

# Deutsche Akkreditierungsstelle

## Annex to the Accreditation Certificate D-RM-15184-01-00 according to DIN EN ISO 17034:2017

**Valid from:** 11.07.2022

**Date of issue:** 11.07.2022

Holder of accreditation certificate:

**Hach Lange GmbH**  
**Königsweg 10, 14163 Berlin**

The reference material producer meets the minimal requirements of DIN EN ISO 17034:2017 and, if applicable, additional legal and normative requirements, including those in relevant sectoral schemes, in order to carry out the conformity assessment activities listed below.

The management system requirements of DIN EN ISO 17034 are written in the language relevant to the operations of reference material producers and confirm generally with the principles of DIN EN ISO 9001.

Reference material production in the fields:

- **Conductivity standard solutions**
- **pH reference solutions**

**The reference material producer maintains an up-to-date list of certified reference materials in the accredited area**

*This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at <https://www.dakks.de>.*

Abbreviations used: see last page

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**This document is a translation. The definitive version is the original German annex to the accreditation certificate.**

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**Certified reference materials in the fields conductivity standard solutions and pH reference solutions**

| Product                         | Measuring range / margining                                  | Expanded uncertainty of measurement ( $k = 2$ ) | 1. Characterisation strategy |
|---------------------------------|--|---|------------------------------|
| pH reference solution           | 1.5 to 11 (25°C)   | 0.006   | d)                           |
| pH reference solution           | > 11 to 13 (25°C)  | 0.03  | d)                           |
| Conductivity standard solutions | 1.5 mS m <sup>-1</sup> to 4.0 mS m <sup>-1</sup> (25°C)      | 2 %   | d)                           |
| Conductivity standard solutions | > 4.0 mS m <sup>-1</sup> to 150 mS m <sup>-1</sup> (25°C)    | 0.35 %  | d)                           |
| Conductivity standard solutions | >150.0 mS m <sup>-1</sup> to 12000 mS m <sup>-1</sup> (25°C) | 0.3 %   | d)                           |

d) Value transfer from an RM to a closely matched RM using a single measurement procedure performed by one laboratory.

**Abbreviations used:**

DIN Deutsches Institut für Normung e.V.  
EN European Standard  
ISO International Organisation for Standardization