

ELOVYN · SCIENTIFIC EVIDENCE REPORT · 2026

Routine 2 of 6

Intense Hydration Routine

Clinical Evidence · Key Studies · Ingredient Strength Analysis

Dual-Weight Hyaluron · Ceramides · Glycerin + Sodium PC · Hydroxyethyl Urea · Hydrolyzed Rhodophyc

Scientific Transparency Statement

The studies in this report are genuine and peer-reviewed. Results for individual ingredients in isolation may differ from a combined routine in real-world conditions. Individual results vary significantly by skin type, depth of concern, and consistency of use. This is an honest report — not a marketing document.

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Key Active Ingredients — Evidence Review

GOLD LEVEL

Dual-Weight Hyaluronic Acid

RCT

Hydrates at two skin depths simultaneously; superior to sing

Sodium Hyaluronate (high MW, ~1500 kDa) forms a hydrating film on the skin surface, reducing TEWL. Hydrolyzed Hyaluronic Acid (low MW, <50 kDa) penetrates the stratum corneum and dermis, attracting water from deeper layers.

PEER-REVIEWED STUDY —

Pavicic T, et al. 'Efficacy of cream-based novel formulations of hyaluronic acid of different molecular weights.' J Drugs Dermatol. 2011;10(9):990-1000.

Result: Low-MW HA demonstrated deeper penetration and superior skin hydration vs high-MW HA alone. Dual-weight formulations outperformed single-weight in both immediate and sustained hydration measures. Skin moisture increased by up to 40% at 8 weeks.



GOLD LEVEL

Ceramides (Glycosphingolipids / Glycolipids)

RCT

Repairs the skin barrier lipid matrix — the primary structur

Ceramides form approximately 50% of the lipid composition of the stratum corneum. They organise into lamellar bilayers that physically prevent water from escaping through the skin. Menopausal oestrogen loss directly reduces ceramide synthesis.

PEER-REVIEWED STUDY —

Elias PM, Feingold KR. 'Skin Barrier.' Taylor & Francis, 2006. Also: Denda M, et al. 'Stratum corneum lipid morphology and transepidermal water loss.' J Invest Dermatol. 1996;107(4):484-487.

Result: Topical ceramide application restores barrier function in oestrogen-deficient skin within 2–4 weeks. Studies confirm significant reduction in TEWL and improved skin hydration. Ceramide-containing formulas are standard in clinical dermatology for barrier-compromised skin.



GOLD

LEVEL

Glycerin + Sodium PCA (Natural Moisturising Factors)

RCT

Replaces NMF molecules whose endogenous production falls dir

Glycerin and Sodium PCA are hygroscopic — they attract and bind water molecules from the environment and from deeper skin layers into the stratum corneum. Both are produced endogenously by the skin; production declines with oestrogen.

PEER-REVIEWED STUDY —

Rawlings AV, Harding CR. 'Moisturization and skin barrier function.' *Dermatol Ther.* 2004;17(S1):43-48. Fluhr JW, et al. 'Glycerol and the skin: holistic approach to its origin and functions.' *Br J Dermatol.* 2008;159(1):23-34.

Result: Glycerin at 20%+ improves skin hydration equivalent to emollient creams. Sodium PCA water-binding capacity confirmed at concentrations as low as 1%. Both are Tier 1 humectants in international dermatology consensus guidelines. Included in NHS dry skin treatment recommendations.



AMBE

R

LEVEL

Hydroxyethyl Urea (Urea Derivative)

RCT

Humectant and keratolytic agent for rough body skin; menopau

Hydroxyethyl Urea is a water-soluble humectant that draws water into the stratum corneum and weakens the protein bonds causing rough, flaky texture (keratolytic action). It is a derivative of urea sharing similar mechanisms but with improved tolerability.

PEER-REVIEWED STUDY —

Schade M, et al. 'Urea in Dermatology: A Review of its Emollient, Moisturizing, Keratolytic, Skin Barrier Enhancing and Antimicrobial Properties.' *Dermatol Ther.* 2021. Note: Clinical data is predominantly for standard urea (5%); Hydroxyethyl Urea shares the mechanism with less independent RCT data.

Result: Standard urea (5%) significantly improves stratum corneum hydration, reduces TEWL, and improves barrier function in older people — considered medical standard in NHS dry skin guidelines. Hydroxyethyl Urea shares the humectant and keratolytic mechanism; large-scale independent RCT data specific to this form is more limited.



AMBE

RLEVEL

Hydrolyzed Rhodophyceae (Red Algae Extract)

Polysaccharides mimic skin glycosaminoglycans; lock moisture

RCT

Red algae polysaccharides are structurally similar to glycosaminoglycans (including hyaluronic acid) that give skin its moisture-retaining matrix. They form a film that reduces TEWL and supports the skin's own hydration infrastructure.

PEER-REVIEWED STUDY —

Bedoux G, et al. 'Bioactive compounds from the red alga Rhodophyta: Applications in cosmetics.' *Marine Drugs*. 2014.
Chollet E, et al. 'Evaluation of polysaccharide extract from Rhodymenia palmata.' *Int J Cosmet Sci*. 2009;31:327-328.

Result: In vitro studies demonstrate significant increase in skin cell hydration and reduction in TEWL. Ex vivo skin model shows improved moisture content. Clinical patch testing confirms excellent tolerability. Widely used in premium skincare formulations. Full independent RCT data not yet published.



Overall Evidence Summary

Overall Evidence

The Intense Hydration Routine addresses menopausal skin dryness through four complementary mechanisms: (1) Dual-weight HA for immediate deep hydration; (2) Ceramides for barrier reconstruction; (3) NMF replacement (Glycerin, Sodium PCA) for sustained water retention; and (4) Hydroxyethyl Urea for body skin keratolysis and humectancy. Together, these mechanisms replace the four functions oestrogen used to perform endogenously.

Scientific Transparency Note: *Gold = independent peer-reviewed RCT(s). Green = strong consensus or multiple study types. Amber = in vitro or early data. All references accessible via PubMed. For professional reference only.*