

Certificate of Analysis



ISO Guide 34 Reference Material

Product Identification

Article Code: DRE-C16055000

Article Name: DL-Phenylalanine

Formula: C₉H₁₁NO₂

Mol. Weight: 165.19

CAS No.: 150-30-1

Lot Number:

G686987

Expiry Date:

20.06.2024

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: 99.43% (g/g)

Expanded Uncertainty U= 0.30% (g/g)

The uncertainty of this standard is calculated in accordance with the ISO Guide 34 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: Nucleodur 100 C8 3 µm 250 x 4 mm

Inj.-Vol.: 3 µl

Flow: 1.0 ml/min

Ret.Time: 3.40 min

Method Details

Eluent A: Acetonitrile:H₂O 1:9 for 1 min

Eluent B: Acetonitrile 100% for 5 min

Eluent A -> Eluent B: 19 min

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: <0.10% (g/g) by Karl-Fischer-Titration ($U(\text{exp}) = 0.04\%$ (g/g)).

Purity was determined by chromatographic assay, corrected by water content and/or residue solvents.

Identity: EA, NMR, RT, IR, UV, MS

Certificate Revision 1 - 20.06.2018 - M. Beck

Certified on: 20.06.2018

Certified by: M. Beck

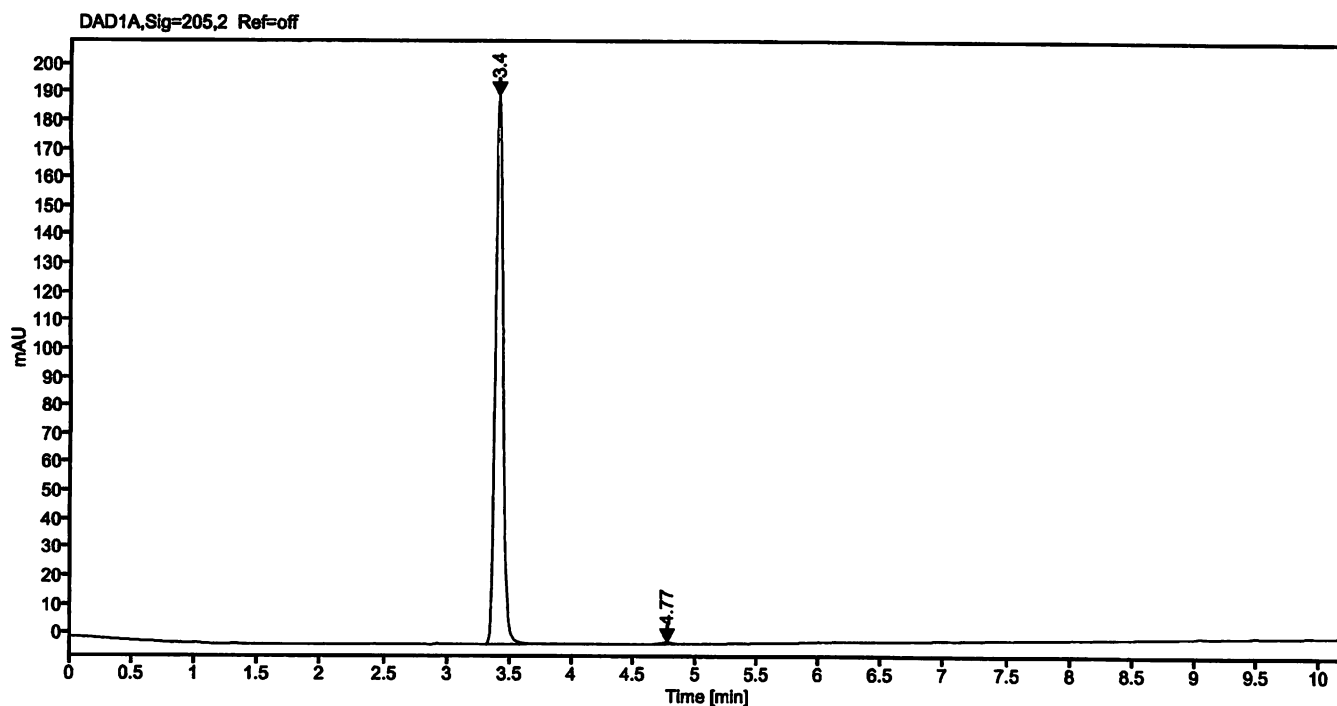
RM Release

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 Guide 34:2009 with relevant parts of DIN EN ISO/IEC 17025:2005 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.

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MC

Data file: 16055000-04-r002.dx Instrument: DAD5
Sample name: 80424WA G686987 Sequence Name: 24052018-Nuc C8
Inj. volume [µl]: 3.0 Injection date: 5/24/2018 3:22:57 PM
Acq. method: S5_Gradient_100-10_K.amx Location: P4-C1
Sample Description DL-Phenylalanine



Signal: DAD1A,Sig=205,2 Ref=off

Nr.	RT [min]	Area	Height	Area%
1	3.40	808.80319	192.74	99.51
2	4.77	3.99479	0.62	0.49
	Sum	812.80		

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