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Certificate of Calibration

Ordinate Calibration

Calibration Data for potassium hydrogen phthalate. Absorbance values in the UV wavelength range of 5 ampullae (diluted with water 1:50) and the mean value:

Standard N-568-S	Lot No.	Ampulla	Ordinate Reading (Absorbance)+/-MU(*) at 280nm	Calculated value of the content of the ampulla (multiplication with dilution factor 50)
Potassium hydrogen phthalate	2311	No. 1	0.456 +/- 0.010	22.80
Potassium hydrogen phthalate	2311	No. 2	0.454 +/- 0.010	22.69
Potassium hydrogen phthalate	2311	No. 3	0.455 +/- 0.010	22.76
Potassium hydrogen phthalate	2311	No. 4	0.456 +/- 0.010	22.78
Potassium hydrogen phthalate	2311	No. 5	0.451 +/- 0.010	22.54
Potassium hydrogen phthalate	2311	Mean value (calculated)	0.454 +/- 0.010	22.71

(*) MU: Measurement Uncertainty

The expanded uncertainty assigned to the measurement results is obtained by multiplying the standard uncertainty by the coverage factor $k = 2$. The value of the measurand lies within the assigned range of values with a probability of 95%.

Date of Calibration: 21 November 2023

Conditions of Calibration

The following settings were used on the below listed UV/VIS Spectrometer employed to obtain the calibration data quoted on this certificate.

Measurement of Absorbance

Ordinate mode Absorbance
Slit mode UV/VIS Fix Slit UV/VIS 1.8nm
Integration time 2nm/sec

The instrument wavescan program facility was used to measure the absorbance of the liquids at the wavelength given above. Distilled water was used as reference.

The liquids were calibrated on a Uvikon XL Spectrometer with serial number 110178.

The most recent performance check of this instrument was 11.09.2023 using standard filters (Starna Holmium oxide filter, Hexane-Toluene and Hellma F1,F2,F3,F4-SN323 secondary standard, F7 Hellma E163 didymium glass) for calibration. Starna filters were calibrated at 13.07.2023 and Hellma filters 20.10.2023. Measurements were performed at an ambient temperature of 24°C +/- 2°C.

Date
21 November 2023

Head of Research & Development
Dr. Michael Riepl

Michael Riepl