

CrossLinked^{HA}

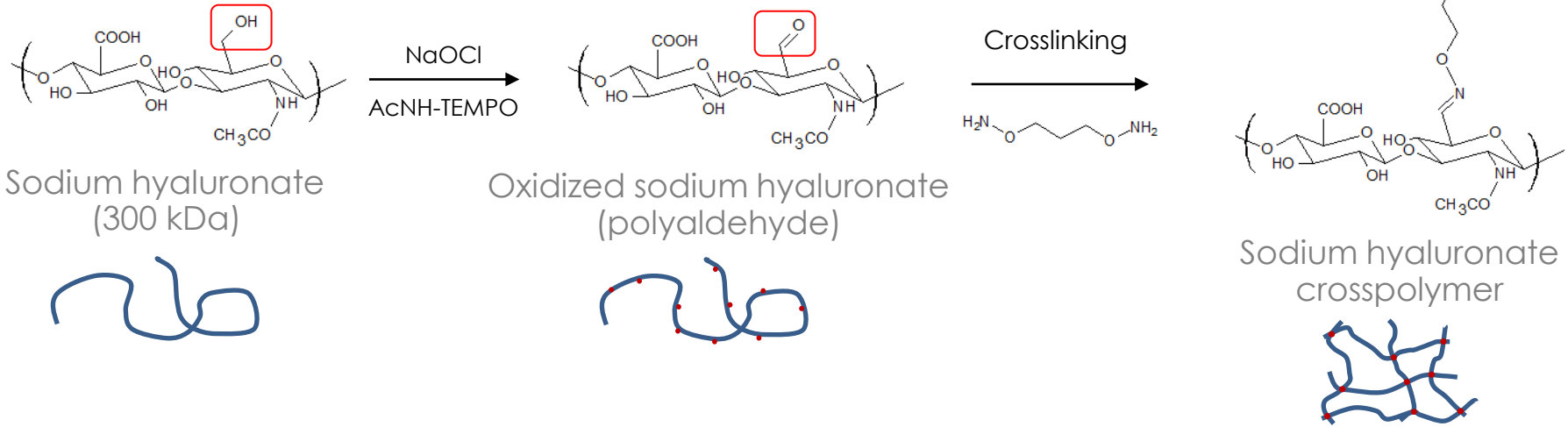
Hyaluronic acid crosslinked

✔ PATENTED PREPARATION ✔ CHINA COMPLIANT

INCI: SODIUM HYALURONATE AND
SODIUM HYALURONATE CROSSPOLYMER



Preparation of CrossLinked^{HA} in Contipro



Standard sodium hyaluronate (300 kDa) is added during crosslinking (1:5) => softer gels
=> water-soluble final powder (without standard HA, the powder was insoluble)

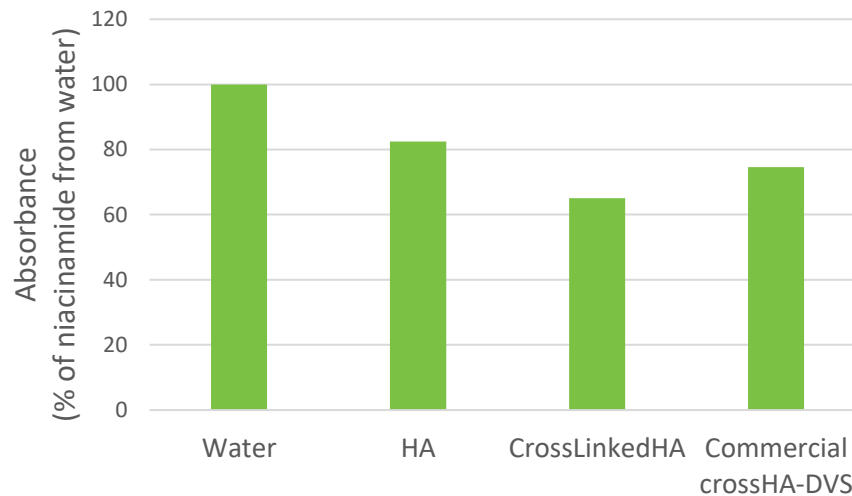


DELIVERY

17%

LONGER RELEASE OF
OBSORBED ACTIVE

Study
by Contipro



Niacinamide in different environments: with water/HA/CROS/commercial crosslinked HA, dialysis chambre, release after 2 h determined by measuring the absorbance.

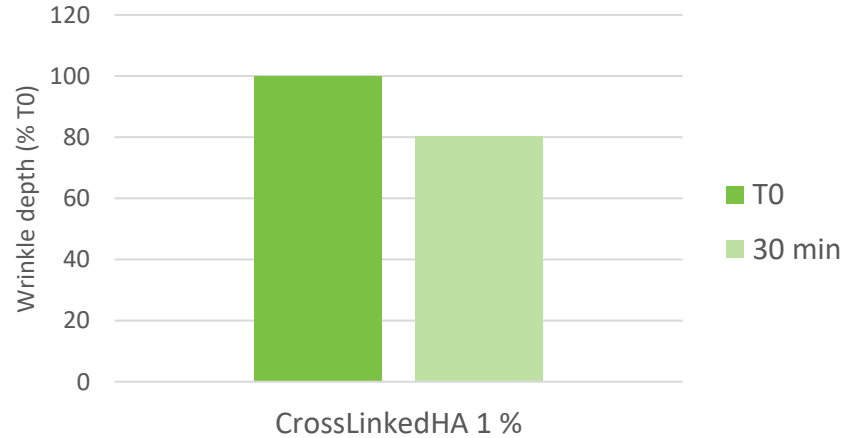


WRINKLE REDUCTION

20%

IMMEDIATE WRINKLES REDUCTION

In vivo study by Contipro



CROS (1%) in serum, crow's feet area, 5 volunteers.
Wrinkles depth determined by Primos camera

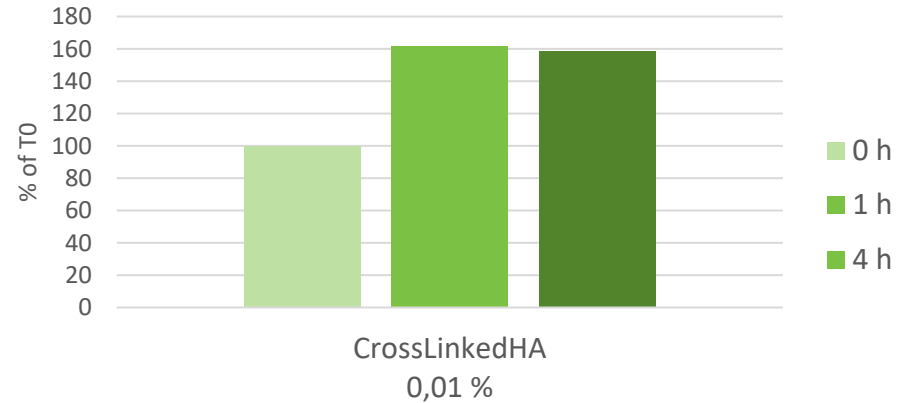


HYDRATION

58%

INCREASE OF
IMMEDIATE
HYDRATION

In vivo study by Contipro

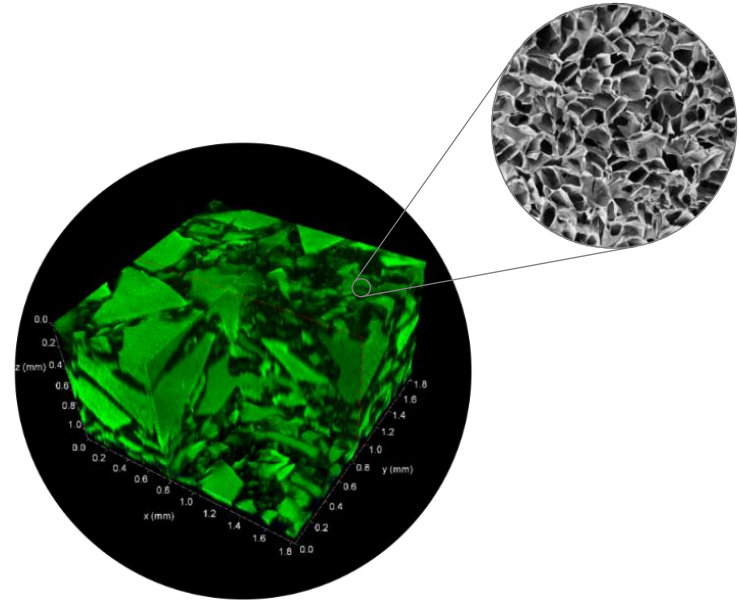


CROS (0,01%) in emulsion, face, 8 volunteers.
Hydration determined by CM 825 Corneometer
(Courage and Khazaka electronics)

Additional advantages of CrossLinked^{HA}

- * Higher resistance against hyaluronidases (enzymes present in the skin which degrade hyaluronic acid)
- * Forms a soft hydrogel microparticle suspension in water
- * Decreases the irritation risk caused by some active ingredients
- * High water-binding capacity
- * Skin elasticity and texture improvement

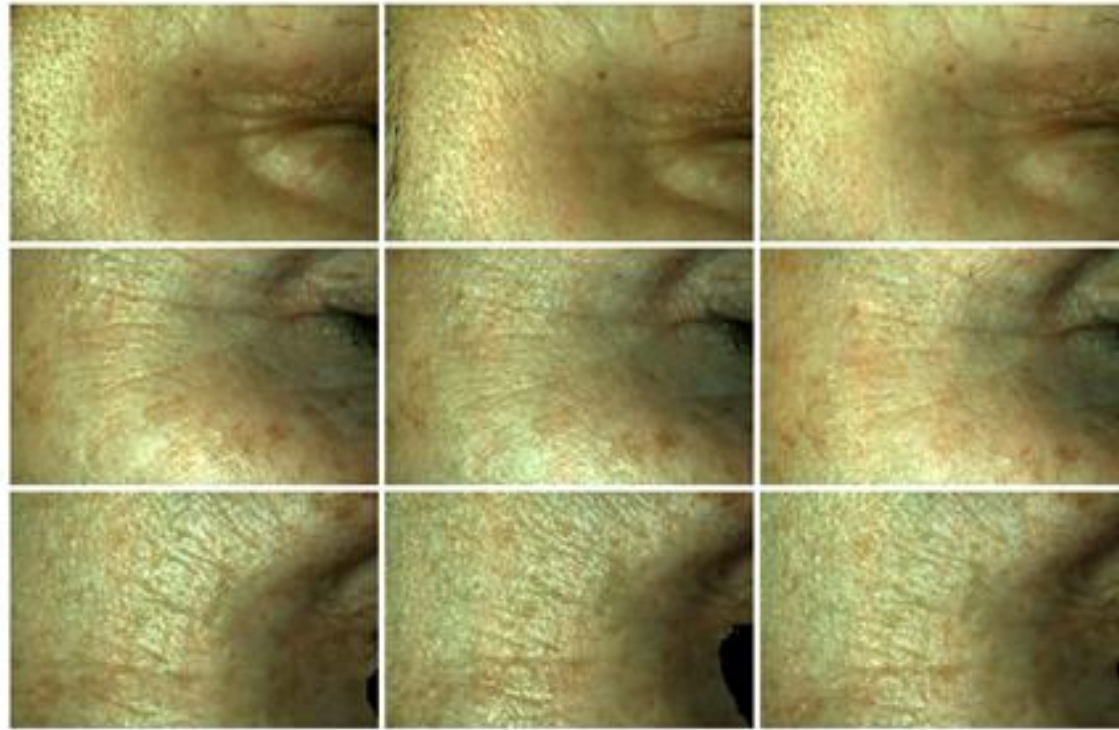
Picture of porous structure of CrossLinked^{HA} hydrogel (electron microscope)



Fluorescently-labelled CrossLinked^{HA}
4 % „solution“ in water (= homogenous suspension of hydrogel microparticles)
Confocal microscopy

Wrinkle reduction: representative pictures

1 % CrossLinked^{HA}

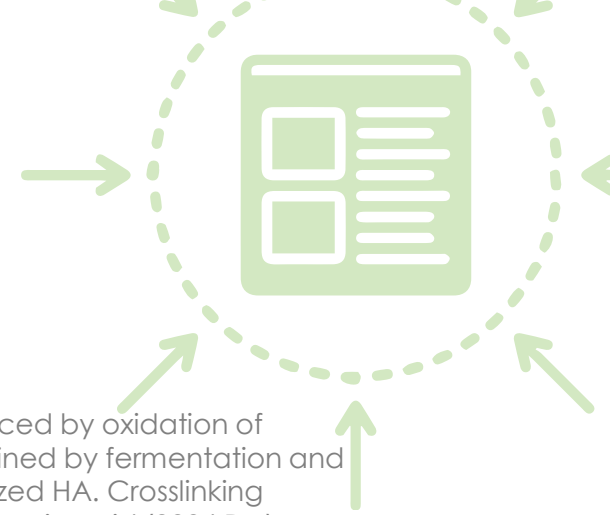


0 h

1 h

4 h

CrossLinked^{HA}: Collected technical data



- **INCI name:** Sodium Hyaluronate and Sodium Hyaluronate Crosspolymer
 - **Supplied form:** powder
 - **Samples:** 1 g
 - **Minimal ordering quantity:** 1 kg
(If ordering smaller quantities, price can increase due to handling fees)
 - **Recommended concentration in final products:**
0.01 – 0.1 % of powder
(safety tests up to 1%)
 - **Shelf-life:** 24 months
 - **Solubility:** Fully soluble in water; soluble in aqueous mixture of ethyl alcohol and isopropyl alcohol
 - **Source:** CrossLinkedHA is produced by oxidation of hyaluronic acid (300 kDa) obtained by fermentation and subsequent crosslinking of oxidized HA. Crosslinking occurs in the presence of hyaluronic acid (300 kDa) necessary for the solubility of the final powder in water.
 - **Compatibility and processing:** Sensitive to heat. Extreme pH (less than 4 or more than 10) leads to decomposition of polymer, this process is accelerated by heating.
 - **Examples of „safe conditions“:**
 - pH 7: 2 h at 70 °C or 24 h at 50 °C
 - pH 5: 2 h at 50 °C or 24 h at 40 °C
 - pH 9: 2 h at 50 °C or 24 h at 40 °C
- Incompatible with strong oxidation or reduction agents and polymeric cationic substances, e.g. surfactants or polymers (polyquarternium-4, polyquarternium-10, etc.). Addition of multivalent metals (e.g. Zn²⁺, Mg²⁺) can modify quality of the crosslinked network.

Who We Are

*World leader in research
and manufacturing
of hyaluronic acid.*

*Innovator in biotechnologies
since 1990.*

*Reliable partner of **successful
brands.***



We Are Here to Help You

ZUZANA JENÍKOVÁ

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for active ingredients*

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