

Certificate of Analysis



EHRENSTORFER™

ISO Guide 34 Reference Material

Product Identification

Article Code: DRE-C10167500

Article Name: 4-Aminoazobenzene

Formula: C₁₂H₁₁N₃

Mol. Weight: 197.24

CAS No.: 60-09-3

Lot Number:

G249651

Expiry Date:

31.08.2021

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: 98.59% (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: UHPLC/DAD

Method Details

Detection: DAD

Eluent A: WA + 0.5% H₃PO₄

Column: LUNA Omega C18 1.6 µm 100 x 2.1 mm

Eluent B: Acetonitrile

Inj.-Vol.: 2 µl

Flow: 0.5 ml/min

| Time [min] | Eluent A [%] | Eluent B [%] |
|------------|--------------|--------------|
|------------|--------------|--------------|

Ret. Time: 5.91 min

| | | |
|-----|----|-----|
| 0 | 90 | 10 |
| 0.3 | 90 | 10 |
| 8 | 0 | 100 |
| 9.5 | 0 | 100 |
| 10 | 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: 0.15% (g/g) by Karl-Fischer-Titration ($U(\text{exp}) = 0.03\%$ (g/g)).

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

Certificate Revision 1 - 26.04.2018 - M. Beck

Certified on: 26.04.2018

Certified by: M. Beck

RM Release

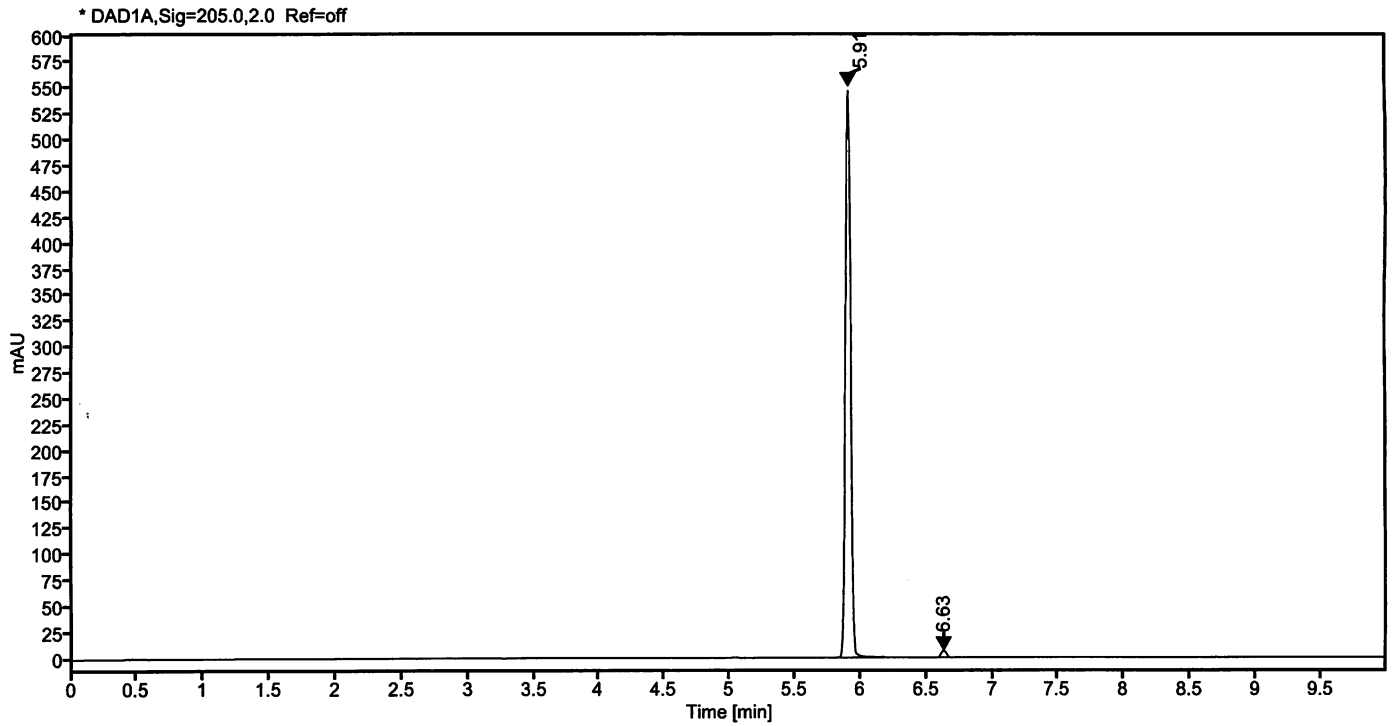
The LGC Labor GmbH, accredited by DAkkS as indicated by the accreditation number D-RM-19883-01 & D-PL-19883-01, has shown competence based on ISO Guide 34:2009 with relevant parts of DIN EN ISO/IEC 17025:2005 for production of certified reference materials in form of organic pure substances and in form of single and multi-component solutions of organic pure substances.

LGC Labor GmbH - Bgm.-Schlosser-Straße 6A - 86199 Augsburg - Germany
Phone +49 821 906080 - Fax +49 821 9060888 - augsburg.inquiry@lgcgroup.com
The warranty for this product is limited to the purchasing price of this product.

13042018

Data file: 10167500-03-r001.dx Instrument: UHPLC 2
Sample name: 80413AL G249651 Sequence Name: 13042018-2
Inj. volume [µl]: 2.0 Injection date: 4/13/2018 5:56:37 PM
Acq. method: Gradient_10-100_P.amx Location: P2-B4

Sample Description 4-Aminoazobenzene



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

| Nr. | RT [min] | Area | Height | Area% |
|-----|----------|------------|--------|-------|
| 1 | 5.91 | 1519.53957 | 550.50 | 98.83 |
| 2 | 6.63 | 18.04493 | 6.57 | 1.17 |
| | Sum | 1537.58 | | |