

# Certificate of Analysis

**EHRENSTORFER™**

## ISO 17034 Reference Material

### Product Identification

**Article Code:** DRE-C14037500**Article Name:** Glycolic acid**Formula:** C<sub>2</sub>H<sub>4</sub>O<sub>3</sub>**Mol. Weight:** 76.05**CAS No.:** 79-14-1**Lot Number:**

G979499

**Expiry Date:**

26.02.2022

**Storage Temperature:**

20°C ± 4°C

Storage and handling: The RM should be stored in the original sealed bottle at the temperature given above. After use the bottle should be tightly closed and protected from moisture.

**Purity:** 97.80% (g/g)**Expanded Uncertainty U=** 1.19% (g/g)

The uncertainty of this standard is calculated in accordance with the ISO 17034 and EURACHEM/CITAC Guide - Quantifying Uncertainty in Analytical Measurement, Second Edition. The expanded uncertainty is  $U(\text{exp}) = u(\text{RM}) \times k$ , where  $k$  is the coverage factor at the 95% confidence level ( $k=2$ ). Uncertainty  $u(\text{RM})$  is based on the combination of the uncertainties associated with each individual operation involved in the analysis of the product:  $u(\text{RM}) = \sqrt{u(\text{char})^2 + u(\text{bb})^2 + u(\text{its})^2 + u(\text{sts})^2}$ ;  $u(\text{char})$  is the uncertainty of characterisation;  $u(\text{bb})$  uncertainty of homogeneity test;  $u(\text{its})$  uncertainty of stability test long-term;  $u(\text{sts})$  uncertainty of stability test short-term.  $u(\text{its})$  and  $u(\text{sts})$  are not included in the calculation as the stability statement is based on real evidence opposed to simulation.

Minimum sample: 1 mg is recommended as the minimal sample amount. If less material is used, it is recommended to increase the certified uncertainty by a factor of two for half sample and a factor of four for a quarter of sample.

Intended use: Use this RM as calibrant for chromatography or any other analytical technique.

### Analytical Data

Traceability of chromatography: To the International System of Units (SI).

**Instrument:** HPLC/DAD**Detection:** DAD**Column:** Column: Nucleodur C18 Pyramid 3 µm 150 x 3 mm**Inj.-Vol.:** 20 µl**Flow:** 1.0 ml/min**Ret.Time:** 0.82 min

#### Method Details

100% Eluent: 2.72 g KH<sub>2</sub>PO<sub>4</sub> in 1 L water (pH 2.6 with H<sub>3</sub>PO<sub>4</sub>)

### Comment

Traceability: The balances used are calibrated with weights traceable to the national standards (DKD).

Calibrated class A glassware is used for volumetric measurements.

Water Content: 0.83% (g/g) by Karl-Fischer-Titration ( $U(\text{exp}) = 0.09\%$  (g/g)).

Purity was determined by quantitative <sup>1</sup>H-NMR

Identity: EA, NMR, IR, RT, MS

No chromatogram available.

Certificate Revision 1 - 15.10.2018 - M. Beck

**Certified on:** 15.10.2018**Certified by:** M. Beck

RM Release

The LGC Labor GmbH, accredited by DAkkS as indicated by the accreditation number D-RM-19883-01 & D-PL-19883-01, has shown competence based on ISO 17034:2017 with relevant parts of DIN EN ISO/IEC 17025:2018 for production of certified reference materials in form of organic pure substances and in form of single and multi-component solutions of organic pure substances.

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The warranty for this product is limited to the purchasing price of this product.