

Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV

Signatory to the Multilateral Agreements of
EA, ILAC and IAF for Mutual Recognition

Accreditation



The Deutsche Akkreditierungsstelle GmbH attests that the calibration laboratory

Hellma GmbH & Co. KG
Klosterrunsstraße 5, 79379 Müllheim

is competent under the terms of DIN EN ISO/IEC 17025:2005 to carry out calibrations in the following fields:

Optical Quantities

- **Radiometry**

The accreditation certificate shall only apply in connection with the notice of accreditation of 2014-08-27 with the accreditation number D-K-18752-01 and is valid until 2019-08-26. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 2 pages.

Registration number of the certificate: **D-K -18752-01-00**

Deutsche Akkreditierungsstelle GmbH

Office Berlin
Spittelmarkt 10
10117 Berlin

Office Frankfurt am Main
Gartenstraße 6
60594 Frankfurt am Main

Office Braunschweig
Bundesallee 100
38116 Braunschweig

The publication of extracts of the accreditation certificate is subject to the prior written approval by Deutsche Akkreditierungsstelle GmbH (DAkKS). Exempted is the unchanged form of separate disseminations of the cover sheet by the conformity assessment body mentioned overleaf.

No impression shall be made that the accreditation also extends to fields beyond the scope of accreditation attested by DAkKS.

The accreditation was granted pursuant to the Act on the Accreditation Body (AkkStelleG) of 31 July 2009 (Federal Law Gazette I p. 2625) and the Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products (Official Journal of the European Union L 218 of 9 July 2008, p. 30). DAkKS is a signatory to the Multilateral Agreements for Mutual Recognition of the European co-operation for Accreditation (EA), International Accreditation Forum (IAF) and International Laboratory Accreditation Cooperation (ILAC). The signatories to these agreements recognise each other's accreditations.

The up-to-date state of membership can be retrieved from the following websites:

EA: www.european-accreditation.org

ILAC: www.ilac.org

IAF: www.iaf.nu

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Annex to the Accreditation Certificate D-K-18752-01-00 according to DIN EN ISO/IEC 17025:2005

Period of validity: 2014-10-02 to 2019-08-26

Date of issue: 2014-10-02

Holder of certificate:

Hellma GmbH & Co. KG
Klosterrunsstraße 5, 79379 Müllheim

Head: Birgit Kehl
Deputy: Holm Kändler
Dr. rer. nat. Jochen Hallmann

Accredited since: 2009-10-23

Calibrations in the fields:

Optical Quantities

- **Radiometry**

Permanent Laboratory

Measured quantity / Calibration item	Range	Measurement conditions / procedure	Best measurement capability ¹⁾	Remarks
wavelength	190 nm to 890 nm	spectrophotometry	0.20 nm	
optical Density in transmission (absorbance)	0 to < 0.35	spectrophotometry	0.0024	Measurement uncertainty in the unit of optical density. The optical density has a unit with dimension 1 and is equivalent to the common unit Abs. Definition of optical density according to DIN 5036-1:1978-07.
	≥ 0.35 to < 0.55		0.0028	
	≥ 0.55 to < 1.05		0.0034	
	≥ 1.05 to < 1.55		0.0068	
	≥ 1.55 to < 2.05		0.0079	
	≥ 2.05 to < 2.55		0.0120	
	≥ 2.55 to < 3.10		0.0220	

¹⁾ The table shows the best measurement capabilities expressed as expanded uncertainties of measurement according to DAkkS-DKD-3 (EA-4/02). The expanded uncertainties of measurement correspond to a coverage probability of 95% and have a coverage factor of $k = 2$ unless stated otherwise. Uncertainties without unit are relative uncertainties unless stated otherwise.