

Spectralon[®] Reflectance Standards Care and Handling Guidelines

Spectralon Reflectance Standards (SRS) and Reflectance Targets (SRT) are optical standards, and should be handled in much the same way as other optical standards. Although the material is very durable, care should be taken to prevent contaminants such as finger oils from contacting the material's surface. Always wear clean gloves when handling Spectralon.

1. Cleaning Instructions

If the material is lightly soiled, it may be air brushed with a jet of clean dry air or nitrogen. DO NOT use Freon. For heavier soil, the material can be cleaned by sanding under running water¹ with a 220-240 grit waterproof emery cloth until the surface is totally hydrophobic (water beads and runs off immediately). Blow dry with clean air or nitrogen or allow the material to air dry.

If the material requires high resistance to deep UV radiation, the piece should be prepared as above, then either of the following two treatments performed.

1. Flush the Spectralon piece with >18 mΩ distilled, deionized water for 24 hours.
2. Vacuum bake the Spectralon piece at 75°C for a 12 hour period at a vacuum of 1 Torr or less, then purge the vacuum oven with clean dry air or nitrogen

¹Low reflectance Spectralon (<10% reflectance) should be dry sanded.

2. Storage and Transportation

Spectralon standards should be stored such as other optical standards in a clean laboratory environment. It is recommended to always keep the standards in a plastic bag or covered box except for use. After exposure to extreme temperature and humidity conditions, e.g. during transportation, the standard should be allowed to adapt to the laboratory environment for a period of 2 hours.

Temperature range: - 80°C to + 100°C
Humidity range: 5% to 95%

3. Recommended Recalibration

Spectralon standards are stable over a long period of time, when they are stored and maintained properly. When standards are not in use and kept in their original package under proper storage conditions, the recommended calibration period can start from the date of first use.

4. Disposal Recommendations

If Spectralon reflectance standards do not show the specified optical parameters after extensive use or after recalibration, they are to be disposed of according to the government regulations for non-hazardous, non biodegradable materials.