The ophthalmological range

PROTECT

Lacri-protect®

Protect the occular surface

Key Ingredient: 0,2 % carbomer.
Use: lubricate the eye surface.
Directions for use: 1 to 2 drops 2 times a day.
Presentations: box of 10 single doses, display of 110 single doses.

new

PRESERVATIVE-FREE
Single-dose carbomer
Resealable single dose: use within 12 hours after opening

Lacri +®

Doing more for the eye comfort

Key Ingredient: cross-linked sodium hyaluronate 0.4% .
Use : lubricate, moisturize and protect the ocular surface.
Directions for use: 1 to 2 drops 2 times a day.
Presentation : 10 ml multidose bottle.

new

PRESERVATIVE-FREE
Sterility provided by the tip-seal mechanism and by the multilayer filtration membrane
Long shelf life: 3 months after opening

When to use these products:

Lacri-protect®	Lacri+®
• single-time or short-term use • help in restoring tear film thickness • use as a complement to the management of dry eye syndrome • protect the ocular surface, thanks to a film-forming effect: during and/ or after anaesthesia, during irritation (wind, pollen, dust, ...) or corneal exposure	• medium- and long-term use • multiple actions on the tear film: quality, stability • use as a complement to the management of dry eye syndrome • use in addition to medical treatments promoting corneal cells regeneration

In its 2015 report, the SFO (French Society of Ophthalmology) reminds that the improvement of comfort and clinical signs of dry eyes can vary in function of the individual and of the treatment.[2]

CLEAN

Phytobiovet® cleansing discs

Simply clean the eye area and preserve the epidermis

Key ingredients: organic cornflower water, aloe vera.
Use: hydrate, soothe and regenerate the fragile skin around the eyes.
Made from 100% biodegradable and compostable organic cotton.
Presentation: jar of 30 impregnated discs.

Lacrynet®

Clean and calm the eye area

Key ingredients: cornflower and rose waters, boric acid.
Use: cleanse, decongest and soothe the eyelids and eye area.
Presentation: 145 ml bottle.

Phytobiovet® cleaner for the eyes

Clean naturally

Key ingredients: organic cornflower, rose and chamomile waters.
Use: gently clean the eye area.
Presentation: 100 ml bottle.

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MP LABO
Innovative by Nature

OPHTHALMOLOGY

A new eye
on veterinary ophthalmology

Lacri+® & Lacri-protect®, a new range of preservative-free eye protectors.

- **Protect the eyes** with the safety of preservative-free formulas
- **Innovate** with new presentations to ensure products' sterility
- **Improve eye comfort** through a patented technology of cross-linked sodium hyaluronate

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Lacri-protect®, protect the ocular surface

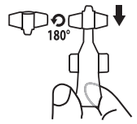
Carbomer

A synthetic polymer of polyacrylic acid with moisturizing and film-forming properties:

- High binding power to water: ability to retain **more than 1000 times their volume in water**[1].
- Interaction with the mucins, allowing to **stay on the ocular surface without flowing**[2].
- **Improve the quality** of the tear film.

the benefits

- **Tolerance** - formulation without preservative to bring ocular comfort and limit complications.
- **Innovation** - resealable single-dose to guarantee sterility.
- **Accuracy** - pipette to facilitate the application of a precise and controlled drop.
- **Practicality for the owner** - a single-dose of carbomer reusable 12 hours after opening.
- **Flexibility in your recommendation** - available in box of 10 single-doses or in display of 110 single-doses.



Resealable single-dose

PRESERVATIVE FREE

Lacri+®, doing more for the ocular comfort

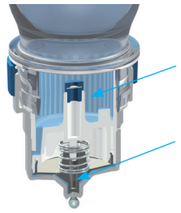
Cross-linked sodium hyaluronate

A **naturally occuring molecule found** in the vitreous body with viscoelastic and mucomimetic properties that are improved by the cross-linking technology:

- **Lubrication and hydration** properties of the ocular surface **increased** with urea[5].
- **Extended contact time** on the ocular surface thanks to the covalent crosslinking technology[6].
- **Ability to repair** corneal epithelial cells.

the benefits

- **Tolerance** - formulation without preservative to bring ocular comfort and limit complications.
- **Innovation** - a patented device to guarantee the sterility during the use.
- **Accuracy** - delivery of a calibrated drop.
- **Comfort and persistence** - cross-linked sodium hyaluronate for an excellent ocular protection.
- **Shelf life** - 3 months after opening.



Patented multidose bottle
(pictures Aptar Pharma)

Multilayer membrane to filter air

Tip-seal mechanism to prevent contamination

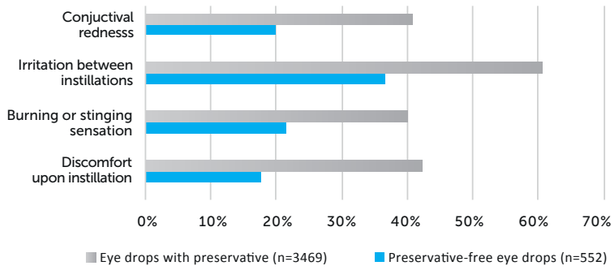
PRESERVATIVE FREE

Lacri+® and Lacri-protect®, a range **preservative-free eye protectors.**

PRESERVATIVE FREE

"Frequent use of preservatives tends to weaken the ocular surface, making it susceptible to develop inflammatory reactions, more or less chronic, and that can be serious in the long term[3]."

Use of preservative-free eye drops decreases the frequency of discomfort in humans[4]



CURRENT RECOMMENDATIONS FOR HUMANS:
REMOVAL OF PRESERVATIVES IS FUNDAMENTAL IN CASE OF DRY EYE[2].

Lacri+®, new **cross-linking** technology.

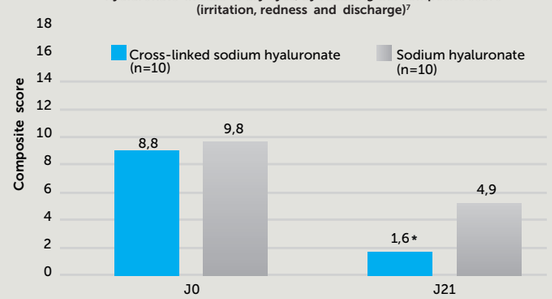
What is cross-linking?

A modification of soiudm hyaluronate structure by creating transversal bounds to obtain a three-dimensional polymer.

What are the interests of cross-linking?

- **Greater stability** and resistance to enzymatic degradation: increases contat-time on the ocular surface[6].
- **Improvement in the health parameters of the ocular surface**: irritation, redness and discharge significantly improved with cross-linked sodium hyaluronate versus native sodium hyaluronate[7].

Cross-linking significantly improves the comfort provided by sodium hyaluronate in case of dry eyes, by reducing the composite score (irritation, redness and discharge)[7]



*** Statistically significant difference on the composite score between the cross-linked sodium hyaluronate group and the sodium hyaluronate group, p = 0,0003**

1. Chiambaretta F, Pouliquen P, Menerath JM, Pilotaz F, Rebika H, Rigal D. Efficacité et tolérance d'un gel de carbomère fluide versus un gel de carbomère classique lors du traitement du syndrome sec. J Fr Ophtalmol. 2004 Feb;27(2):130-5.
2. Pisella PJ, Baudouin C, Hoang-Xuan T. Société française d'ophtalmologie, rapport 2015. Surface oculaire. 2015:521-536.
3. Vaede D, Baudouin C, Warnet JM, Brignole-Baudouin F. Les conservateurs des collyres : vers une prise de conscience de leur toxicité. Journal français d'ophtalmologie. 2010,33:505-524.
4. Pisella PJ, Pouliquen P, Baudouin C. Prevalence of ocular symptoms and signs with preserved and preservative free glaucoma medication. Br J Ophthalmol. 2002 Apr;86(4):418-23.
5. Fallacara A, Vertuani S, Panozzo G, Pecorelli A, Valacchi G, Manfredini S. Novel artificial tears containing cross-linked hyaluronic acid: an *in vitro* re-epithelialization study. Molecules. 2017,22:2104.
6. Posarelli C, Passani A, Del Re M, Fogli S, Toro MP, Ferrerras A, Figus M. Cross-Linked Hyaluronic Acid as Tear Film Substitute. J Ocul Pharmacol Ther. 2019 Sep;35(7):381-387.
7. Williams DL, Mann BK. Efficacy of a crosslinked hyaluronic acid-based hydrogel as a tear film supplement: a masked controlled study. PLoS One. 2014 Jun 10;9(6):e99766.