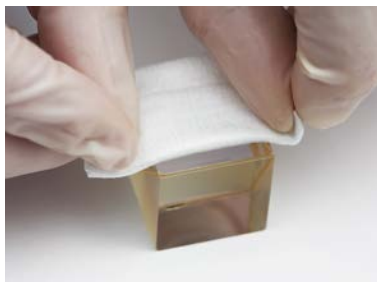


OPTICAL COMPONENTS CLEANING INSTRUCTIONS

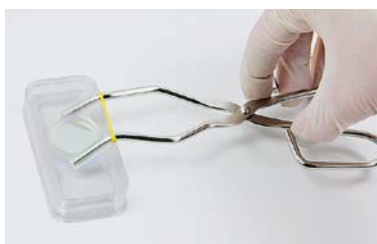


Inspect and make sure that you need to clean your optical component. If it's not necessary, avoid extra cleaning. The polished face of the crystals is the key element that ensures preservation and longer usability of the component. If you need to clean the optical component, please follow these instructions:

- Always wear powder-free latex gloves or finger cots and handle component by the edges. Do not touch the surface of optical component with your fingertips. Avoid handling optics with metal instruments. Use delicate tweezers with soft tips for a small size components.
- Any larger dust and dirt particles can be removed by using very soft brush or compressed air. **Attention:** if you use compressed air, keep the distance (at least 10 cm). In the less distance you can damage the polished face with temperature stress.
- If polished face looks fine do not clean with something else. If it's still dirty please use solvents. **Never clean "dry":** Cleaning dry optics, no matter what the wiper, is virtually guaranteed to cause problems. Use only extra pure water free class solvents, such as ethyl acetate ($C_4H_8O_2$), butyl acetate ($C_6H_{10}O_2$), or similar. Always use lint-free lens tissues for optics cleaning.
- **For the optical component cleaning** apply a small drop of the cleaning solution on the top surface. Leave enough time for it to dissolve and float away any contaminating materials. But before the cleaner dries, gently wipe the surface with the highest quality lens cleaning tissue.
- **For crystal and small** (up to 5 mm² area) **optical component cleaning** use lint-free lens tissue or cotton swab. Do not use cotton swabs for a larger component as it leaves stripes. Moisten a tissue with solvent and carefully cross the surface of crystal. Make sure that the wiper size is the same or a bit larger than the polished face of component. The tissue is only for onetime use! Repeat this action till the component looks fine.

If the cleaning does not help to remove contamination the optical component must be repolished.

TWEEZERS / FORCEPS FOR OPTICAL COMPONENTS 260-1050



These stainless steel tweezers/forceps are convenient instrument for handling of optical components with diameter from 10 to 50.8 mm. Tweezers/forceps have silicon tips that reduce the risk of damage of optics.

Catalogue number	Price, EUR
260-1050	9

CRYSTALS HANDLING SAFETY GUIDE



- **Do not open** container until contents are at the room temperature to prevent moisture condensation. Open package carefully in dust free and dry (*relative humidity less than 60%*) atmosphere.



- Please **use gloves** to handle crystals. Hold the crystal at the non-polished faces only. Holding the crystal near the breath will destroy the polishing.



- **Dust** from the polished surface can be **removed by soft paint brush**. Experienced users can try to clean faces with particles-free cotton wool tipped swabs soaked in water free ethyl-acetate.



- The crystals are **temperature sensitive**. Drastic chilling or warming (at the rate $> 5^{\circ}\text{degC}/\text{min}$) will cause shattering by thermal stress.



- The crystals should be **stored in desiccator** or in a container with minimum gas volume.

