

**Cleaning Procedure for Uncoated and Ion Beam Sputtered Optics Only**

APPROVALS	DATE	REV	DCN NO.	BY	CHECK	DCC	DATE
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Equipment, Tools and Materials

Class 100 laminar flow bench / sink

Deionized water, 18 Megohms, filtered (0.2 micron filter) at point of use.

Dry nitrogen cylinder, 99.99% pure

Ionizing blow-off gun with 0.2 micron filter.

Cleaning bowl

Hot plate

Gloves - Ansell-Edmont Latex 90-576.

Lens tissue "Lensx 90", Berkshire

Liquinox solution prepared as follows:

In a beaker, to 1 liter of filtered DI water; add 20 ml. of Liquinox detergent.

Place beaker on a hot plate.

While stirring the solution, increase temperature to 70 degrees C; once the temperature is reached, keep stirring for at least 5 minutes.

Remove from hot plate - Solution is ready to use.

Life shelf of the solution is one week while covered.

Washing and Drying

The procedure listed here must be performed under a Class 100 laminar flow bench.

1. Fill a cleaning bowl with Liquinox solution, the bottom of the bowl must be lined with Lenx 90 tissue to protect the optic's surface.
2. Place the bowl on a hot plate.
3. Immerse the parts to be cleaned in the solution and heat up solution until the temperature reaches 70 degrees C.
4. Allow the parts to soak for at least 1 hour. If the parts have been polished recently, the soaking time may be shorter.
Never allow any surface wetted with Liquinox to get dry!!!!
5. After an hour, shut-off the heat and cool the solution to around 40 degrees C.
6. Remove optics from bowl.
7. With a soft Lenx 90 tissue, wetted with the detergent solution, wipe the bevels of the optic. Discard the tissue.
8. With a fresh tissue, wetted with Liquinox solution, thoroughly and gently, with smooth, soft strokes, scrub the entire optic's surface, both sides. Discard tissue.
9. Immediately rinse the part under running DI water, gently scrubbing all surfaces with a soft lens tissue. Repeat the above step at least twice using a fresh tissue every time to ensure that all traces of detergent are completely removed.



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10. To final rinse, spray only de-ionized water over the optic being cleaned for at **least** 10 seconds. Stop the DI water flow.

NOTE: *If the water does not sheets off the mirror's surface at this time, repeat steps 3 throughout 9.*

11. With an ionizing gun, utilizing pure, dry nitrogen and low pressure, (45-50 lbs./in²) slowly blow the bevel of the optic and the surface starting from the top and working towards the bottom. Ensure that no water remains on the surfaces.
Keep optics **covered** and in a clean area until ready to use.