

Certificate of Analysis



ISO 17034 Reference Material

Product Identification

Article Code: DRE-C12197500

Article Name: 2,3-Diaminotoluene

Formula: C₇H₁₀N₂

Mol. Weight: 122.17

CAS No.: 2687-25-4

Lot Number: G982693

Expiry Date: 18.09.2022

Storage Temperature: 4°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: 94.19% (g/g)

Expanded Uncertainty U= 1.00% (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: GC/FID

Detection: FID

Column: Optima-SMS, 0.25 µm, 0.25 mm

Inj.-Vol.: 1 µl

Flow: 1.0 ml/min

Ret.Time: 12.69 min

Injector: 280°C

Initial Temp: 60°C for 5 min

End Temp: 280°C for 1 min

Gradient: 15°C/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: 3.18% (g/g) by Karl-Fischer-Titration ($U(\text{exp}) = 0.03\%$ (g/g)).

Purity was determined by elemental analysis

Identity: EA, NMR, RT, IR

Attachment: Exemplary chromatogram of given method

Certificate Revision 1 - 18.09.2018 - M. Beck

Certified on: 18.09.2018

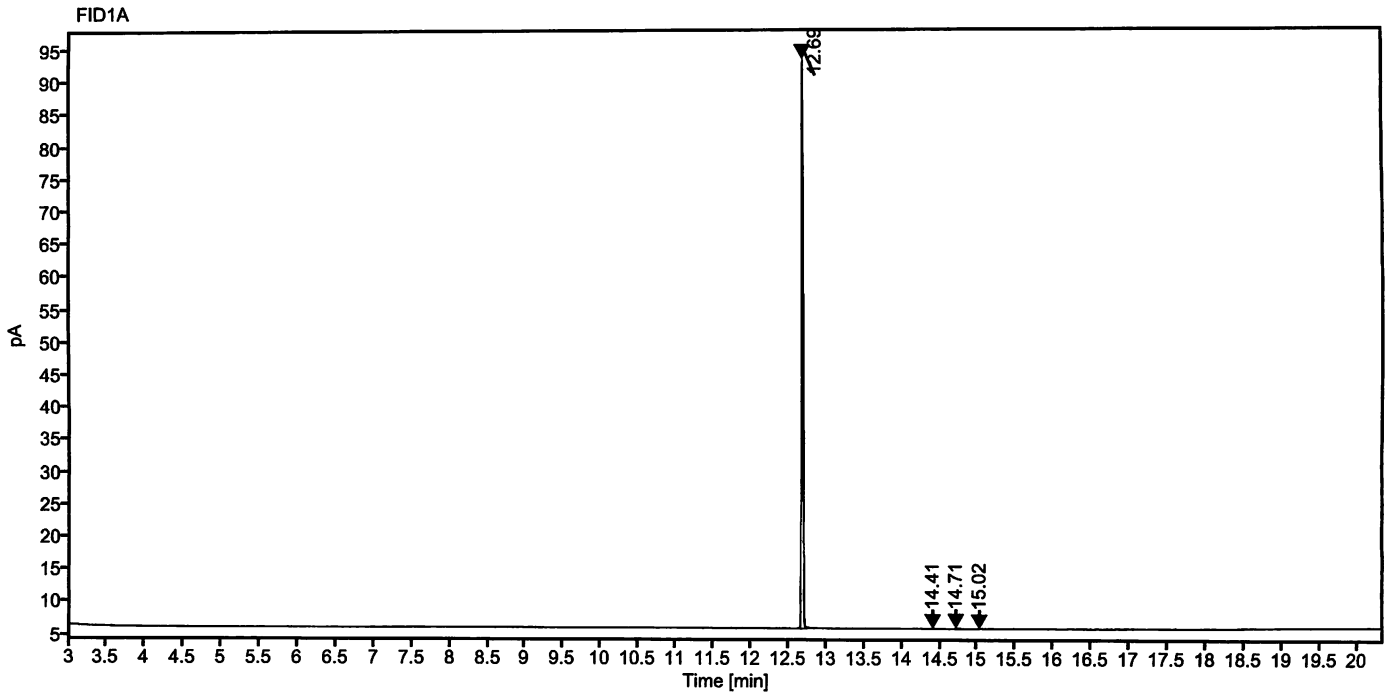
Certified by: M. Beck

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.

Data file: 12197500-04.dx **Instrument:** FID 2
Sample name: 80914AL G982693 **Sequence Name:** 2018KW38-0917-a
Inj. volume [µl]: 1.0 **Injection date:** 9/17/2018 4:54:42 PM
Acq. method: pesk.amx **Location:** 36
Sample Description 2,3-Diaminotoluene



Signal:		FID1A				
Nr.	RT [min]	Area [pA*s]	Height [pA]	Area%	Width [min]	
1	12.69	111.79078	87.43	99.55	0.203	
2	14.41	0.13656	0.11	0.12	0.019	
3	14.71	0.27053	0.15	0.24	0.025	
4	15.02	0.09855	0.06	0.09	0.023	
	Sum	112.30				

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