



Expect Service

Radiation Products Design Inc

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## INSTRUCTIONS

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### RPD INFORMATION

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### RPD PRODUCT INFORMATION

<b>Item Number</b>	<b>Eye Shields</b>
934-012	Silver-Plated Lead, Small Inside Dimensions: 2.3 cm W x 2.1 cm H Approx. 1.6 mm Lead Wall Thickness
934-014	Silver-Plated Lead, Medium Inside Dimensions: 2.7 cm W x 2.4 cm H Approx. 1.6 mm Lead Wall Thickness
934-016	Silver-Plated Lead, Large Inside Dimensions: 3.1 cm W x 2.8 cm H Approx. 1.6 mm Lead Wall Thickness
934-018	Silver-Plated Lead, Extra Large w/Window Inside Dimensions: 3.1 cm W x 3.1 cm H Approx. 1.6 mm Lead Wall Thickness

## INTRODUCTION

### Superficial Shielding

**Purpose** To protect the lens and cornea of the eye when treating the eyelid.

**Applications** **Protection of the Eye**

- A non-prescription soft contact lens in the eye may be used
- Place eye shield directly on the eye or over a soft contact lens.
- The hole through the top of the eye shield can be used with suture string to secure the eye shield to the patient's forehead using tape. Tape can also be used to hold the eyelid closed over the top of the eye shield.

**External Shield of the Eye**

- Eye shields may be placed over the eyelid for external shielding during facial treatments.

**Specifications** **Lead Density:** 11.35 g/cm<sup>3</sup>

The lead permits less than 1% transmission of the radiation intensity at 120 KVp (3mm Al HVL).

## SPECIAL PRECAUTIONS

Immediately remove the eye shield if the patient has any of the following problems:

- Eye pain - such as: stinging, burning, itching, excessive watering, etc. These problems are usually caused by soap residue on the eye shield.
- Unusual eye secretions.

**DO NOT store in liquid, MUST store dry**

**DO NOT use or store in a sodium chloride or sodium nitrite solution, as this will cause the silver coating on the eye shield to dissolve. Products that contain sodium chloride or sodium nitrite include, but not limited to, saline solutions, PSS Select Glutaraldehyde Plus and CidexPlus. It is RPDinc's recommendation not to use any solution that is sodium based, as this may cause the silver coating on the eye shield to dissolve.**

Rinse before and after use with sterile water for same patient after each use.

Always consult the Radiation Physicists when using lead eye shields in electrons. 6MeV electrons have had a reported 16-25% transmission factor.

Electron backscatter from lead eye shields has been reported to be 40% to 50%.

Please check the following paper: Field Shaping in Electron Beam Therapy by F.M. Khan, Ph.D., Oct, 1976, British Journal of Radiology.

## **INSPECTION**

Before each use and prior to sterilizing, examine eye shields for burrs or rough edges, which could have occurred through normal use.

## **CLEANING**

- All eye shields must be thoroughly cleaned before being disinfected or sterilized.
- The presence of organic matter can protect bacteria from the action of the disinfectant or sterilant, or react with the agent and make it ineffective.
- Cleaning can be done either with water alone or with soap and water (or detergent) or with water and detergent and disinfectant.
- Cleaning with a disinfectant reduces the risk of contamination to the cleaning staff, but does not eliminate them completely.

Be sure to rinse thoroughly to remove all soap residue from eye shield.

Sterile water may be used. Do not use or store in a sodium chloride or sodium nitrite solution, as this will cause the silver coating on the eye shield to dissolve. Products that contain sodium chloride or sodium nitrite include, but not limited to, saline solutions, PSS Select Glutaraldehyde Plus and CidexPlus. It is RPDinc's recommendation not to use any solution that is sodium based, as this may cause the silver coating on the eye shield to dissolve.

## DISINFECT

**Cidex OPA** Wash Eye Shields with water and soap and detergent and disinfectant.

Soak in Cidex OPA for 12 minutes. Than rinse in three different batches of sterile water to remove all traces of Cidex OPA.

**Note:** This product does not require ACTIVATION.

Any quality Germicidal Solution mixed with the recommended amount of water will be satisfactory. Germicides containing a Quaternary Ammonium derivative should not be relied on to destroy spore bearing organisms or Mycobacterium tubercles or the etiologic agent of viral hepatitis. Thus, eye shields suspected of such contamination should be sterilized.

## STERILIZATION METHODS

**Autoclave (Steam)** Autoclave wrapped parts for 10 minutes at 273°F (134°C).

Sterrad® uses Hydrogen Peroxide solution; temperature must not exceed 140°F. This type of sterilization will cause the silver to tarnish, which can easily be removed with silver polish.

Validation studies conducted by the ASP support the following claims in its Instructions for Use (IFU) for each of the sterilizer models listed below:

<b>Sterrad® 50 &amp; 200</b>	Cleared
<b>Sterrad® 100S</b>	Cleared for Short and Long Cycle
<b>Sterrad® NX™</b>	Cleared for Standard and Advanced Cycle
<b>Sterrad® 00NX™</b>	Cleared for Standard Cycle

### DO NOT USE

- **Steris System # 1 that contains a peracetic acid solution that will cause corrosion.**
- **High temperature heat sterilizer**
- **Sodium chloride or sodium nitrite solutions, as this will cause the silver coating on the eye shield to dissolve.**

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following page)

**DO NOT USE  
(cont.)**

**Products that contain sodium chloride or sodium nitrite include, but not limited to, saline solutions, PSS Select Glutaraldehyde Plus and CidexPlus. It is RPDinc's recommendation not to use any solution that is sodium based, as this may cause the silver coating on the eye shield to dissolve.**

**INSTRUCTIONS**

1. The physicist must do calculations. The Lead Eye Shields are for superficial X-Ray.
2. Clean the eye shield with soap and water. Be sure to rinse thoroughly to remove all soap residues from the eye shield.
3. Inspect eye shield carefully for scratches.
4. Disinfect and sterilize according to the instructions.
5. Optional: May insert a non-prescription contact lens to prevent possible scratches to the cornea and iris.
6. Hold eyelids open and insert the eye shield directly on the eye or over a non-prescription soft contact lens. Note: Ask patient if they are experiencing any burning sensation in the eye. If so, remove the eye shield immediately and rinse thoroughly to remove all soap residues.
7. The hole through the top of on the eye shield can be used with suture string to secure the eye shield to the patient's forehead using tape. Tape can also be used to hold the eyelid closed over the top of the eye shield.
8. After use, wash with soap and water, then rinse thoroughly.
9. Store eye shields dry.
10. The eye shields must be sterilized between patients.

**STORAGE**

Store dry, but rinse before and after use with sterile water.

**DO NOT** use or store in saline (sodium chloride) solution. The sodium chloride will cause the silver to dissolve.

## WAX COATING

Eye Shields can be coated with a dental base plate wax, Item 933-122. The wax is melted in a small stainless steel wide top container on a small electric warmer plate, Item 933-140. When the wax is melted, grip eye shields with forceps and dip into wax for ten seconds and remove. Then constantly rotate in all directions while wax is cooling, to prevent the wax from building up in any one place. If the wax temperature is too low, it may go on the eye shield too thick and be bumpy. If the wax temperature is too high, it will not coat the eye shield very thick. See Wax Coating-The Physics of Radiation Therapy by Faiz M. Khan, Ph.D. under D. Internal Shielding-last paragraph.

## REMOVING WAX FROM EYE SHIELD

Place eye shield in hot, soapy water. Wax should become soft enough to peel off. Repeat procedure, if necessary, until all wax is removed. Eye shield is then ready for sterilization and wax recoating

## WARRANTY

1 year from date of purchase.

## ACCESSORIES

Item #	Description
466-401	Cidex OPA, 1 gal
466-403	Cidex OPA Solution Test Strips, 60 strips/ bottle
933-122	Wax Sheets, 1 lb (approx 35 sheets)
933-140-1	Stainless Steel Cup, 2.5 oz
933-140-2	Warming Plate
934-020	8 Compartment Box for Eye Shields
937-700	Soft Contact Lenses, 6/Pkg
937-706	Contact Lens Cases, 3/Pkg
937-711	Opti-Free Pure Moist Contact Lens Solution, 4 oz