Hyalsept

Gel for animal wound care

Time *to heal wounds faster*

Formulation supporting the wound healing process

sodium hyaluronate, iodine, potassium iodide

Quality of GMP company

UE materials

Unique HA structure

Biowet PUŁAWY

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Hyalsept

Gel formulation for use on extensive, non-healing wounds in different animal species.

The product is a sterile, viscous gel containing sodium hyaluronate, iodine and potassium iodide.

- **Sodium hyaluronate** accelerates and improves the process of wound healing and tissue regeneration. Hyaluronan has strong hygroscopic, lubricating, adhesive and viscoelastic properties.

- **Iodine** and **potassium** iodide belong to the most effective skin disinfectants. Iodine and potassium iodide prevent rapid degradation of sodium hyaluronate by enzymes secreted by bacteria present in the wound or its proximity. The iodine content is reduced during the use of the product due to formation of potassium triiodide (1).

- The **gel form** enables maximum adhesion, allowing the active substances to adhere tothe wound, lubricate it and create good conditions for healing and preventing sticking of the dressing.

Hyalsept components ensure good conditions for faster wound healing.

Sodium hyaluronate, i.e. hyaluronic acid sodium salt is a derivative of hyaluronic acid. It has the highest concentration in the skin, synovial fluid and vitreous body of the eye (1).

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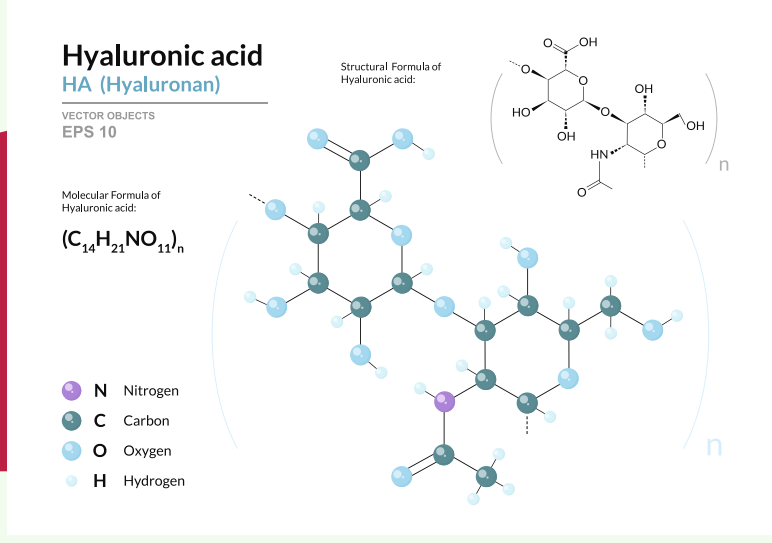
- **Hyaluronan solutions show high rheological (viscoelastic) properties** and are very hydrophilic.
- In solution, the hyaluronan polymer chain assumes the form of an expanded coil, which holds approx. 1000 times more HA weight in water.
- HA chains entangle with each other at very low concentrations, which contributes to the unusual rheological properties. At higher concentrations, solutions have an extremely high viscosity.
- HA has been called a “pseudo-plastic' material. Hyaluronans have been shown to reduce postoperative adhesion formation following abdominal and orthopaedic surgery (2).

Hyaluronic acid is an extracellular matrix component, which combines elastin and collagen fibres in the skin.
In occurs as proteoglycan in the skin. Aside from strong hygroscopic properties, it also has cohesive abilities.

Hyaluronan is highly hygroscopic, which enables modulation of tissue hydration and maintaining osmotic equilibrium. Hyaluronan also acts as an active molecule interacting with cell surface receptors and regulating cell proliferation, migration, and differentiation (2).



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Hyalsept

Sodium hyaluronate has different functions depending on the chain length. The length of a hyaluronic acid chain may range from several hundred daltons (Da) to a few million daltons. Water creates hydrogen bonding with numerous hydroxyl groups (OH groups) of the molecule, so sodium hyaluronate may bind large amounts of water in relation to its molecular weight (3).

Sodium hyaluronate with an adequate molecular weight and structure supports the wound healihg process. The high capacity of hyaluronic acid to bind water is accompanied by the effect of higher viscosity. This effect increases with the polymer size. Long polymers of sodium hyaluronate significantly increase viscosity.

Hyaluronan is divided into groups with regard to the chain length and molecular weight.

Name	Sodium Hyaluronate low	Sodium Hyaluronate	Sodium Hyaluronate high
Molecular weight	< 50 kDa	1500-1800 kDa	> 2000 kDa

1. Galus R., Antiszko M., Włodarski P., Clinical applications of hyaluronic acid; Pol Merkur Lekarski., 2006 May;20(119):606-8.(abstrakt)(1)
2. R. Ferrari et all., Application of hyaluronic acid in the healing of non-experimental open wounds: A pilot study on 12 wounds in 10 client-owned dogs; Veterinary World, EISSN: 2231-0916.(3)
3. P. Olczyk, K. Komosińska-Vasser, K. Winsz-Szczotka, K. Kuźnik-Trocha, K. Olczyk, Hialuronian - struktura, metabolizm, funkcje i rola w procesie gojenia ran, Postępy Hig Med Dosw. (online), 2008; 62:651-659.

Gel supporting the wound healing process

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Hyalsept

Application of the Hyalsept formulation facilitates wound healing by creating a barrier on he wound surface, which separates the wound from the external environment, maintains an adequate level of humidity in the wound environment and facilitates migration of cells from the surrounding skin to the affected area. At the site of its application, sodium hyaluronate forms a kind of scaffold on which the damaged tissue is reconstructed.

Indications

Hyalsept is recommended to be applied on:

- poor or slow healing postoperative wounds and postoperative suture dehiscence;
- superficial and deep wounds of various origin;
- extensive abrasions, lacerations;
- wounds after injuries or contusions;
- lesions after stings/bites.

Product properties

- facilitates the process of wound healing and tissue regeneration in the wound,
- ensures optimal water balance,
- protects wounds against infection,
- accelerates the process of angiogenesis in the damaged tissues.

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Hyalsept

Hyalsept

Method of administration
The product is intended only for external, topical application on the wound.
The packaging of Hyalsept removed from the fridge must be heated at room temperature.

After cleaning the wound and removing hair, apply a suitable amount of the product with the use of a sterile syringe directly to the wound or a sterile dressing. Observe the rules of hygiene during application.

With small wounds
with a diameter up to 2 cm, apply Hyalsept directly to the wound in the amount of approx. 2 ml. Then secure the wound with a sterile dressing.

With medium wounds
with a diameter up to 7 cm, apply Hyalsept to a sterile dressing in the amount of approx. 5 ml. Apply the dressing soaked with gel to the wound. Then, place another sterile dressing on this dressing.

With large wounds
with a diameter up to 10 cm, apply Hyalsept to a sterile dressing in the amount of approx. 8 ml. Apply the dressing soaked with gel to the wound. Then, place another sterile dressing on this dressing.

If the dressing sticks to the wound, before its removal wet it with e.g. saline solution.

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Hyalsept

Packing method
A bottle containing 50 ml solution, with a cannula for repeated collection, packed in a cardboard carton.

Cannula with an antibacterial filter. MINI SPIKE V green.

Storage
Store in a dry place at a temperature below 25°C. Protect from light. After opening, store at 2-8°C. Do not freeze. Do not use after the expiry date stated on the packaging.
Once opened, use within 28 days.

Keep out of sight and reach of children.

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Composition
Sodium hyaluronate, iodine, potassium iodide.

Pharmaceutical form
Gel for wound care.

Method of administration
The product is intended only for external, topical application on the wound.
The packaging of Hyalsept removed from the fridge must be heated at room temperature.
Observe the rules of hygiene during application.
After cleaning the wound and removing hair, apply a suitable amount of the product with the use of a sterile syringe directly to the wound or a sterile dressing.

- With small wounds with a diameter up to 2 cm, apply Hyalsept directly to the wound in the amount of approx. 2 ml. Then secure the wound with a sterile dressing.

- With medium wounds with a diameter up to 7 cm, apply Hyalsept to a sterile dressing in the amount of approx. 5 ml. Apply the dressing soaked with gel to the wound. Then, place another sterile dressing on this dressing.

- With large wounds with a diameter up to 10 cm, apply Hyalsept to a sterile dressing in the amount of approx. 8 ml. Apply the dressing soaked with gel to the wound. Then, place another sterile dressing on this dressing.

If the dressing sticks to the wound, before its removal wet it with e.g. saline solution.

Indications
- poor or slow healing postoperative wounds and postoperative suture dehiscence;
- superficial and deep wounds of various origin;
- extensive abrasions, lacerations;
- wounds after injuries or contusions;
- lesions after stings/bites.

Properties
Hyalsept facilitates wound healing by creating a barrier on the wound surface, separating the wound from the external environment and maintaining an adequate level of humidity in the wound environment. The gel form enables maximum adhesion, allowing the active substances to adhere to the wound, lubricate it and creating good conditions for healing and preventing sticking of the dressing.
Sodium hyaluronate facilitates the process of wound healing and tissue regeneration.
Iodine and **potassium iodide** have disinfecting properties.

Storage
Store in a dry place at a temperature below 25°C. Protect from light. After opening, store at 2-8°C. Do not freeze. Do not use after the expiry date stated on the packaging. Keep out of sight and reach of children.

Packaging
A glass bottle containing 50 ml of Hyalsept, with a cannula for repeated gel collection, packed in a cardboard carton.

For animal treatment only.

Expiry date
24 months. Once opened, use within 28 days.

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