

*THIS WEBINAR WILL BEGIN  
SHORTLY!*



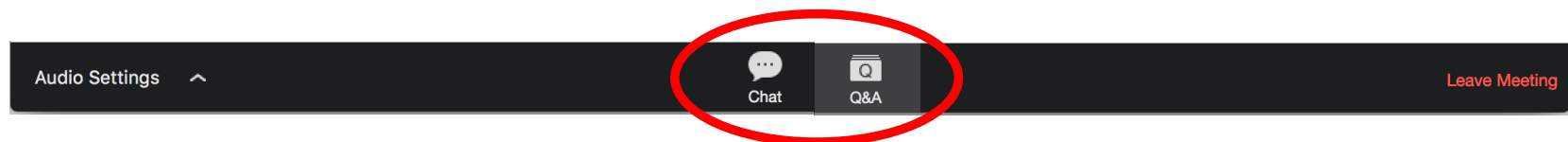
GETTING  
PRISTINE  
WITH  
SCLERAL LENS  
HYGIENE

Karen Lee, OD, FAAO, FSLs

Scleral Lens Education  
Society Immediate Past  
President



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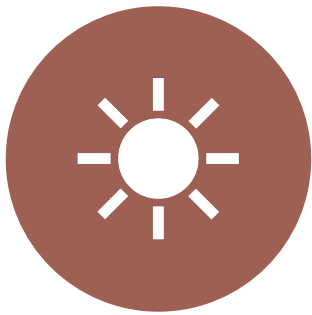


## LECTURE OBJECTIVES

- Review cleaning and disinfection process of scleral lenses
- Provide a comprehensive review of solutions that can be used by scleral lens patients
- Become familiar with solutions that are compatible with Tangible Hydra-PEG coated scleral lenses
- Be able to provide better care for our patients



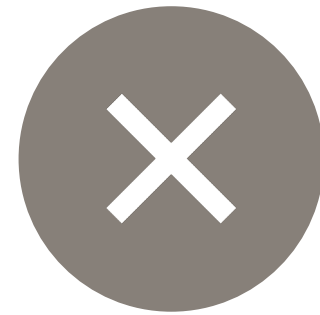
# SCLERAL LENS USE



GP MATERIALS  
DAILY WEAR



CLEANED AND  
DISINFECTED NIGHTLY  
PRIOR TO USE



NOT RECOMMENDED  
FOR OVERNIGHT WEAR

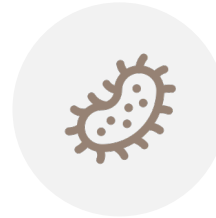
# SCLERAL LENS SOLUTIONS



## ***Cleaners***

Removes deposits and debris from lens surface.

Many types available.



## ***Disinfection***

Prevent ocular microbial contamination with chemicals that acts as a solution preservative and disinfects the lens.



## ***Surface Wetting***

Creates a hydrophilic surface to stabilize pre-lens tear film and increase biocompatibility of lens surface to reduce protein deposits.



## ***Rinsing/Filling***

Remove potentially toxic solutions from lens surface and act as a cushion between the lens and cornea.

# SCLERAL LENS ORDER OF OPERATIONS



Classic two-bottle system  
or  
Multipurpose product

## *TWO-BOTTLE REGIMEN*

- Separate cleaning and soaking solutions.
- Complicated process.
- More effective at cleaning lenses?



## *MULTIPURPOSE LENS CARE PRODUCTS*

- One bottle system that does it all, simple.
- More cost effective



# SCLERAL LENS ORDER OF OPERATIONS

1

*Cleaner  
Options*

- *Non-  
abrasive  
Daily  
Cleaner*
- *Extra  
Strength  
Cleaner*

2

*Overnight  
Storage*

3

*Rinse*

4

*Fill*

5

*Additional  
Supplies*

## DAILY CLEANERS

Used in the evening after lens removal

- Removes debris and deposits
- Prepares the lens for soaking disinfection

Many types of daily cleaners

- Non-abrasive surfactants
- Extra strength daily cleaners
- Abrasive surfactants
- Surfactant soaking



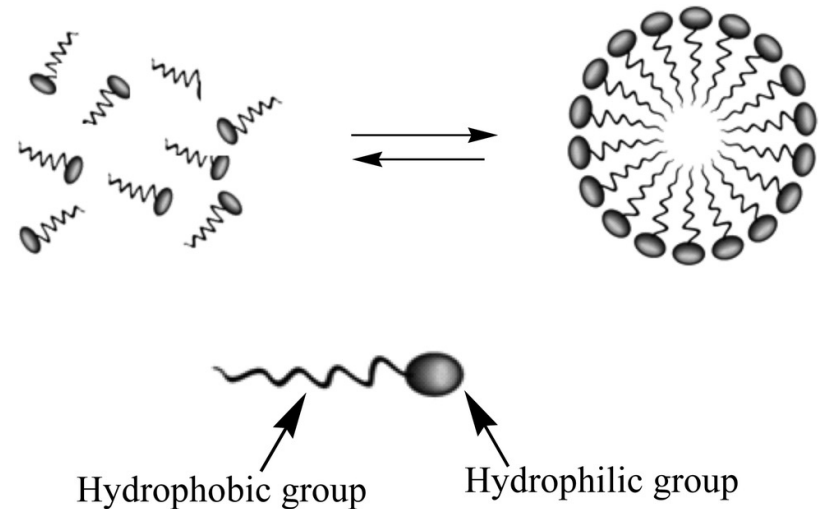
## ABRASIVE DAILY CLEANERS

- Surfactants with abrasive polymer particles
  - Smaller diameter particles are less abrasive
  - Removes stubborn deposits
- **Contraindicated with scleral lenses**
  - Causes surface scratches with higher Dk plastics
- **Not compatible with Hydra-PEG or plasma treated lenses**
- Often have a **red cap**
- Example: Boston Advance Cleaner



# NON-ABRASIVE DAILY CLEANERS

- Surfactant (detergent/soap) agents that do not contain polymer particles
- Rubbing and friction is important to remove deposits
  - Look for suds!
- **Not compatible with Hydra-PEG**
- Often have a **red cap**
- Example: Lobob Optimum ESC- Extra Strength Cleaner





## DAILY CLEANERS

NAME	MANUFACTURER	PRESERVATIVE	TYPE OF CLEANER	REC'D RINSE
Boston Original Cleaner	Bausch + Lomb	None	Abrasive	Saline
Boston Advance Cleaner	Bausch + Lomb	None	Abrasive	Saline
Rigid Gas Permeable Contact Lens Cleaner, Step 1	Target	None	Abrasive	Not mentioned
Equate enhanced contact lens cleaner, step 1	Wal-Mart	None	Abrasive	Not mentioned
Sereine Cleaner	Optikem International	EDTA (0.1%) BAK (0.01%)	Nonabrasive	Tap water
Optimum by Lobob Extra Strength Cleaner	Lobob	None	Nonabrasive	Tap water

NON-ABRASIVE  
DAILY CLEANERS  
OFFICIAL  
INSTRUCTIONS  
FOR USE

Rub after lens removal

- Apply 1-2 drops of cleaner to each surface of the lens
- Rub for 20-30 seconds

Rinse instructions

- Tap water



Soak in disinfecting storage solution





## EXTRA STRENGTH DAILY CLEANERS

- **Alcohol-based** surfactant agents that do not contain polymer particles
- Can be used daily or weekly
- Great for stubborn lipid-based deposits
- Self-preserved solution
- **Not compatible with Hydra-PEG**
- Red cap: Must be rinsed and thoroughly soaked

## ALCOHOL-BASED EXTRA STRENGTH CLEANERS

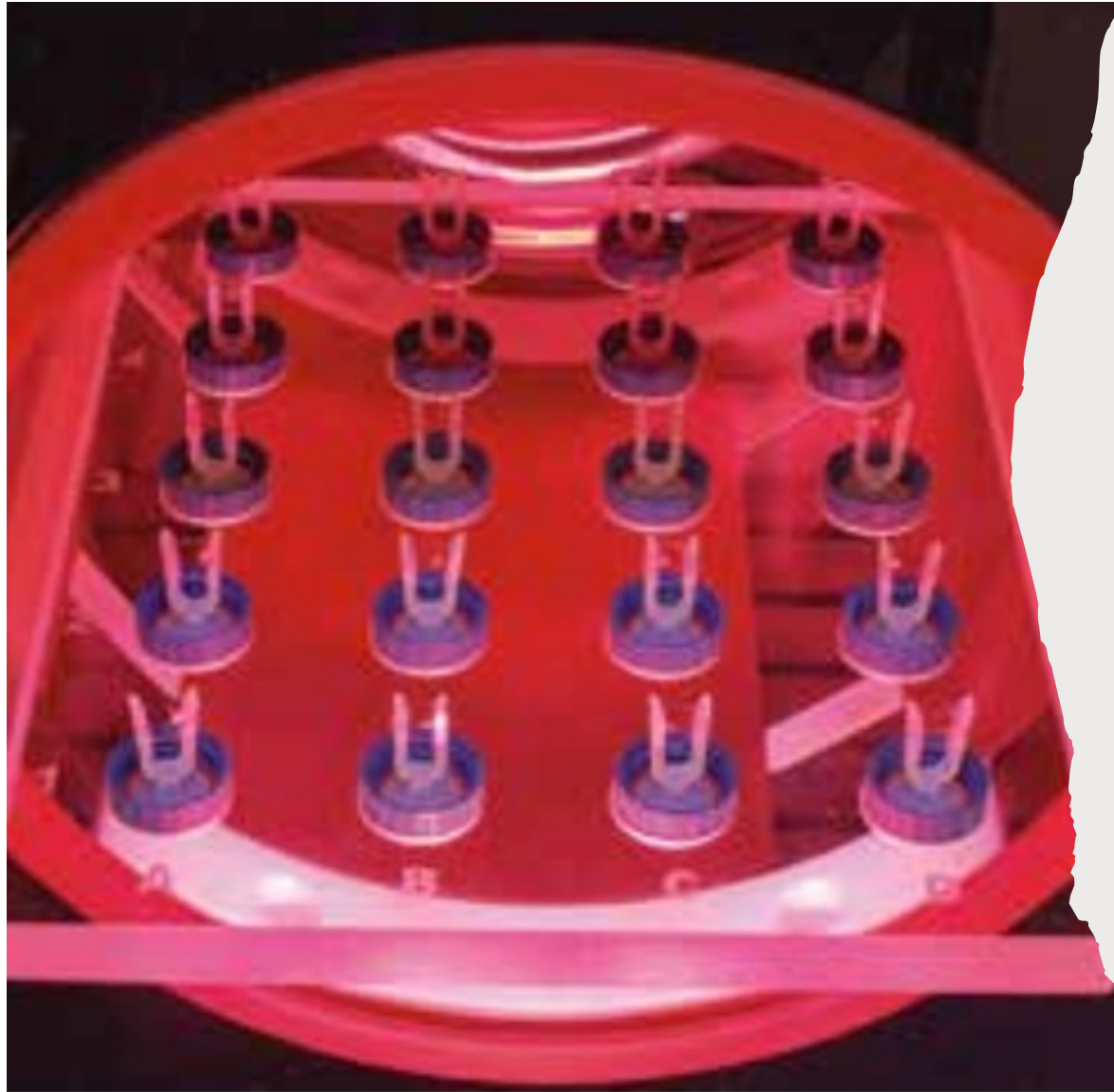
<i>Name</i>	<i>Manufacturer</i>	<i>Materials Approved</i>	<i>Type of Cleaner</i>	<i>Rinse</i>
MiraFlow Extra Strength Daily Cleaner	William Martin, OD	Soft CLs and GPs	Nonabrasive...	Sterile saline
Sereine Extra Strength Daily Cleaner	Optikem International	Soft CLs and GPs	Nonabrasive	Sterile saline
Walgreens Extra Strength Daily Contact Lens Cleaner	Walgreens	Soft CLs and GPs	Nonabrasive	Sterile saline
Lens Fresh Extra Strength	Orion Vision Group	Soft CLs and GPs	Nonabrasive	Sterile saline Or Biotrue

## ALCOHOL-BASED EXTRA STRENGTH CLEANERS INSTRUCTIONS

- Apply 1-2 drops to both surfaces of the lens
- Rub gently for 15-20 seconds
- Rinse thoroughly with sterile saline
- Soak in disinfecting storage solution

Lens Fresh recommends an additional round of rubbing and rinsing prior to lens application





A QUICK NOTE  
REGARDING  
PLASMA  
TREATMENT

- Plasma treatment is not a coating
- GPs are placed in a specialized vacuum chamber and exposed to high-energy radio waves and oxygen
- Two main functions
  - Remove organic impurities
  - Create ionized lens surface
- Abrasive GP cleaners contraindicated
- Alcohol-based cleaners questionable

# SCLERAL LENS ORDER OF OPERATIONS

1

*Cleaner Options*

- Non-abrasive Daily Cleaner
- Extra Strength Cleaner

2

*Overnight Storage*

- **Conditioning solution**

3

*Rinse*

4

*Fill*

5

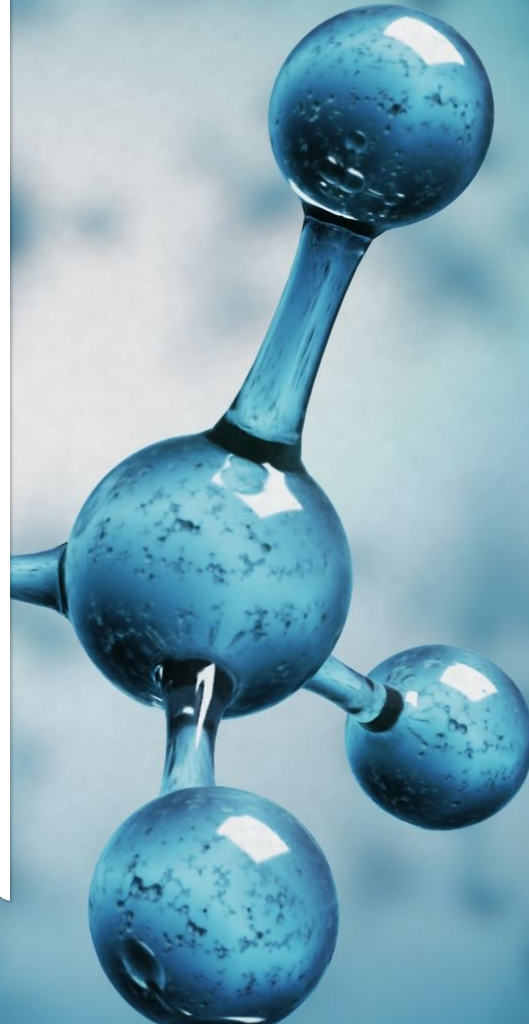
*Additional Supplies*



# CONDITIONING OR SOAKING SOLUTIONS

Four major functions:

- Maintain lens hydration
- *Disinfection*
- Improve lens comfort
- Enhance surface wettability







## SOAKING SOLUTION INSTRUCTIONS

After rubbing a lens cleaner and rinsing with saline

- Place lenses into a clean dry case
- Fill the case with fresh soaking solution
- Soak overnight or for minimum recommended period
- Safe to go on the eye directly when pt is wearing GPs
- *Must be rinsed off for scleral lens patients*

## SOAKING SOLUTIONS

<i>Name</i>	<i>Manufacturer</i>	<i>Min Soak Time</i>	<i>Preservative</i>
Boston Original Conditioning Solution	Bausch + Lomb	4 hours	Chlorhexidine gluconate (0.006%) Disodium Edetate (0.05%)
Boston Advance Conditioning Solution	Bausch + Lomb	4 hours	Polyaminopropyl Biguanide (0.0005%) Chlorhexidine Gluconate (0.003%) Disodium Edetate (0.05%)
Rigid Gas Permeable Contact Lens Conditioning Solution, Step 2	Target	4 hours	Polyaminopropyl Biguanide (0.0005%) Chlorhexidine Gluconate (0.003%) Disodium Edetate (0.05%)
Equate Contact Lens Conditioning Solution	Wal-Mart	4 hours	Chlorhexidine gluconate (0.006%) Disodium Edetate (0.05%)
Equate Enhanced Contact Lens Conditioning Solution, Step 2	Wal-Mart	4 hours	Polyaminopropyl Biguanide (0.0005%) Chlorhexidine Gluconate (0.003%) Disodium Edetate (0.05%)
Sereine Wetting and Soaking Solution	Optikem International	4 hours	Disodium Edetate (0.1%) Benzalkonium Chloride (0.01%)

# SCLERAL LENS ORDER OF OPERATIONS

1

**Cleaner Options**

- Non-abrasive Daily Cleaner
- Extra Strength Cleaner

**Combo Cleaning & Soaking Solution**

2

**Overnight Storage**

- Conditioning solution

3

**Rinse**

4

**Fill**

5

**Additional Supplies**

~~Classic two-bottle system~~  
Multipurpose product

# COMBO CLEANING & DISINFECTION SOLUTION

- Overnight storage solution with surfactants and wetting agents
- Dissolves deposits during overnight soaking cycle
- Can be used after a daily cleaner or in place of a daily cleaner
- **Not compatible with Hydra-PEG**
- **Must be rinsed prior to lens application**





## COMBO SOLUTION INSTRUCTIONS

Rub the lens for 30 seconds

- Create a sudsy pool of solution
- Rinse with tap water
- Soak overnight or for minimum recommended period
- *Must be rinsed off prior to use*

## COMBO CLEANING, SOAKING & DISINFECTION SOLUTIONS

<i>Name</i>	<i>Manufacturer</i>	<i>Soak Time</i>	<i>Preservative</i>
Sereine Soaking and Cleaning Solution	Optikem International	4 hours	Disodium Edetate (0.25%) Benzalkonium Chloride (0.01%)
Optimum by Lobob Cleaning Disinfection & Storage Solution	Lobob	6 hours	Benzyl Alcohol (0.3%) Disodium Edetate (0.5%).

***Not safe for direct application to the ocular surface!***

# SCLERAL LENS ORDER OF OPERATIONS

1

## *Cleaner Options*

- Non-abrasive Daily Cleaner
- Extra Strength Cleaner
- Combo Cleaning & Soaking Solution
- ***One Bottle Multipurpose Product***

2

## *Overnight Storage*

- Conditioning solution
- Combo Cleaning & Soaking Solution

3

## *Rinse*

4

## *Fill*

5

## *Additional Supplies*





## MULTIPURPOSE SOLUTION PATIENT CONSIDERATIONS

### Patient Considerations

- H/O poor compliance with two-bottle lens care products
- H/O minimal lens surface deposits

### ***One bottle does it all! Cleaning, disinfect, wetting and conditioning***

- Solution designed with surfactants that dissolve deposits during soaking cycle
- Very similar to MPS used for soft CLs
- Simpler process but rinsing/rubbing may still be necessary
- Often compatible with Hydra-PEG coating



## *MULTIPURPOSE LENS CARE PRODUCTS*

- Convenient
- Less expensive
- Questionable pt compliance
  - Rubbing and rinsing
- Effectivity?

## *HYDROGEN PEROXIDE- BASED SOLUTIONS*

- Preservative and allergen free
- Effective against biofilms and acanthamoeba
- **BURNS w/improper use**
- **Neutralization time needed**





## MULTIPURPOSE SOLUTION EFFECTIVITY?

- Less effective but still satisfactory after bottle had been opened for 3 months (Boost 2006)
- Less effective if stored in refrigerator (Boost 2006)
- Some solutions were not effective against *acanthamoeba* despite using as recommended (Boost 2012)



## MULTIPURPOSE SOLUTION INSTRUCTIONS

Depends on the MPS used

- Rub and rinse may occur before or after lens soaking

General recommendations

- Rub the lens for 15-20 seconds in MPS
- Rinse the lens for 5-15 seconds with MPS
- Soak in MPS for recommended time period

# AVAILABLE ALL- IN-ONE / MULTI- PURPOSE SOLUTIONS



## MULTIPURPOSE SOLUTIONS

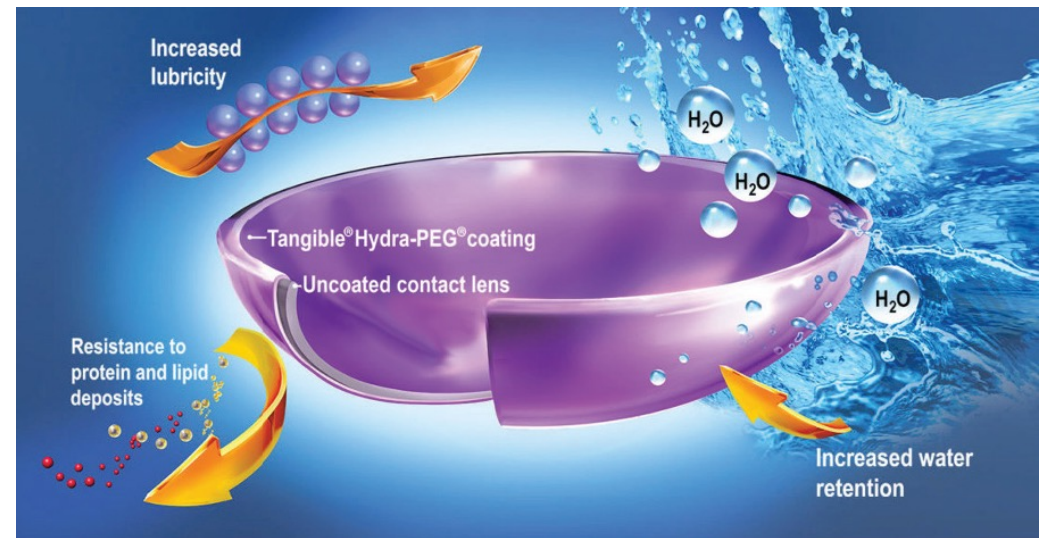
<i>Name</i>	<i>Manufacturer</i>	<i>Preservative</i>	<i>Rub or Rinse</i>
Boston Simplus Multi-Action Solution★	Bausch & Lomb	Chlorhexidine gluconate (0.003%) Polyaminopropyl biguanide (0.0005%)	Rub for 20 sec and rinse for 5 sec AFTER 4+ hour soak
Equate Hard Contact Lens Multi-action Solution	Walmart	Chlorhexidine gluconate (0.003%) Polyaminopropyl biguanide (0.0005%)	Rub for 20 sec and rinse for 5 sec AFTER 4+ hour soak
Unique pH★	Menicon	Polyquaternium (0.0011%) Disodium Edetate (0.01%)	Rub and rinse BEFORE 4+ hour soak
MeniCare Plus	Menicon	Polyhexamethylene biguanide (0.0005%)	Rub and rinse BEFORE 5+ min soak
Clear Conscience Multi-Purpose Solution	Clear Conscience, LLC	Disodium edetate (?) Polyhexanide (0.0001%)	Rub and rinse BEFORE/AFTER 4+ hour soak
Tangible Clean★	Tangible Science	Disodium edetate (?) Polyhexanide (0.0001%)	Rub for 15 sec and rinse BEFORE 6+ hour soak

★Tangible Hydra-PEG approved



# TANGIBLE HYDRA-PEG

- Permanent coating made of hydrophilic polymers
  - 90% water polyethylene glycol (PEG)
- Advantages of Hydra-PEG
  - Increases surface wettability and lubricity
  - Resists deposits and fogging
  - Dry eye pts reported superior comfort (Mickles)
- Disadvantages of Hydra-PEG
  - Difficulty with lens handling?
  - Limited solution compatibility
  - Durability of permanent coating?
    - Lenses cannot be sent back to lab for re-coating
  - Cannot store spare lenses dry



Do not expose to tap water!

**Cleaning pt lenses prior to dispense is not required.**

**APPROVED SOLUTIONS LIST**

**USE ONLY APPROVED TANGIBLE HYDRA-PEG™ CLEANERS**

Multipurpose Solutions

Menicon Unique pH      by Menicon  
Boston Simplus®      by Bausch & Lomb

Hydrogen Peroxide Solutions

Clear Care®      by Alcon  
Clear Care® Plus with HydraGlyde®      by Alcon



*Any rewetting drops approved for use with contact lenses are compatible with Tangible Hydra-PEG coating.*

**DO NOT USE TAP WATER, ABRASIVE OR ALCOHOL-BASED CLEANERS**

(These will damage or destroy the Tangible Hydra-PEG™ coating)

Abrasive Cleaners

Boston® Advance      by Bausch & Lomb

or similar products

Alcohol Based Cleaners

Miraflow (and equivalents)      by various companies

or similar products

Others

Progent      by Menicon  
Boston One Step Liquid Enzymatic Cleaner      by Bausch & Lomb  
Optimum by Lobob ESC Extra Strength Cleaner      by Lobob Laboratories

or similar products

# TANGIBLE CLEAN

- Multipurpose solution compatible with Tangible Hydra-PEG coated lenses
  - Approved for soft, GPs, hybrids and scleral lenses
  - Pt can rub lens without damaging Hydra-PEG coating
- Less viscous cleaner that rinses off easily
  - May decrease fogging and ocular irritation



OPTIMUM | tangible™  
HYDRA-PEG





## HYDROGEN PEROXIDE BASED MULTIPURPOSE SOLUTIONS

- Allergen and preservative free
- Surfactant cleaner
  - Brown bottle vs. actual solution
- Unsurpassed peroxide disinfection
- Compatible with GPs and soft CLs
- Neutralization time...

### *Patient considerations*

- Those with allergies
- Front surface deposits
- Poor hygiene or high levels of contamination
- Poor compliance with non-peroxide based MPS
- Not ideal for occasional lens wearers
- Front surface wettability issues?

# PEROXIDE BASED SOLUTION INSTRUCTIONS

Depends on the solution used

- Rub and/or rinse the lens prior to soaking for 4-6 hours

Practitioner Lookout!

- Rubbing may cause skin discoloration
- Basket size vs. scleral lens OAD





## HYDROGEN PEROXIDE BASED MULTIPURPOSE SOLUTIONS SCLERAL LENS ACCESSORIES

- Lens basket with traditional case may be too small for larger scleral lenses
- The Dry Eye Shop PROSE disinfection case: Compatible with lenses 16 – 22 mm in diameter
  - Some assembly required; platinum disc not included
  - Each disc is good for ~90 uses

← No platinum disc

## PREPARE THE PROSE DISINFECTION CASE

Pull on the disc while twisting. Do not attempt to bend at all or the case will snap.



Most common error is snapping off the disc.



# MULTIPURPOSE PEROXIDE BASED SOLUTIONS

<i>Name</i>	<i>Manufacturer</i>	<i>Rub or Rinse</i>
Clear Care Original*	Alcon	Rub and then 5 sec rinse before 6+ hr soak
Clear Care Plus*	Alcon	5 sec rinse before 6+ hr soak
PeroxiClear	Bausch & Lomb	Rub and then 5 sec rinse before 4+ hr soak

Solution must be replaced after 7 days of storage.

Specified GP compatibility

\*Hydra-PEG approved

# MULTIPURPOSE PEROXIDE BASED SOLUTIONS

Name	Manufacturer
Face Values Hydrogen Peroxide Cleaning and Disinfecting Lens Care System	Bed Bath and Beyond
Refine One Step	CooperVision
CVS Health Hydrogen Peroxide Cleaning and Disinfecting Lens Care System	CVS
Hill Country fare Cleaning & Disinfecting Lens Care System	HEB
Hydrogen Peroxide Lens Solution Care System	meijer
Signature Care Hydrogen Peroxide 3% Lens Care System Cleaning & Disinfecting	Randalls
Hydrogen Peroxide Cleaning & Disinfecting Lens Care System	Rite Aid
3% Peroxide Contact Solution - up & up	Target
AquaClear 3% Hydrogen Peroxide Solution	Vision Source
Walgreens Hydrogen Peroxide Cleaning and Disinfecting Solution	Walgreens
Equate 3% Hydrogen Peroxide Solution	Walmart

Does not specifically say compatible with GPs

# SCLERAL LENS ORDER OF OPERATIONS

1

## *Cleaner Options*

- Non-abrasive Daily Cleaner
- Extra Strength Cleaner
- Combo Cleaning & Soaking Solution
- One Bottle Multipurpose Product
  - H<sub>2</sub>O<sub>2</sub> based
  - Non- H<sub>2</sub>O<sub>2</sub> based

2

## *Overnight Storage*

- Conditioning solution
- Combo Cleaning & Soaking Solution

3

## *Rinse*

- ***Tap water?***
- ***Preserved saline***
- ***Preservative-free saline***
- ***Filling solution***

4

## *Fill*

5

## *Additional Supplies*

# RINSING SOLUTIONS

- Completely remove residual soaking/combo/MPS solution
- Rinsing and filling not necessarily the same

## Options

- Tap water...
- Multidose bottles
  - Preserved saline vs. Preservative-free saline
- Multidose bottles vs. Single-use vials
  - Patient preference





# RINSING SALINE SOLUTIONS

Name	Manufacturer	Preservative
Clear Care Rinse & Go	Alcon	Polyquaternium-1 (0.001%) Disodium edetate (0.05%)
Sensitive Eyes	Bausch + Lomb	Polyaminopropyl biguanide (0.00003%) Disodium edetate (0.025%)
Equate Saline Solution	Walmart	
Saline Solution for Sensitive Eyes	Target	
Hill Country fare Sterile Saline Solution	HEB	
Sensitive Saline Solution	meijer	
Saline Solution	Rite Aid	
Sterile Saline Solution	Kroger	
Walgreens Saline Solution	Walgreens	
<b><i>PuriLens Plus</i></b>	The Lifestyle Company	Buffered (boric acid, sodium borate) No preservatives
<b><i>Off-label use when filling SLs</i></b>		
<b><i>2 oz or 4 oz bottles</i></b>		
<b><i>Available in box of 12 or 24 bottles</i></b>		
<b><i>pH = 7.4</i></b>		



# SCLERAL LENS ORDER OF OPERATIONS

1

## *Cleaner Options*

- Non-abrasive Daily Cleaner
- Extra Strength Cleaner
- Combo Cleaning & Soaking Solution
- One Bottle Multipurpose Product
  - H<sub>2</sub>O<sub>2</sub> based
  - Non- H<sub>2</sub>O<sub>2</sub> based

2

## *Overnight Storage*

- Conditioning solution
- Combo Cleaning & Soaking Solution

3

## *Rinse*

- Tap water
- Preserved saline
- Preservative-free saline
- Filling solutions

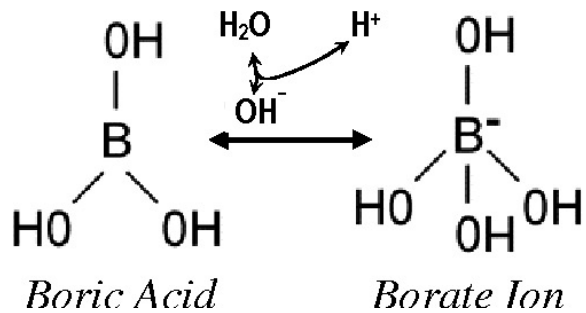
4

## *Fill*

- ***Preservative-free buffered saline***
- ***Preservative-free unbuffered saline***
- ***Other***
  - ***PFAT***
  - ***Serum tears***

5

## *Additional Supplies*



## RINSING & FILLING SOLUTIONS

- Filling solutions must be *preservative-free*
- Does buffer matter?
  - Normal pH of human tears ~ 7.0
  - Buffer helps maintain pH
    - Sodium borate and boric acid or phosphate
- Wide range of pH among unbuffered saline (Dahms, Yeung)
  - Can be as low as 4.50 pH
  - Most acidic: Modudose Saline and AddiPak vials
- Subjective comfort varies between patients
  - Dry eye pts may prefer buffered saline (Caroline & Andre)

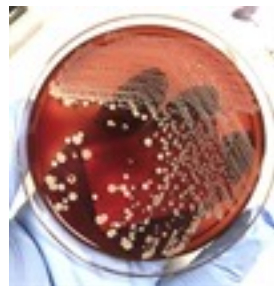
# RINSING & FILLING SOLUTIONS

- Multidose bottles vs. Single use vials

## Microbiological Evaluation of Opened Saline Bottles for Scleral Lens Use and Hygiene Habits of Scleral Lens Patients

Moon Jeong, BS,<sup>1</sup> Karen L. Lee, OD, FAAO,<sup>2</sup> Rosemary C. She, MD,<sup>1</sup> and Gloria B. Chiu, OD, FAAO<sup>3\*</sup>

- Multidose preservative-free saline bottles are easily contaminated within 15-day recommended discard schedule
- Despite bottle contamination, microbial keratitis with scleral lens wear is still relatively rare
- Caution in pts with poor hygiene or compromised corneal integrity



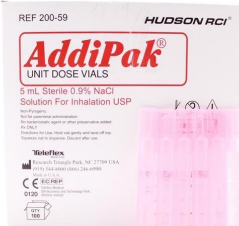
**TABLE 2.** Distinct organisms cultured from multidose preservative-free saline study bottles

Gram-positive (7) (n = 26)
Diphtheroid, NOS (1)
<i>Kocuria kristinae</i> (1)
<i>Micrococcus luteus</i> (1)
<i>Staphylococcus epidermidis</i> (9)
<i>Staphylococcus haemolyticus</i> (2)
<i>Staphylococcus pasteurii</i> (4)
<i>Staphylococcus warneri</i> (8)
Gram-negative (14) (n = 20)
<i>Acinetobacter ursingii</i> (2)
<i>Citrobacter freundii</i> (1)
<i>Delftia acidovorans</i> (1)
<i>Enterobacter cloacae</i> complex (1)
<b><i>Escherichia coli</i> (1)</b>
<i>Klebsiella (Enterobacter) aerogenes</i> (1)
<i>Klebsiella oxytoca</i> (2)
<i>Klebsiella pneumoniae</i> (8)
<i>Ochrobactrum anthropi</i> (1)
<i>Pluralibacter gergoviae</i> (1)
<b><i>Pseudomonas aeruginosa</i> (1)</b>
<b><i>Pseudomonas fluorescens</i> (2)</b>
<i>Serratia marcescens</i> (3)
<i>Stenotrophomonas maltophilia</i> (1)

NOS = not otherwise specified (no identification by matrix-assisted laser desorption ionization time of flight).

# SINGLE-USE RINSING/FILLING SOLUTIONS

<i>NaCl 0.9% Inhalation Solution</i>	<i>LacriPure (Menicon)</i>	<i>VibrantVue (Visionary Optics)</i>	<i>Nutrifill (Contamac)</i>	<i>ScleralFil (B+L)</i>
No buffers No preservatives	No buffers No preservatives	No buffers No preservatives	Contains buffer (phosphate) No preservatives	Contains buffer (boric acid, sodium borate) No preservatives
Off-label	FDA approved	FDA approved	FDA approved	FDA approved
3 ml or 5 ml vials	5 ml vials	5 ml vials	10 ml vials	10 ml vials
Available in box of 100 vials	Available in box of 98 vials	Available in box of 100 vials	Available in box of 35 vials	Available in box of 30 vials
pH = 4.5 to 6	pH = 6.5	pH = 6.8	pH = 7.4	pH = 7.3



# NUTRIFILL

- Formulated to mimic natural tears
  - Additional ions may decrease epithelial stress
- Contains 5 natural electrolytes
  - Sodium
  - Phosphate
  - Potassium
  - Calcium
  - Magnesium



# SCLERAL LENS ORDER OF OPERATIONS

1

## *Cleaner Options*

- Non-abrasive Daily Cleaner
- Extra Strength Cleaner
- Combo Cleaning & Soaking Solution
- One Bottle Multipurpose Product
  - H<sub>2</sub>O<sub>2</sub> based
  - Non- H<sub>2</sub>O<sub>2</sub> based

2

## *Overnight Storage*

- Conditioning solution
- Combo Cleaning & Soaking Solution

3

## *Rinse*

- Tap water
- Preserved saline
- Preservative-free saline
- Filling solutions

4

## *Fill*

- Preservative-free buffered saline
- Preservative-free unbuffered saline
- Other
  - PFAT
  - Serum tears

5

## *Additional Supplies*

- ***Enzymatic cleaners***
- ***Progent***
- ***Tangible Boost***
- ***Other***
  - ***Hand prep spray***

# ENZYMATIC CLEANERS

- Boston One-Step Liquid Enzyme Cleaner
  - Removes protein deposits and reduces adherence
  - Approved for weekly use
  - Preservative free
  - Subtilisin proteolytic enzyme
  - **Not compatible with Hydra-PEG**
- Boston One-Step Liquid Enzyme Cleaner Instructions
  - Add 2 drops of enzymatic cleaner to fresh soaking/conditioning solution and soak for 4+ hours
  - Rub and rinse with conditioning solution prior to lens use
- Alcon Opti-Free SupraClens Protein Remover has been D/C'd





# MENICON PROGENT

- Non-abrasive cleaner that rapidly disinfects and removes proteins/deposits
- Can be used every 2 weeks, maximum every 5 days
- Combine Sol A & Sol B then soak for 30 minutes
  - Sodium hypochlorite + potassium bromide = hypobromide
- Rinse by soaking in Progent rinsing solution
  - Shake lenses in Progent case with rinsing solution
- Clean and disinfect lenses in MPS before use
- Progent Large Diameter Lens Case available
  - Can accommodate lenses 11 – 23 mm in diameter
- **Not compatible with Hydra-PEG**



# TANGIBLE BOOST

- Monthly treatment that rebuilds Hydra-PEG coating
- Available by prescription only
- Combine Sol A & Sol B then soak for 30 minutes
  - Proprietary
- Rinse by soaking in MPS for 20 seconds in Boost case
- Clean and disinfect with Hydra-PEG compatible MPS before use
  - Tangible Clean MPS is the recommended solution



OPTIMUM | tangible<sup>™</sup>  
HYDRA-PEG

# VIBRANTVUE HAND PREP SPRAY

- Ingredients: Hypochlorous acid and water
  - Natural and effective cleanser
  - No need to wash after use
    - No ocular stinging or burning
    - Safe to handle contact lenses
  - Alcohol free
    - Gentle on skin
- Spray can be used in place of hand washing when on the go
- Effective against COVID-19 and Acanthamoeba





PATIENT EDUCATION

## MOST PATIENTS ARE NOT COMPLIANT

- Not rubbing or rinsing as recommended
- Ask about solutions and how they are used at every visit
  - Patients have a lot of questions
  - Train and re-train as needed
- Patient education
  - Extra counseling does improve patient compliance
  - Provide written instructions as well as verbal

# HELPFUL PT HANDOUTS

## SCLERALLENS.ORG

### SCLERAL LENS PATIENT INFORMATION

#### CLEANING, DISINFECTION, AND STORAGE SOLUTIONS



- Solutions are available for purchase in most drug and grocery stores, online, or through some offices.
- Manually rubbing lenses with fingers prior to storage is essential to remove deposits from the lens surface.
- Rinse residual solution off the lens with saline prior to application. Do not use tap water on the lenses.
- Replace the case each time a new bottle of solution is opened (every ~3 months).
- \*This solution is not compatible with Tangible Hydra-PEG.

#### APPLICATION SOLUTIONS



- Solution used to fill lens bowl must be preservative free to avoid toxicity.
- Solutions may be available for purchase by phone, in store, online, or in office.
- LacriPure (Menicon), ScleralFil (Bausch + Lomb), and Nutrifill (Contamac) are FDA approved for scleral use.
- AddiPak 0.9% NaCl and Purilens Plus are off-label, but acceptable for scleral use.
- Saline vials should be discarded daily and bottles should be discarded as recommended on bottle or earlier if recommended by your provider.

#### ADDITIONAL CARE



- Extra strength cleaners can be used if the lenses deposit heavily with lipids (oils) or proteins.
- Cleaners must be rinsed off well with saline prior to lens application.
- These products should not be used on lenses treated with Tangible Hydra-PEG.

the  
**dry eye shop**  
877-693-7939 voice/text  
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## MY SCLERAL LENS ESSENTIALS

#### Application & Removal

- DMV Scleral Cup
- DMV Vented Scleral Cup
- EZI Applicator Ring
- See Green Plunger Stand
  - With light
- DMV Ultra Remove
- Other device: \_\_\_\_\_

Replace plungers every: \_\_\_\_\_

Clean implements with: \_\_\_\_\_

#### Filling Solutions

Preservative-Free ONLY!

- LacriPure
- NutriFill
- Purilens
- ScleralFil
- Preservative-free tears
- Other: \_\_\_\_\_

#### Rinsing Solutions

- Preservative-free saline
- Other: \_\_\_\_\_

#### Handling Tips



- Use only moisturizer-free hand soaps
- Place a lint-free towel over your workspace
- Use a rubber catch mat in your sink

#### Mid-Day Re-Application?

- Every \_\_\_\_ hours
- Only if needed



Remove lenses before using prescription eye drops.

#### "Rub" Cleaning

- Boston SIMPLUS
- Miraflo
- Tangible Clean
- Unique pH
- Optimum Lobob
- Other: \_\_\_\_\_

#### Disinfection/Storage

- Boston SIMPLUS
- Clear Care Triple Action
- Tangible Clean
- Unique pH
- Optimum Lobob
- Other: \_\_\_\_\_

#### Disinfection Cases

- Use standard screw-top case
  - Use Clear Care "basket" case
  - Use PROSE disinfection case
- Clean case: \_\_\_\_\_
- Replace case: \_\_\_\_\_

#### My lenses are:

- Coated with Hydra-PEG
- Plasma treated
- Diameter: \_\_\_\_\_ mm
- Brand: \_\_\_\_\_



#### Water Safety Tips

Do not rinse with water. Remove lenses before showering or swimming. Never store lenses in water or preservative-free saline.

#### When not in use:

- Store lenses dry
  - Store lenses wet: \_\_\_\_\_
- Disinfect lenses before next use!*

#### NOTES

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I should call my doctor's office if: \_\_\_\_\_

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# HELPFUL PT HANDOUTS AOCLE.ORG








Available online in English,  
French and Spanish!

## Healthy Scleral Contact Lens Habits

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Congratulations on your new Scleral contact lenses!

To ensure continued success with your Scleral lenses, review these healthy lens habits.

- Wash your hands thoroughly with soap, rinse and dry them before handling your lenses.<sup>1,2</sup>

-  Do not use tap water to clean or handle your lenses or to clean the case.<sup>3-7</sup>
- Your solution has been chosen specifically for your type of lens. Do not change without discussing this with your eye care professional. In addition, contact lens solutions should not be used after the expiration date.<sup>8-12</sup>  
Your recommended solution for:  
- **cleaning** is \_\_\_\_\_  
- **soaking** is \_\_\_\_\_  
- **filling** is \_\_\_\_\_
- To maintain comfortable lens wear, rub your lenses after removal with the recommended **cleaning** solution to remove protein, oil and make-up.<sup>13-15</sup>
- Prior to insertion, the lens should be filled with a non-preserved **filling** solution to avoid corneal toxicity. Pay close attention to the expiration date.<sup>16-18</sup>
- Store brand solutions are often old formulations of solutions and may not be compatible with your type of lens.<sup>19-22</sup>
- Always recap your solution bottle after each use.<sup>1,23</sup>

-  Do not sleep with scleral lenses.<sup>18</sup>
- If you have a spare pair, it should be stored dry and in a case until needed. Before using, clean the lens(es) with the **cleaning** solution and store in **soaking** solution overnight prior to application.<sup>24</sup>
- Before using any type of eye drop (medication or artificial tear), ask your doctor if the lenses need to be removed.<sup>25-27</sup>

- Completely empty the solution in the lens case every day. Never add more solution if there is solution already there.<sup>15, 28-30</sup>

- Clean the case with your **soaking** solution and let air dry completely, uncapped and upside down, on a paper towel. It is recommended to replace your case at least every 3 months.<sup>2, 28, 31-34</sup>

- Healthy lens wear should not induce redness, discomfort, or visual disturbance. If you have any concerns remove your lenses and consult your eye care professional.<sup>35-36</sup>

Your next contact lens checkup is:

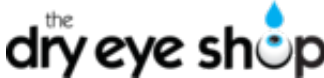
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Association of Optometric Contact Lens Educators  
www.aocle.org

AOCLE

This form is provided as an educational tool which does not take the place of your doctor's advice. The AOCLE, its officers, and members are not responsible for any loss, injury, or damage resulting from using this form.

## SOURCES FOR SOLUTIONS

- [Dryeyeshop.com](http://Dryeyeshop.com) 

- [Myeyesupply.com](http://Myeyesupply.com) 



Questions?

THANK YOU!

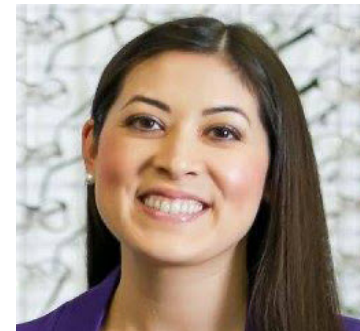
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