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Test Report Nr. B 21.15.223.01 (en)

Order: Determination of the spectral reflection coefficient of paint coatings in the range of 280 nm to 2500 nm of samples provided by the client.

Customer: MIG Material Innovative Gesellschaft mbH
Am Garock 3
D-33154 Salzkotten

Contractor: Institute for Materials Research and Testing
at the Bauhaus-University Weimar
Department of Building Physics & Non-Destructive Testing

Date of order: 2015-07-16

Test object: Glass probes with paint coating

Weimar,
2015-12-08

By order


Dipl.- Ing. A. Freyburg
Head of department



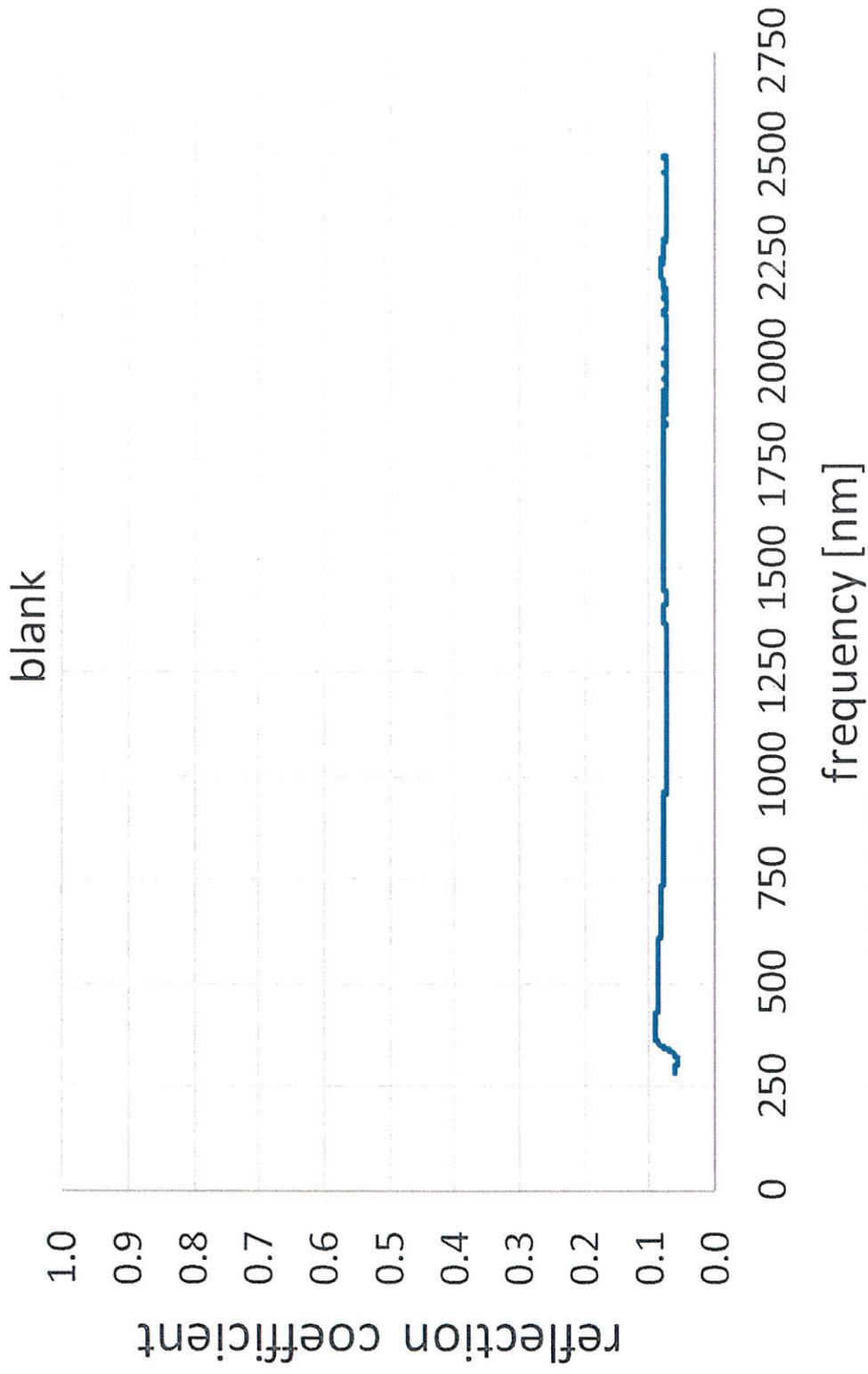

Dr.- Ing. S. Helbig
scientific assistant

Results

From the sample ,blank' both supplied specimens were used for the measurement. Each specimen was measured at two different locations. Table 2 shows the mean values (two probes and two locations) at selected wavelength. In a higher resolution the data are listed on the CD accompanying the german report.

Table 2: The reflection coefficient between 280 nm und 2500 nm at a sampling rate of 50 nm for the sample blank.

wavelength [nm]	reflection coefficient (absolut)	wavelength [nm]	reflection coefficient (absolut)	wavelength [nm]	reflection coefficient (absolut)
2500	0.0761	1700	0.0777	900	0.0777
2450	0.0756	1650	0.0778	850	0.0788
2400	0.0750	1600	0.0778	800	0.0809
2350	0.0756	1550	0.0777	750	0.0804
2300	0.0762	1500	0.0773	700	0.0823
2250	0.0799	1450	0.0767	650	0.0835
2200	0.0804	1400	0.0773	600	0.0854
2150	0.0759	1350	0.0759	550	0.0875
2100	0.0764	1300	0.0750	500	0.0885
2050	0.0763	1250	0.0748	450	0.0885
2000	0.0764	1200	0.0745	400	0.0919
1950	0.0763	1150	0.0746	350	0.0839
1900	0.0767	1100	0.0748	300	0.0603
1850	0.0770	1050	0.0751	280	0.0625
1800	0.0773	1000	0.0759		
1750	0.0777	950	0.0769		

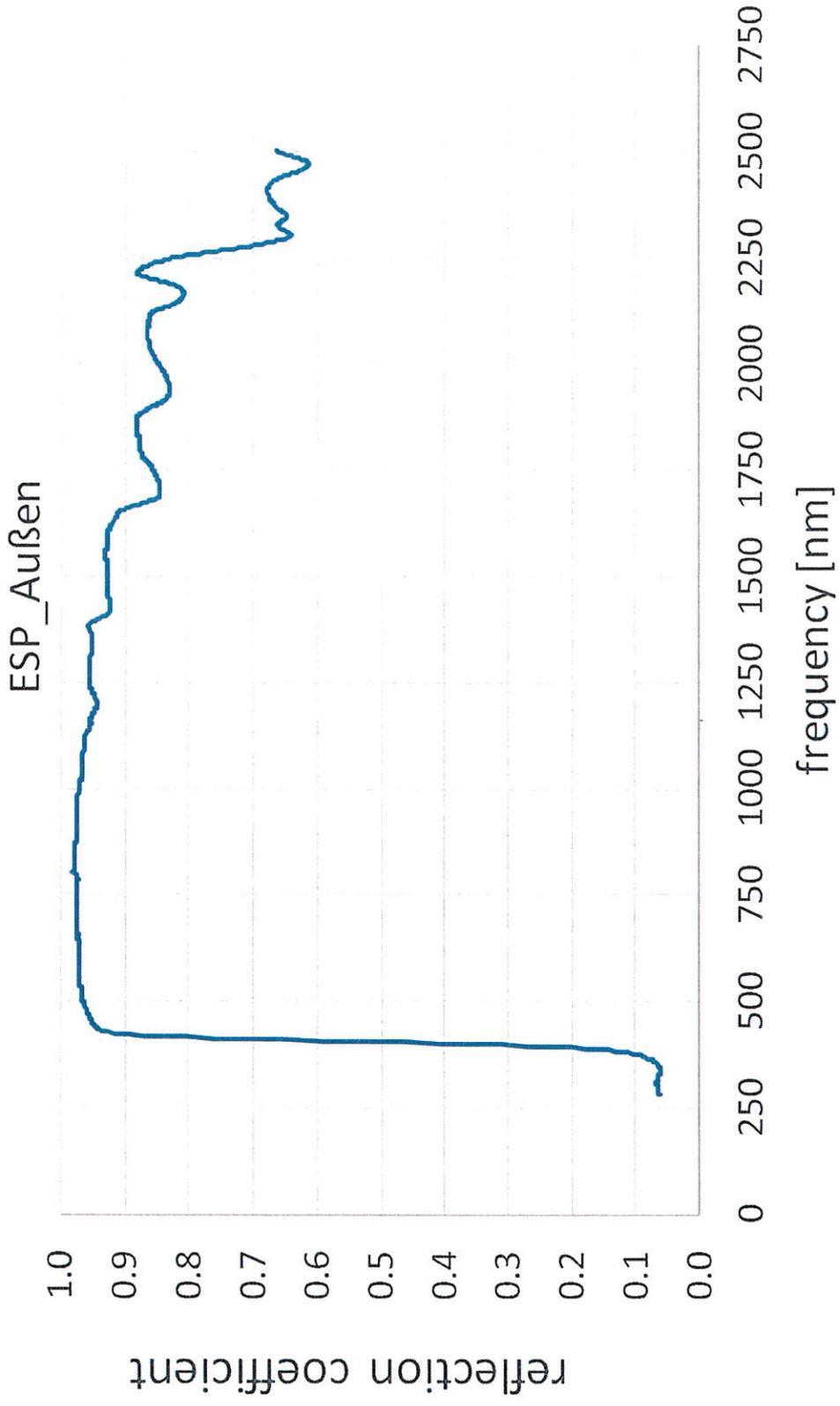


The spectrum of the diffuse reflectance of the sample ,blank'.

From the sample ‚ESP Außen‘ both supplied specimens were used for the measurement. Each specimen was measured at two different locations. Table 3 shows the mean values (two probes and two locations) at selected wavelength. In a higher resolution the data are listed on the CD accompanying the german report.

Table 3: The reflection coefficient between 280 nm und 2500 nm at a sampling rate of 50 nm for the sample ESP Außen.

wavelength [nm]	reflection coefficient (absolut)	wavelength [nm]	reflection coefficient (absolut)	wavelength [nm]	reflection coefficient (absolut)
2500	0.6642	1700	0.8453	900	0.9745
2450	0.6367	1650	0.9084	850	0.9775
2400	0.6769	1600	0.9269	800	0.9799
2350	0.6480	1550	0.9295	750	0.9742
2300	0.6427	1500	0.9280	700	0.9738
2250	0.8175	1450	0.9256	650	0.9722
2200	0.8605	1400	0.9383	600	0.9712
2150	0.8137	1350	0.9519	550	0.9696
2100	0.8628	1300	0.9535	500	0.9653
2050	0.8627	1250	0.9549	450	0.9513
2000	0.8472	1200	0.9441	400	0.4085
1950	0.8309	1150	0.9526	350	0.0641
1900	0.8542	1100	0.9637	300	0.0665
1850	0.8810	1050	0.9663	280	0.0622
1800	0.8760	1000	0.9703		
1750	0.8565	950	0.9737		

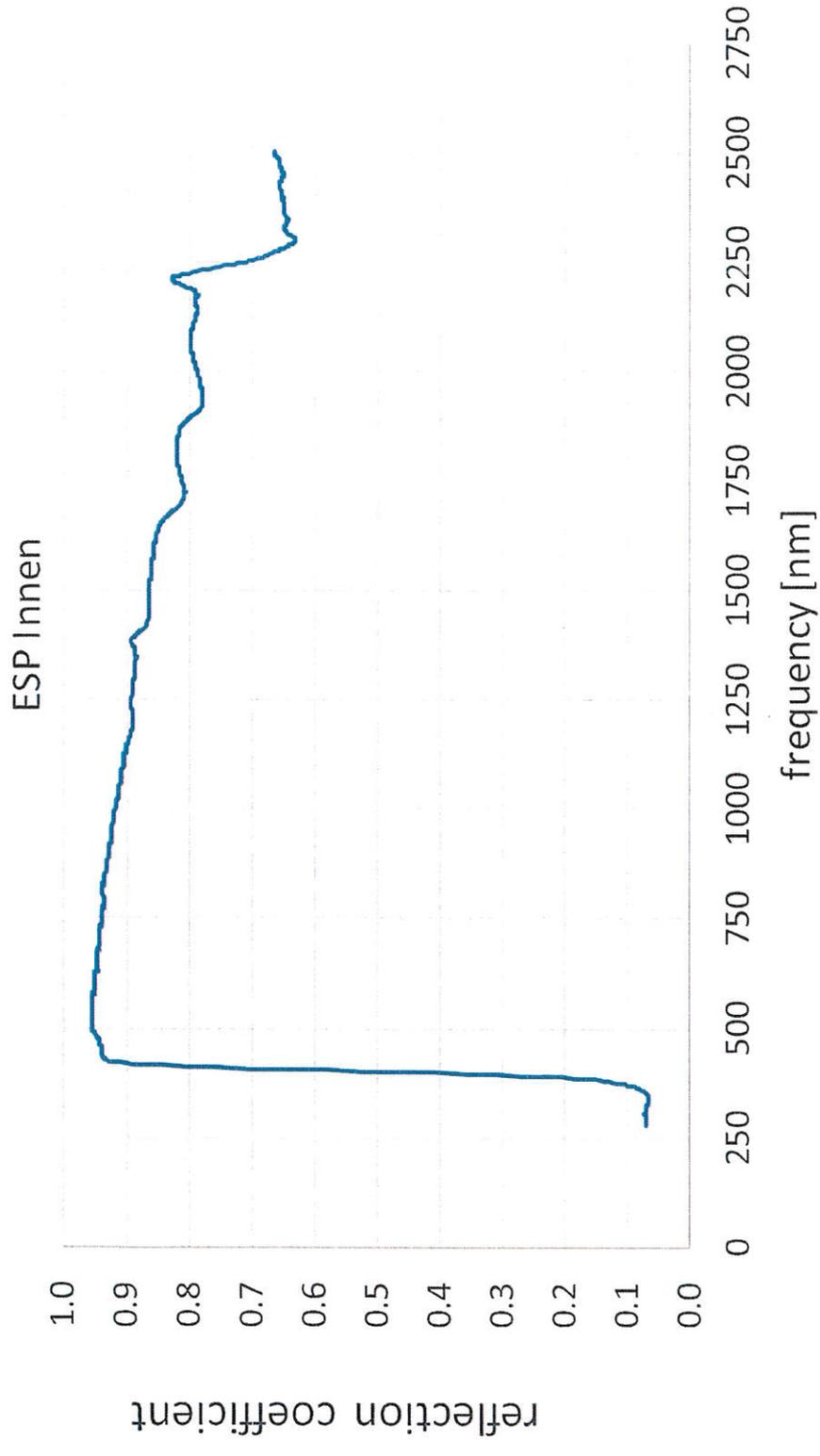


The spectrum of the diffuse reflectance of the sample 'ESP_Außen'.

From the sample ,ESP Innen' both supplied specimens were used for the measurement. Each specimen was measured at two different locations. Table 5 shows the mean values (two probes and two locations) at selected wavelength. In a higher resolution the data are listed on the CD accompanying the german report.

Table 5: The reflection coefficient between 280 nm und 2500 nm at a sampling rate of 50 nm for the sample ESP Innen.

wavelength [nm]	reflection coefficient (absolut)	wavelength [nm]	reflection coefficient (absolut)	wavelength [nm]	reflection coefficient (absolut)
2500	0.6646	1700	0.8116	900	0.9263
2450	0.6503	1650	0.8460	850	0.9325
2400	0.6522	1600	0.8551	800	0.9378
2350	0.6448	1550	0.8600	750	0.9377
2300	0.6315	1500	0.8627	700	0.9416
2250	0.7077	1450	0.8642	650	0.9452
2200	0.8193	1400	0.8803	600	0.9493
2150	0.7881	1350	0.8841	550	0.9527
2100	0.7941	1300	0.8875	500	0.9536
2050	0.7956	1250	0.8917	450	0.9384
2000	0.7867	1200	0.8897	400	0.4647
1950	0.7776	1150	0.8976	350	0.0676
1900	0.7926	1100	0.9053	300	0.0706
1850	0.8176	1050	0.9103	280	0.0682
1800	0.8184	1000	0.9164		
1750	0.8116	950	0.9225		



The spectrum of the diffuse reflectance of the sample 'ESP Innen'.