temperatures. Gently warm to 45-50°C and gently mix.

Use Level. 1 - 10%

Ionic State. Nonionic

Alcohol Compatibility. Compatible with up to 50% alcohol at 1-10% use level

Solubility. Water Soluble

Pro Tips. It is recommended that this product is added to the batch in cooldown to maintain appearance

THE BENEFITS OVERVIEW.

Antioxidant Protection Oxygen Radical Absorbance Capacity (ORAC)



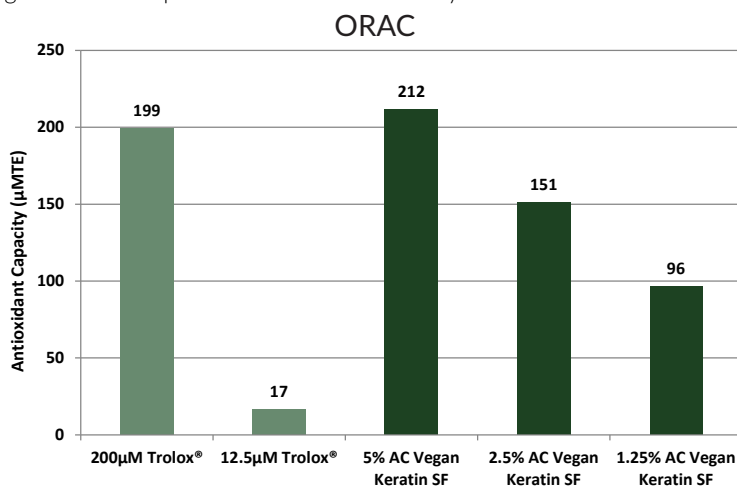
Hair Hydration Hair Hydration via Gravimetric Analysis



THE EFFICACY.

Antioxidant Protection

Oxidative stress contributes to premature skin aging by generating reactive oxygen species (ROS) that can damage key skin components. Antioxidants help neutralize these reactive molecules, supporting healthier, more resilient looking skin. Accordingly, an Oxygen Radical Absorbance Capacity (ORAC) assay was conducted to evaluate the antioxidant potential of AC Vegan Keratin SF. This method measures a material's ability to scavenge free radicals and provides an indication of its antioxidant capacity. Trolox[®] was used as the antioxidant reference at concentrations ranging from 12.5 μ M to 200 μ M. Results demonstrated that AC Vegan Keratin SF provides antioxidant activity.



**Outperformed
200 μ M Trolox[®]
at 5.0%**

Hair Hydration

A Gravimetric Analysis was conducted to assess the hydrating ability of AC Vegan Keratin SF on hair compared to the animal-derived AC Keratin Hydrolysate 30 PF. Hair swatches were treated with 2.0% AC Vegan Keratin SF, 2.0% AC Keratin Hydrolysate 30 PF, water, or left untreated. Following treatment and controlled drying, percent moisture was calculated for each hair swatch.

Percent Moisture by Gravimetric Analysis

	Untreated Control	H ₂ O	2.0% AC Vegan Keratin SF	2.0% AC Keratin Hydrolysate 30 PF
Initial Mass	0.931	0.984	0.978	0.982
Initial Mass + Test Product	0.931	1.703	1.711	1.717
Final Mass	0.85	0.891	1.025	1.019
% Moisture	-8.70%	-5.40%	2.70%	2.20%

**Greater
Moisture
Retention by
+22.7%**

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