

Certificate of Analysis

ISO 17034 Reference Material

Product Identification

Article Code: DRE-C10304940
Article Name: Aspartame
Formula: C14H18N2O5
Mol. Weight: 294.30
CAS No.: 22839-47-0



EHRENSTORFER™

Lot Number: G977872
Expiry Date: 05.11.2022
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: 94.49% (g/g)

Expanded Uncertainty U= 1.06% (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: UHPLC/DAD

Detection: DAD

Column: LUNA Omega C18 1.6 µm 100 x 2.1 mm

Inj.-Vol.: 2.0 µl

Flow: 0.5 ml/min

Ret.Time: 2.63 min

Method Details

Eluent A: WA + 0.5% H3PO4

Eluent B: Acetonitrile

Time[min]	Eluent A [%]	Eluent B [%]
0.0	90	10
0.3	90	10
8.0	0	100
9.5	0	100
10.0	90	10

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: 3.31% (g/g) by Karl-Fischer-Titration ($U(\text{exp}) = 0.25\%$ (g/g)).

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

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

Attachment: Exemplary chromatogram of given method

Certificate Revision 1 - 05.11.2018 - N. Müller

Certified on: 05.11.2018
Certified by: N. Müller
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.

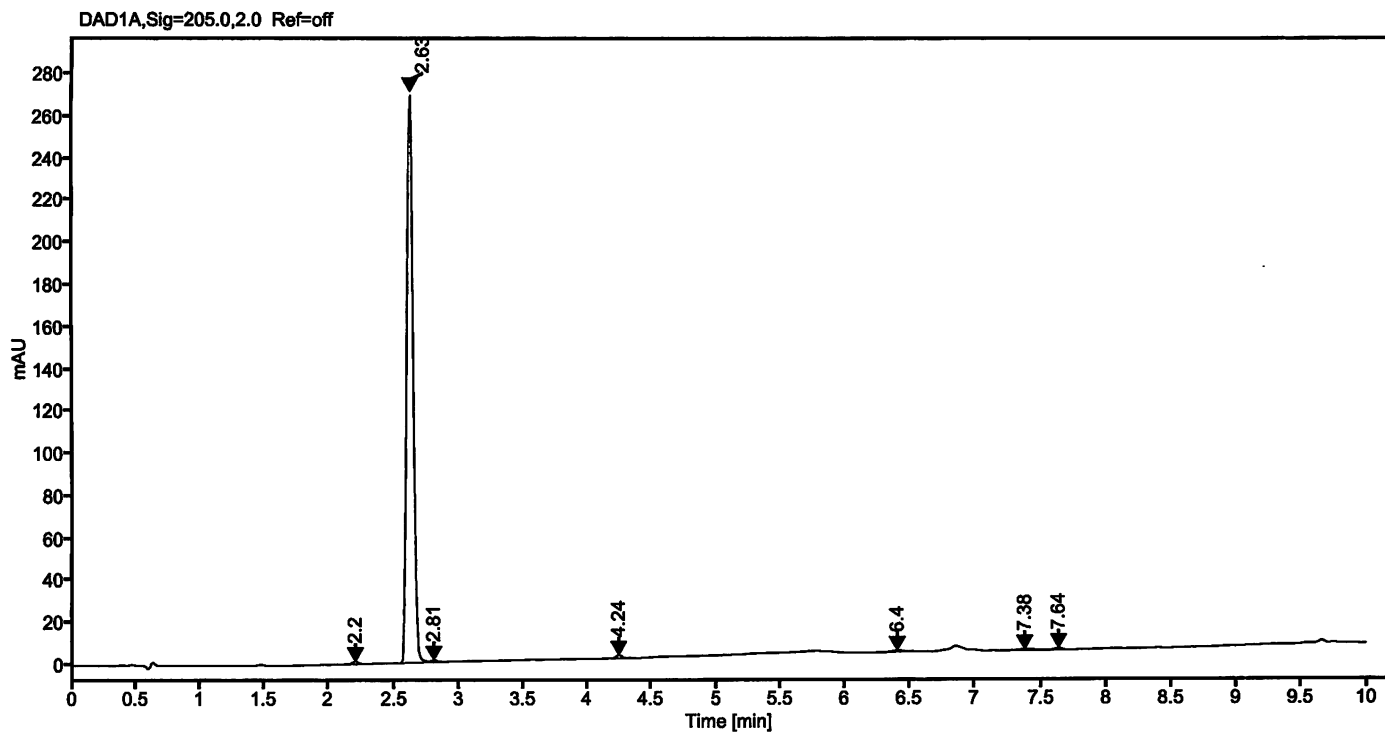
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The warranty for this product is limited to the purchasing price of this product.

29.10.18
HG

Data file: 10304940-02.dx
Sample name: 81023WA G977872
Inj. volume [µl]: 2.0
Acq. method: Gradient_10-100_P.amx

Instrument: UHPLC 2
Sequence Name: 23102018-Inst.-2a
Injection date: 10/23/2018 3:28:21 PM
Location: P3-A2

Sample Description Aspartame



Signal: DAD1A,Sig=205.0,2.0 Ref=off

Nr.	RT [min]	Area	Height	Area%
1	2.20	3.73115	1.16	0.40
2	2.63	905.89794	270.76	97.61
3	2.81	3.01063	0.97	0.32
4	4.24	4.89061	1.53	0.53
5	6.40	3.04547	0.68	0.33
6	7.38	4.06949	0.53	0.44
7	7.64	3.44600	0.93	0.37
Sum		928.09		

Well D.