

Innovative

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REGARD



...it's time to breathe

contact lens

solution

Regard

Innovative oxygen releasing formula for soft contact lenses care.



Releases oxygen to the surface of the eye.

Transforms into natural components of tears.

A revolutionary formula

Regard®'s unique formula, based on the synergy between the **chlorite ion** and hydrogen peroxide, provides an active disinfection and then releases **oxygen** to

the corneal surface.

Regard® is ideal for guaranteeing an efficacious disinfection in the lens case, yet assuring maximum lens comfort on the eye.

Disinfection in the lens case



Comfort in the eyes



Only Regard® offers:

Cleaning

- Highly efficient disinfection profile.
- Elimination of microbes and their related enzymes and toxins.
- Removal of protein deposits.

Comfort

- Active ingredients break down into water, salt, and oxygen.
- Efficacious wetting and lubrication action (HPMC 0,15%).

Health

- Oxygen releasing formula.
- Absence of toxic preservatives.

Mechanism of action

- The **Chlorite Ion** (ClO_2^-) interacts with acidic microbial components (such as the bacterial cell membrane) and transforms temporarily into a potent disinfectant, **Chlorine Dioxide** (ClO_2).¹
Chlorine Dioxide is a non toxic **biocide** commonly used as an alternative to Chlorine (Cl_2) to disinfect municipal drinking water.²



- The antimicrobial action of the Chlorite Ion (ClO_2^-) is synergistically enhanced when combined with a small quantity of Hydrogen Peroxide (H_2O_2).³
This combination not only disinfects, but also **destroys bacterial enzymes and toxins**. The subsequent reversion back into Chlorite creates a **self-stabilizing formula**.⁴



- Out of the bottle and exposed to light, Sodium Chlorite breaks down into **Sodium Chloride** (NaCl - salt) and **Oxygen** (O_2).⁵



- In the ocular environment, Hydrogen Peroxide (H_2O_2) breaks down into **Water** (H_2O) and **Oxygen** (O_2).⁶



The power of oxygen.



Regard is so stable and non-toxic to the eye, it can be used directly as a **lens rewetter** to enhance ocular comfort.

1) The chlorite ion can be activated by acids, aldehydes, alpha hydroxyacids, active protons and other microbial components. The chlorite ion (ClO_2^-) reacts with acidic microbiologic material to produce transient chlorine dioxide (ClO_2).
2) Water safety studies. Data on file.
3) The addition of a small quantity of hydrogen peroxide increases the production of chlorine dioxide (ClO_2) and enhances cellular penetration inside the microorganism.
4) US and European patents applied.
5) A trace amount of ClO_3^- is also formed.
6) Human tears contain the enzymes catalase and superoxide desmutase which break down hydrogen peroxide into oxygen and water.

Regard®

Regard. Cares about your eyes as well as your lenses.



Composition / Benefits

Components

NaClO₂ (Sodium chlorite)

H₂O₂ (Hydrogen peroxide)

Hydroxypropylmethylcellulose (HPMC)

Pluronic F-68

Action

Disinfection, Oxygen

Disinfection, Oxygen

Lubrication and detergent actions

- **Sodium Chlorite** - Safe, transient disinfection in the presence of acidic microbial components. Lower cytotoxicity profile than PHMB. Oxygen releasing.
- **Hydrogen peroxide - 0,01%** - Enhances disinfection and stability. Oxygen releasing.
**Note that .01% H₂O₂ or 100 ppm (parts per million) is completely non-toxic in the ocular environment.⁷ Regard® should not be confused with traditional 3% H₂O₂ disinfection systems (30,000 ppm) which require a neutralization reaction by a metal disk or catalytic tablet added to the solution.*
- **Hydroxypropylmethylcellulose - 0,15%** and **Pluronic F-68** - Polymeric lubricant and tensio-active surfactant to clean and add comfort.

Easy to use, one bottle, one step, without potentially irritating or toxic preservatives. Especially indicated for sensitive eyes or poor tear film.

Improves lens hygiene and releases oxygen for more comfortable lens wear.

Used regularly, reduces the adherence of protein deposits.

Does not affect colored lenses.

Demonstrated safety, efficacy, and comfort.

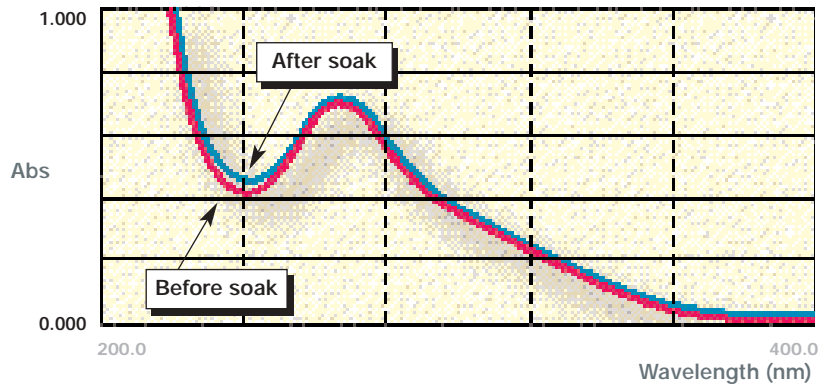
7) Ocular response to Hydrogen Peroxide; J.R. Paugh, N.A. Brennan and N. Efron; Am. Optometry & Physiol. Optics: 65, 91-98, 1988

Lens Absorption Study • Absorbance spectrum of solution taken before and after soak

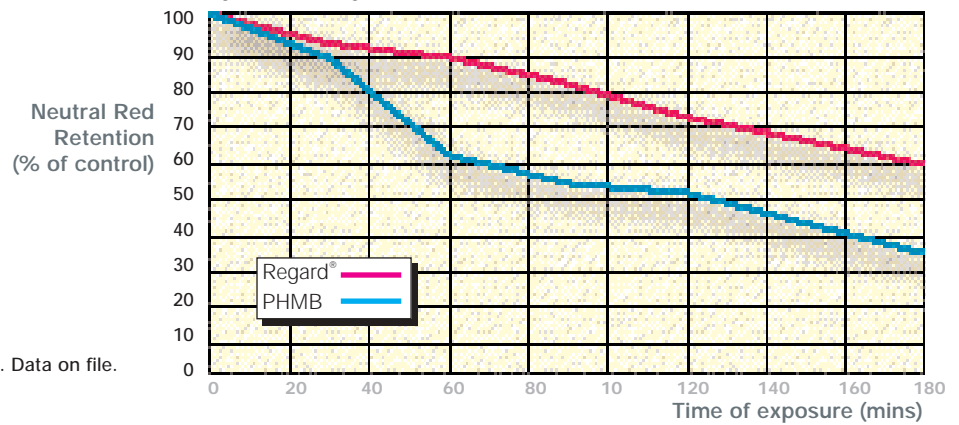
Etafilcon-A lenses were soaked in 2,5 mls Regard solution for 22hrs (Power=-2.0, BC=8.8, Dia=14.0)

No lens uptake with Regard, as compared to PHMB with residual 2.0µg out of 2.5µg available in 2,5 ml solution.*

*Spectrophotometry and C14 radio-labelled studies. VitaResearch. Data on file.



Cytotoxicity Evaluation • Clorite safety - less cytotoxic than PHMB



Neutral red retention. Madin-Darby Canine Kidney cell test. Data on file.

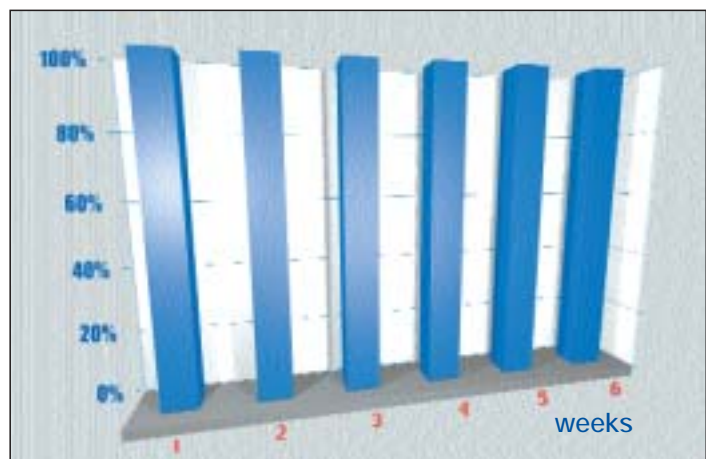
Antimicrobial Efficacy • Excellent disinfection profile

Test Organism	Inoculum CFU/ml	6 hrs CFU/ml	24 hrs CFU/ml	28 days CFU/ml
S. aureus	5x10 ⁵	<10	<10	<10
P. aeruginosa	5x10 ⁵	<10	<10	<10
S. marcescens	5x10 ⁵	<10	<10	<10
C. albicans	5x10 ⁵	<10	<10	<10

Comfort study • Lens wearer assessment

% of lens wearers evaluating Regard as comfortable or very comfortable.

Patient comfort study. VitaResearch data on file.

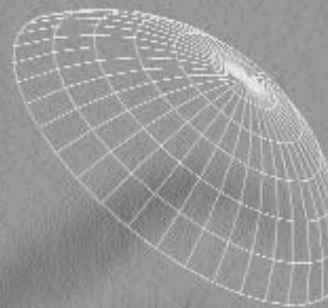


Regard



**Innovative
contact lens
solution**

advanced
eyecare
research



Regard®
is a product from



Via Pola, 148
00040 Pomezia - ITALY
Tel. +39 06 9190022
Fax +39 06 9192709



www.vitaresearch.com
e-mail: info@vitaresearch.com