

Calibration Certificate

Sample : Zenith Lite™ Diffuse Reflectance Target – xx%R
SG31xx
Report-No. : XXXXXXXXXXXXXXXXXXXX
PO-No. : XXXXXXXXXXXXXXXXXXXX
Customer : XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX

Test and Test Method

The 8°/Hemispherical spectral reflectance was measured for the sample listed above. The calibration was performed with a Perkin-Elmer Lambda 950 UV-VIS-NIR spectrometer (serial number 950L1211082) equipped with a 150 mm integrating sphere. The reflectance was determined by using a standard from SphereOptics GmbH, part number SG3051, which has been calibrated by the National Metrology Institute of the Federal Republic of Germany (Physikalisch-Technische Bundesanstalt, calibration certificate: PTB 44052/15).

Total Calibration Uncertainty

The total uncertainty for this measurement is:

Wavelength Range	Total Uncertainty (95 % confidence)
250-300 nm	1.11 %
300-400 nm	0.42 %
400-650nm	0.21 %
650-1750 nm	0.35 %
1750-2200 nm	0.57 %
2200-2300 nm	0.85 %
2300-2400 nm	1.71 %
2400-2450 nm	2.51 %

Laboratory Environment

Temperature: 21 ± 3 °C
Humidity: 40 ± 20 %

Calibration Documentary

This calibration certificate includes the printed spectral reflectance curve of the sample from 250-2450 nm reported in 50 nm intervals, together with the electronic calibration data delivered on a portable data storage device.

Calibration Interval

If the product is handled with care, recalibration is recommended one year after the date of this certificate, at the discretion of the user.

Calibrated by: Daniel Schwefel

Date: August 17, 2016

Daniel Schwefel
Measurement Operator

Dr. Rainer Böhm
Laboratory Manager