

NEW

LUXYAL[®]



**CROSS-LINK
GEL TEARS**



**A NEW TEAR SUBSTITUTE FOR THE TREATMENT OF SYMPTOMS
OF MILD TO MODERATE DRY EYE**



NOVAX[®]
PHARMA

LUXYAL®



CROSS-LINK GEL TEARS

DUAL POLYMER TECHNOLOGY: WITH CROSS-LINKED SODIUM HYALURONATE 0.3% AND P-PLUS™

CONTAINS **SCO®**

MEDICAL DEVICE
CLASS II B



- ✓ **HIGH AND LONG LASTING LUBRICATING POWER**
Stabilises the lachrymal film
- ✓ **HIGH VISCOSITY POWER**
Long-lasting effect, improved vision quality
- ✓ **HIGH MUCOADHESIVITY ACTION**
Bioadhesive to the corneal epithelium
- ✓ **A SAFE BIODEGRADABLE PRESERVATIVE**
Absence of epithelial toxicity
- ✓ **COMPATIBLE WITH ALL TYPES OF CONTACT LENSES**

LUXYAL® CROSS-LINK GEL TEARS is a duo polymer combination that provides a more significant and improved action in case of desiccation through increased surface retention time of the lubricant agents compared to other single polymer formulations.

The association of a dual demulcent (**Cross-linked Sodium Hyaluronate and P-PLUS™**) in **LUXYAL® CROSS-LINK GEL TEARS**, helps to leverage the hygroscopic, viscoelastic and mucoadhesive properties of the solution.

CROSS-LINKED SODIUM HYALURONATE 0,30% (2)

- Is a highly hydrophilic physiological polymer.
- Provides LUXYAL® CROSS-LINK GEL TEARS with biophysical properties similar to those of natural tears.
- Has an optimum molecular weight.

ELECTROLYTES

- The presence of electrolytes (Ca⁺⁺, Mg⁺⁺, K⁺, Cl⁻, Na⁺) helps keep the surface of the eye in good physiological condition.

P-PLUS™

- Has filmogenous, bioadhesive and lubricant properties.
- Enhances the effectiveness of sodium hyaluronate.
- Is a substitute for mucin in artificial tears.
- Improves tear break-up time (TBUT), and symptoms in severe dry-eye patients.

DRY EYE DISEASE

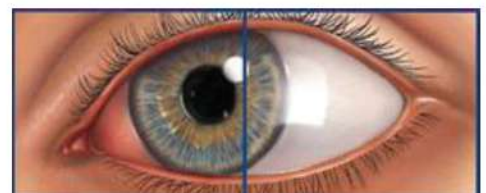
"Dry eye is a disorder of the tear film due to tear deficiency or excessive evaporation, which causes damage to the interpalpebral ocular surface and is associated with symptoms of ocular discomfort."

The definition of dry eye was reviewed by the International Dry Eye Workshop (DEWS) committee in 2007 based on new knowledge about the role of hyperosmolarity and inflammation of the ocular surface in this pathology and these conditions' effects on visual functions⁽⁴⁾.

MAIN CAUSES OF DRY EYE: It is one of the most prevalent eye diseases in the world :

- Defective lacrimal function
- Reduced aqueous tear volume and tear flow
- Increased tear evaporation

NOVAX PHARMA HAS SPECIFIC LINE FOR DRY EYE DISEASE WITH MOISTURIZING AND LUBRICATING EYE SOLUTIONS



DRY EYE

NORMAL EYE

THE BEST PERFORMING TEAR IN TERMS OF VISCOSITY AND MUCOADHESIVITY



10 ML



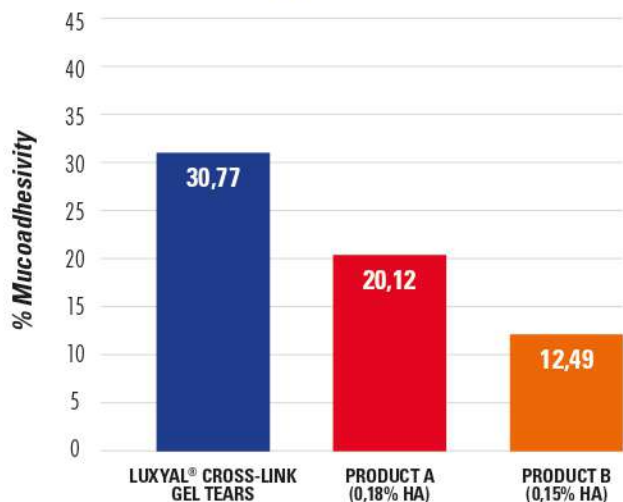
DRY EYE



SCO®

IN VITRO EVALUATION OF MUCOADHESIVITY ON RECONSTRUCTED HUMAN CORNEA-LIKE EPITHELIUM AND VISCOSITY DETERMINATION ⁽⁶⁾

Mucoadhesivity effect on ocular tissues*

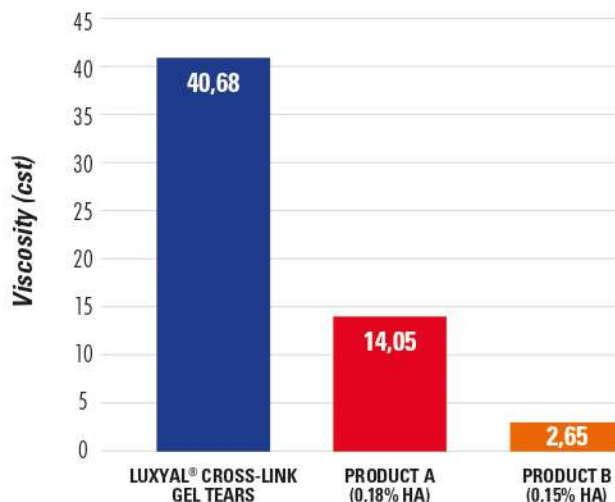


*The tests are available for consultation in the Novax bibliographic files

AIM: The aim of the test is to evaluate the in vitro mucoadhesivity of the tested products.

The results showed that the mucoadhesivity of the sample **LUXYAL® CROSS-LINK GEL TEARS** is 30,77%, higher than the mucoadhesivity of Product A (20,12%) and of Product B (12,49%).

Determination of viscosity

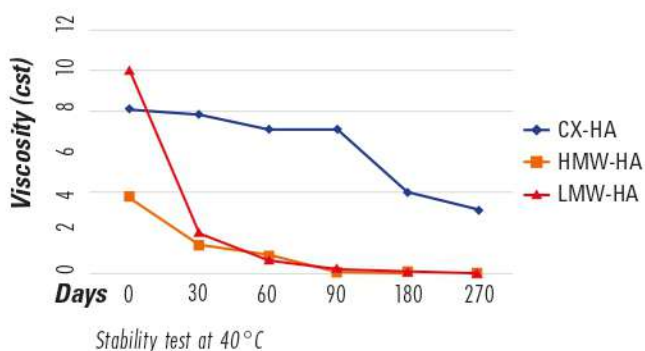


LUXYAL® CROSS-LINK GEL TEARS has a significantly higher viscosity compared to Product A (0,18 % HA) and Product B (0,15 % HA).

Note: **LUXYAL® CROSS-LINK GEL TEARS** Is a new improved formulation derived from **LUXYAL® PLUS**, the original formulation.

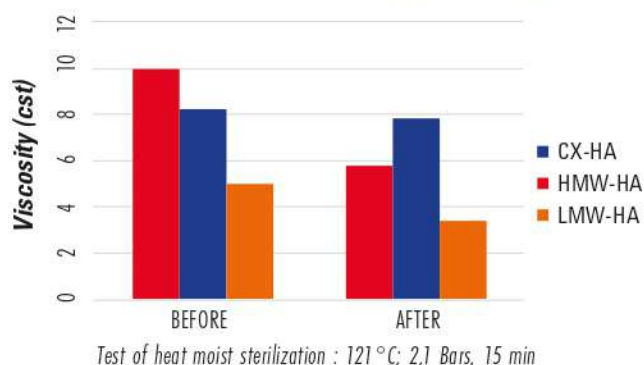
ADVANTAGES OF CROSS-LINKED HYALURONIC ACID ⁽⁷⁾

CX-HA is more stable over time



Linear HA (HMW-HA and LMW-HA)-based eye drops show a loss of viscosity between 60% - 80% after the first 30 days at 40 °C. CX-HA-based eye drops 0,15% show a loss of viscosity between 10% and 12%, but only after 90 days at 40 °C (accelerated stability test).

CX-HA is more resistant to physical degradation



CX-HA-based eye drops show a greater stability after prolonged exposure to very high temperatures (moist heat sterilisation test: 121 °C; 2.1 bar; 15 min).

CONCLUSIONS

LUXYAL® CROSS-LINK GEL TEARS has superior properties compared to other existing products on the market. The association of Cross-linked Sodium Hyaluronate and P-Plus™ not only increases the viscosity of the solution but also improves its mucoadhesivity properties.

MEDICAL DEVICE
CLASS II B



LUXYAL®



**CROSS-LINK
GEL TEARS**

**MULTIDOSE LUBRICATING
SOLUTION WITH A BIODEGRADABLE
PRESERVATIVE **SCO®****

**A NEW TEAR SUBSTITUTE FOR THE
TREATMENT OF SYMPTOMS OF
MILD TO MODERATE DRY EYE (1,3)**

TECHNICAL DESCRIPTION

SCO® THE ADVANCED PRESERVATIVE TECHNOLOGY (STABILIZED COMPLEX OXYCHLORO)

SCO® is an oxidative-type preservative and a mixture of chlorine dioxide, chlorite and chlorate. When exposed to light, SCO® dissociates into components naturally found in the human tears such as sodium chloride, oxygen and water, making it very well tolerated.

What are the benefits of SCO® :

- SCO® only remains in its original form when inside the eye drop bottle.
- As soon as it leaves the bottle as part of a drop it reacts with light and rapidly dissipates into components naturally found in human tears such as sodium chloride, oxygen and water, without causing any cellular damage to the ocular surface.
- SCO® has been shown to be much safer on the ocular surface than those eye drops preserved with other chemical preservatives.
- SCO® is SAFE, EFFECTIVE, GENTLE and COMFORTABLE.



SCO® provides
nothing **BUT**
**water, oxygen
& natural
electrolytes**
to the eyes.

COMPOSITION

Cross-linked Sodium Hyaluronate 0.3%, P-Plus™, Potassium Chloride, Calcium Chloride, Magnesium Chloride, Sodium Chloride, **SCO®**.

INDICATIONS

LUXYAL® CROSS-LINK GEL TEARS provides long and lasting relief of dry eye syndrome and ocular disorders in general, dry keratitis, xerophthalmia, Keratoconjunctivitis sicca, Sjogren's syndrome and Stevens-Johnson Syndrome.

It is also recommended in case of tired eye conditions, associated with itching, burning, foreign body ingress and irritation of the eye, caused by pathological or non-pathological conditions associated with external factors such as prolonged exposure to screens and monitors, air conditioning, air pollution, smoke etc.

LUXYAL® CROSS-LINK GEL TEARS is compatible for the use with all types of contact lenses (5).

STORAGE :

Store between 5 and 35°C



Manufacturer:
NOVAX® PHARMA
Le Coronado
20, avenue de Fontvieille
MC98000 MONACO
www.novaxpharma.com

CE
0051

NOVAX®
PHARMA

BIBLIOGRAPHY

1. Tear substitutes, M.B. Abelson, G. Ousler, R. Anderson, Albert & Jakobiec's Principles & Practices of Ophthalmology, Chapter 27, 2016 | 2. Effectiveness of hyaluronan on corneal epithelial barrier function in dry eye, N. Yokoi, A. Komuro, K. Nishida, S. Kinoshita, 1997, British Journal of Ophthalmology | 3. Ocular Surface Diseases, 2016 World Ophthalmic Congress in Mexico | 4. Report of the International Dry Eye Workshop (DEWS) – The Ocular Surface - April 2007, Vol. 5, No. 2 | 5. Biocompatibility tests and rational - Novax Pharma Internal Data | 6. Mucoadhesivity test, Novax Pharma internal data | 7. Brochure Crossyal - Experience the positive side of Cross Linked Hyaluronic Acid Eye Drops – Crosslinked Hyaluronic Acid Eye Drops – Biotech