

HILURLIP™

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GENERAL DESCRIPTION

Hyaluronic Acid (HA) is a naturally occurring polymer that consists of polyanionic repeating disaccharide units of glucuronic acid and N-acetyl-glucosamine [1]. HA is found in almost all vertebrate organs, but most abundantly in the extracellular matrix of soft connective tissues [2]. Its rheological properties make it an important component of joint fluids [3]. HA is particularly abundant in skin where it constitutes a high fraction of the extracellular matrix of the dermis. As a physical background material, it has functions in space filling and lubrication.

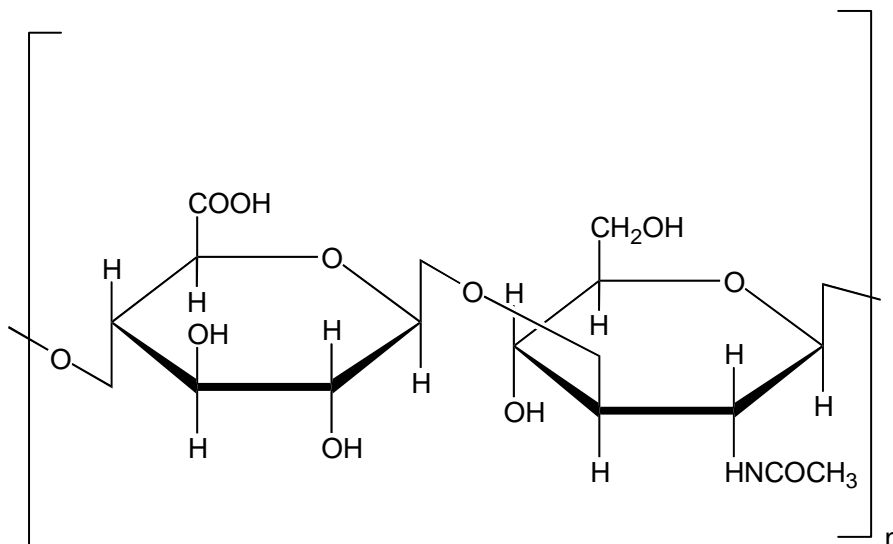


Fig 1. Chemical structure of HA

HA belongs to a family of structurally similar polysaccharides called glycosaminoglycans (GAGs) [4]. In skin, HA is the major GAG. It fills the space between the collagen fibres, forming a polymeric network, which acts as a jelly-like medium, supporting and influencing tissue functions. In the extracellular matrix of connective tissue, the most important function of hyaluronic acid is to preserve tissue hydration, thanks to its high water retaining capacity. HA provides hydration and structural integrity to the dermis [5].

The molecule of HA is stabilised by hydrogen bonds parallel with the chain axis. The polymer consequently takes up a stiffened helical configuration, which gives the molecule an overall expanded coil structure in solution. The coil can be regarded as a highly hydrated sphere which has the ability to bind with water up to 1000 times its volume, so that a gel-like system is formed [6]. This gel is hygroscopic, meaning it swells by absorbing water from the surrounding atmosphere. The HA then expands within the tissue, giving it a greater volume.

HA has been widely used in cosmetics as a top skin moisturiser due to its water-binding and film-forming properties. Application of cosmetic products containing HA to the skin is reported to moisturise and restore elasticity thereby achieving an anti-wrinkle effect. HA is especially useful as a lip filler because of its hygroscopic property and the natural viscoelastic feel and appearance. HA is suitable to be used to enhance the appearance of the lips.

Lip skin differs from other skin and is characterised by being rather thin. It actually consists primarily of mucous membrane, which does not have sweat or sebaceous glands. The outer layer (stratum corneum) is extremely thin or completely absent in most people. Sweat glands add moisture to skin, but the lips' only source of moisture is saliva inside the mouth [7].

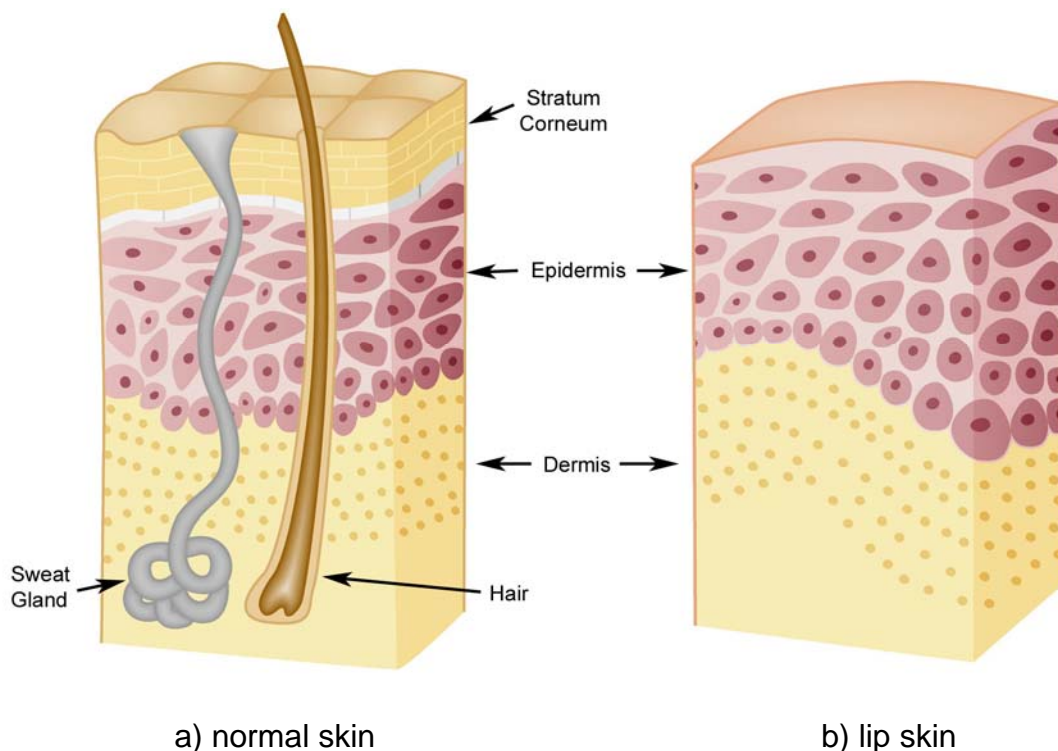


Fig. 2. Skin structure

Due to the absence of a keratinized stratum corneum, moisture rapidly evaporates from the lips, causing them to dry out very easily. In addition, unprotected lips are especially dehydrated because of the sun, and they are continually exposed to environmental aggressions (e.g. cigarette smoke).

All these factors result in lips requiring more moisturisation, protection and care than the rest of skin.

HILURLIP™ is a new way of vehiculation of Hyaluronic acid, especially designed for lip boosting products.

HILURLIP™ is an oil suspension containing particles of Sodium Hyaluronate, submitted to a technological process after which the particle size is reduced and homogenised up to 1µm, to enhance penetration and efficacy. The small particles of Hyaluronan contained in HILURLIP™ swell when they are in contact with skin water, producing a long-term boosting effect on the lips.

HILURLIP™ also contains the tripeptide GHK, a well-known RCS scavenger, which protects the lips against the harmful effects of sun exposure. GHK is able to inhibit glycation therefore preventing the loss of collagen elasticity, and to protect skin cells from photodamage.

PROPERTIES AND APPLICATIONS

- Increases lip volume, producing a long-term plumping effect on the lips.
- Enhances moisturisation of lip skin.
- Protects lips' skin from environmental aggressions like sun exposure and cigarette smoke, preventing premature aging of the lips.
- The oily basis of HILURLIP™ helps to lubricate the lips.

HILURLIP™ can be used in water-free lip care formulations, such as lip glosses or lip balms. Its formulation in lipsticks is not recommended.

TECHNICAL INFORMATION

PRODUCT SPECIFICATIONS

Appearance:	Suspension
Active ingredient content:	1% Sodium Hyaluronate 0.05% Tripeptide-1
Colour:	Grey
Viscosity:	500 – 4000 cps (4/50)
Preservatives:	Phenoxyethanol 1%

PROCESSING AND DOSAGE

HILURLIP™ must be incorporated into the oily phase at the final step of the manufacturing process, as quickly as possible in order to avoid temperature rising. Care should be taken not to exceed 60°C.

A dosage of 1 - 3% of HILURLIP™ is recommended to ensure effective lip plumping results.

STORAGE AND SHELF LIFE

Keep in a clean, cool and dark place. If product is stored as recommended it will remain stable for at least 24 months.

SAFETY

All the raw materials involved are regarded as safe for their use in a cosmetic product.

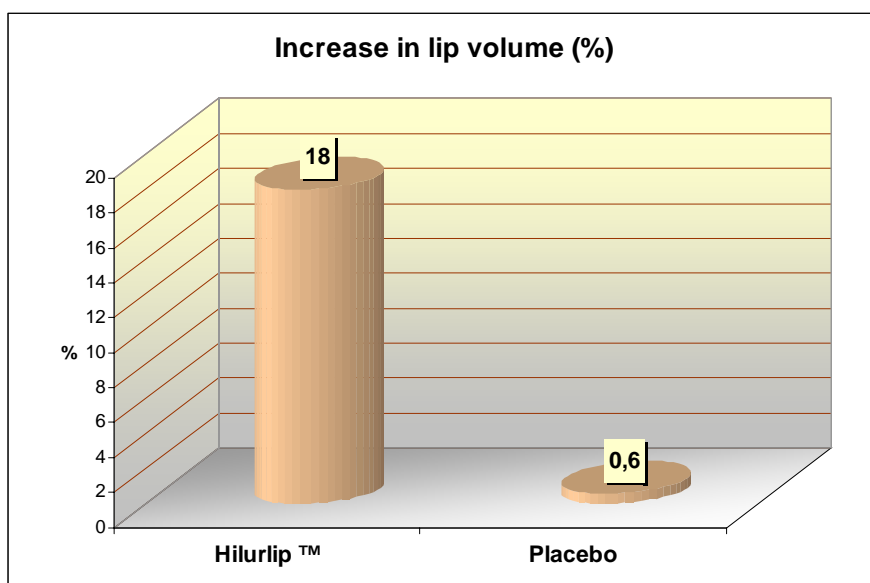
EFFICACY

Lip plumpness

A panel of 10 female volunteers, aged 18 to 70, underwent a clinical test to evaluate the volumizing power of a cosmetic formulation containing 2% HILURLIP™ on the lips area. Another panel of 10 volunteers used a placebo gel.

The increase in lip volume was evaluated with the Visioscan program. Visioscan is an UV-A light video camera with high resolution. The program calculates the quantity of liquid necessary to fill the lip area by means of a special software.

Readings were taken before application and after 30 days of a twice-daily treatment.



After 30 days of treatment, HILURLIP™ proved to **increase the lip volume by 18%**, while the placebo formulation produced no effect on the lips.

Volunteer CS



Day 0



Day 30

All volunteers involved in the test using the gel with HILURLIP™ experienced a lip plumping effect. The volunteers' evaluation of the product scored 80% in the moisturising effect and 80% in the soothing effect.

GENERAL PRODUCT INFORMATION

Trade name	HILURLIP™
Product code	ES150

INGREDIENTS

INCI name	CAS No	EINECS No
ISOHEXADECANE	4390-04-9	-
BIS-PEG-/PPG-14/14 DIMETHICONE	151662-01-0	-
ETHYLENE/PROPYLENE/STYRENE COPOLYMER	-	-
BUTYLENE/ETHYLENE/STYRENE COPOLYMER	-	-
CYCLOPENTASILOXANE	541-02-6	208-764-9
SODIUM HYALURONATE	9067-37-2	-
XANTHAN GUM	11138-66-2	234-394-2
PHENOXYETHANOL	122-99-6	204-589-7
TRYPEPTIDE-1	72957-37-0	-

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Lipotec uses the ™ symbol for EU trademark applications. The symbol is changed to ® when the EU trademark is granted. The specific situation of the trademark in each country may vary and we recommend that you contact us for updated information.

REFERENCES

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