

thera
tears.

TheraTears® EXTRA® Dry Eye Therapy

TheraTears® EXTRA®
is the most hypotonic
leading brand⁶

WITH
OSMO-CORRECTION®
HYPOTONIC & ELECTROLYTE
BALANCED

Product	Osmolarity	Electrolyte Balanced
TheraTears® EXTRA®	155	YES
TheraTears®	188	YES
Refresh Optive® Advanced	269	NO
Systane® Balance	275	NO
Refresh Tears®	276	NO
Systane® Ultra	286	NO
Systane®	290	NO
Soothe® XP	294	NO
Normal Tears	302	YES
Refresh Plus®	306	NO
Refresh Optive®	329	NO

TheraTears® Dry Eye Therapy Relieves the Signs and Symptoms of Dry Eye⁷



**RESTORES
EYES NATURAL
BALANCE®**

+



**CLEANSSES
EYELIDS AND
LASHES**

+



**NOURISHES
EYES TO PROMOTE
HEALTHY TEARS***



TheraTears®
Dry Eye Therapy
Lubricant Eye Drops



TheraTears®
SteriLid®
Antimicrobial Cleanser



TheraTears®
Eye Nutrition
1200mg Omega-3 Supplement

Recommend the TheraTears® family of products for your dry eye patients.

*Critical first steps to treating dry eye symptoms include ocular lubricants,
lid hygiene and dietary modifications such as oral fatty acid supplementation.¹*

-2017 DEWS II Report

[theratears.com/
professionals](http://theratears.com/professionals)

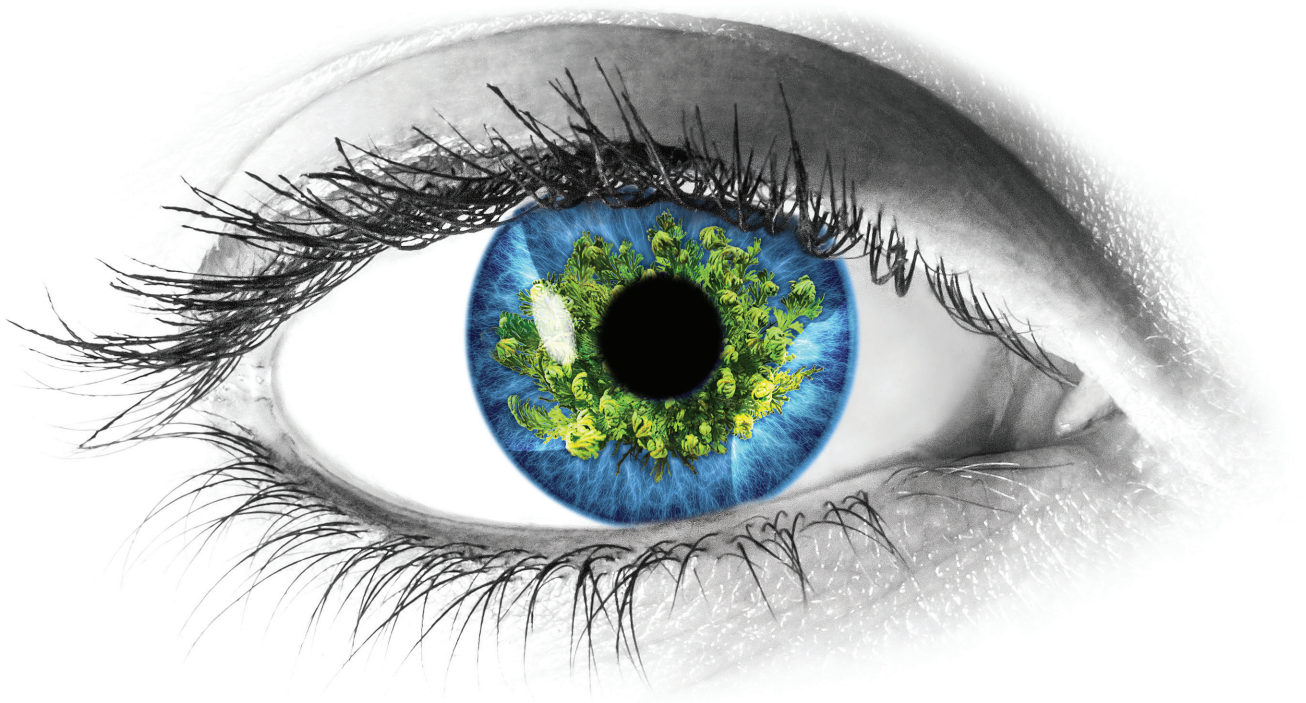
References:

1. Jones L, et al. TFOS DEWS II Management and Therapy Report. The Ocular Surface. 2017;15:575-628.
2. Luyckx J, et al. Trehalose: An Intriguing Disaccharide with Potential for Medical Application in Ophthalmology. Clin Ophthalmol. 2011;5:577-581.
3. Schmid D, et al. Tear Film Thickness After Treatment with Artificial Tears in Patients with Moderate Dry Eye Disease. Cornea. 2015;34(4):421-426.
4. Matsuo T, et al. Trehalose eye drops in the treatment of dry eye syndrome. Ophthalmol. 2002;109:2024-2029.
5. Matsuo T. Trehalose protects corneal epithelial cells from death by drying. Br J Ophthalmol. 2001;85:610-612.
6. Data on file Akorn Consumer Health.
7. Ng L, et al. Changes in Tear Osmolarity and Ocular Symptoms Over Time with Sustained Use of Hypotonic Lubricating Drops in Dry Eye Subjects. Poster presented at: The American Academy of Optometry Annual Meeting; October 11-14, 2017; Chicago, IL.

*This statement has not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease.

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PrestigeConsumer
HEALTHCARE



DRY EYE RELIEF INSPIRED BY NATURE



TheraTears® EXTRA® Dry Eye Therapy
is enhanced with trehalose



The History of Trehalose

Trehalose is a natural disaccharide with enhanced moisture retention capabilities.¹

Trehalose is found in micro-organisms, insects and certain plants, such as the Rose of Jericho, native to desert regions of the world.

The Rose of Jericho can survive in a dormant state for years without water. Thanks to the power of trehalose, it comes back to life when re-exposed to water.



How does it work?

- Protects cell membranes and proteins from denaturation and disruption in the absence of water
- Maintains cell membrane and protein integrity during drying and rehydration

How is it used?

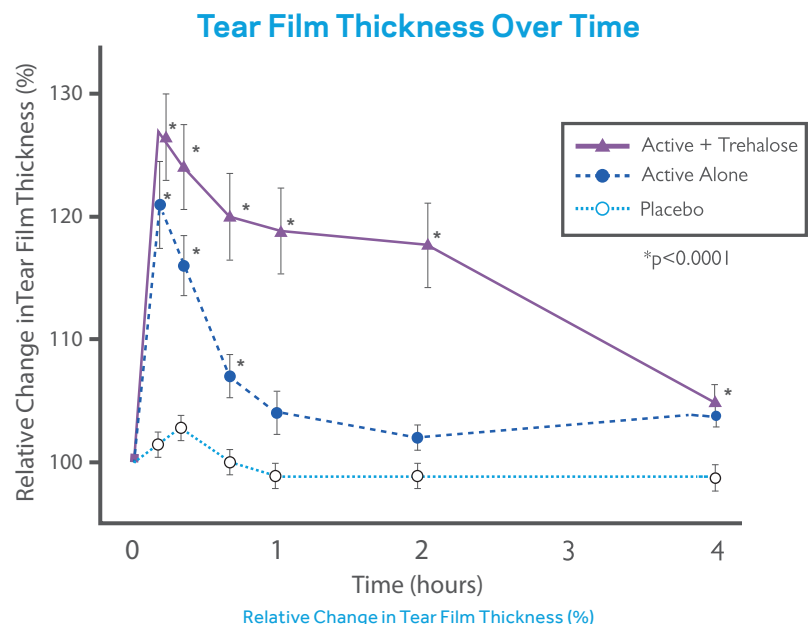
- To enhance the effectiveness of active ingredients
- In the U.S. as an excipient in at least four injectable pharmaceuticals²
- As a protectant for in vitro fertilization, plasma transfusions, cosmetics and processed foods

✓ Rehydrates Tear Film

Trehalose has been shown to enhance tear film thickness when combined with an active ingredient.³

Compared to baseline, the active + trehalose formula provided a significant increase in tear film thickness from 10 minutes to 4 hours after installation.

Adopted from Schmidl D, et al.³



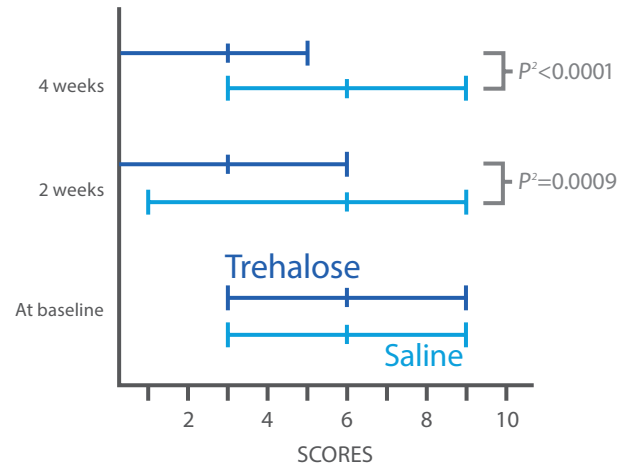
✓ Protects from Further Irritation

In a preliminary clinical study, trehalose helped improve corneal staining.⁴

Trehalose significantly decreases Rose Bengal staining vs. saline control after both 2 and 4 weeks of treatment.

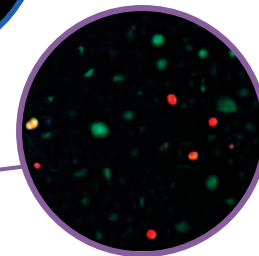
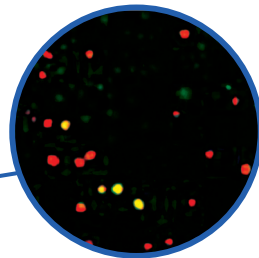
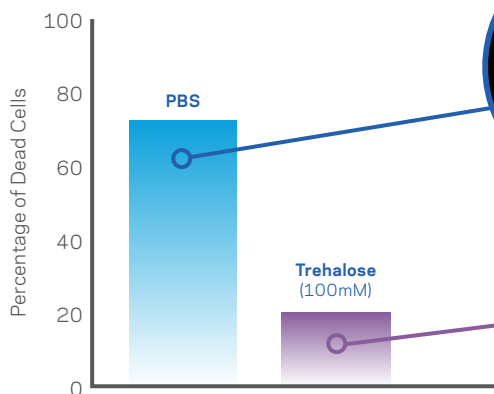
Results of installing trehalose (100mM) in one eye and control saline in the other eye of patients with dry eye syndrome. Chart created from Matsuo T et al.⁴

Comparative Rose Bengal Staining



In a laboratory study, trehalose helped protect corneal epithelial cells from apoptosis after 30 minutes of desiccation.⁵

Comparative Cell Death



Cells were pre-exposed to solutions and then left to dry. After 30 minutes, the number of living cells (green) and dead cells (orange/red) were counted and visualized with cellular imaging. Representative imagery adopted from Matsuo T.⁵

✓ Supports Homeostasis of Tear Film

As discussed in the 2017 DEWS II Report, trehalose is proven to help:¹

- Protect corneal cells from desiccation
- Prevent denaturation of cell membrane lipid bilayers and proteins
- Restore osmotic balance to the ocular surface
- Maintain homeostasis of corneal cells

