

WS-1 Diffuse Reflectance Standard

The **WS-1 DIFFUSE REFLECTANCE STANDARD** is a compact physical standard for use in performing diffuse reflectance measurements, especially color analysis. The reflectance material that comprises the WS-1 is Spectralon, a highly lambertian thermoplastic substance that provides a nearly 100% diffuse reflective surface for applications from 200 nm to 2.5 μm . (With an Ocean Optics spectrometer, the practical use of the WS-1 is limited to 200-1100 nm.) The reflective area of the WS-1 is 1.25" in diameter. The diffusing material is encased in a small, black receptacle with a screw-on top.

Operation

Reflection is the return of radiation by a surface, without change in wavelength. Reflection is expressed as a percentage relative to the reflection from a standard substance, such as the WS-1 white reference material. The WS-1 is mostly used in a setup with a reflection probe and reflection probe holder for diffuse reflection measurements or with the ISP-REF Integrating Sphere. To use the WS-1 as a reference in a diffuse reflection measurement:

1. Make sure you are in Scope Mode, by either clicking the **Scope Mode** icon on the toolbar, or selecting **View | Scope Mode**. Take a reference spectrum by first making sure nothing is blocking the light path going to your reference. Place the reflection probe over the WS-1. For best results, use our Reflection Probe Holder to keep the reflection probe firmly at a 45° angle.
2. Take the reference reading by clicking the **Store Reference Spectrum** icon on the toolbar or selecting **File | Store Reference Spectrum**.

Specifications

Reflectance material:	Spectralon
Reflectivity:	>99%
Wavelength range:	200 nm - 2.5 μm *
Reflective area diameter:	1.25"

* Though the product can be used to 2.5 μm , it can be configured to "see" only to 1100 nm with our S2000 spectrometer.