Certificate of Analysis

ISO Guide 34 Reference Material

Product Identification

Article Code: DRE-C12322400
Article Name: 2,4-Dichloroaniline
Formula: C6H5Cl2N
Mol. Weight: 162.02
CAS No.: 554-00-7

Lot Number: G855929
Expiry Date: 14.08.2024
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: 99.23% (g/g)

Expanded Uncertainty U= 0.45% (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(exp) = u(RM) x k, where k is the coverage factor at the 95% confidence level (k=2). Uncertainty u(RM) is based on the combination of the uncertainties associated with each individual operation involved in the analysis of the product: $u(RM) = \sqrt{u(char)^2 + u(bb)^2 + u(lts)^2 + u(sts)^2}$; u(char) is the uncertainty of characterisation; u(bb) uncertainty of homogeneity test; u(lts) uncertainty of stability test long-term; u(sts) uncertainty of stability test short-term. u(lts) and u(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	Injector:	320°C
Detection:	FID	Initial Temp:	120°C for 4 min
Column:	Optima-5MS, 0.25 µm, 0.25 mm	End Temp:	320°C for 3 min
Inj.-Vol.:	1 µl	Gradient:	15°C/min
Flow:	1.0 ml/min		
Ret.Time:	7.33 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: 0.42% (g/g) by Karl-Fischer-Titration (U(exp) = 0.11% (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 - 14.08.2018 - N. Müller

Certified on: 14.08.2018
Certified by: N. Müller
RM Release

The LGC Labor GmbH, accreditated 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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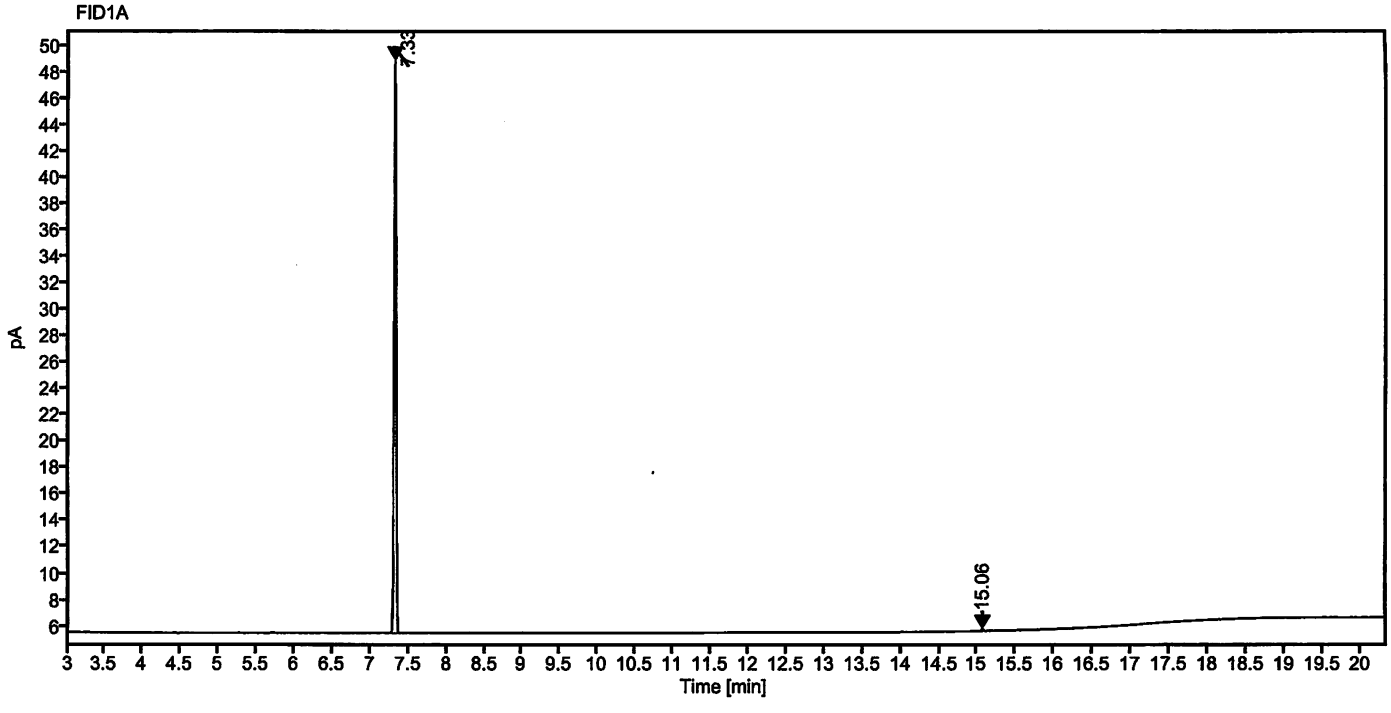
Data file:	12322400-12.dx	**Instrument:**	FID 3
Sample name:	80609AL G855929	**Sequence Name:**	2018KW23-FID3-0606
Inj. volume [µl]:	1.0	**Injection date:**	6/6/2018 9:49:55 PM
Acq. method:	PAHK.amx	**Location:**	146

Sample Description 2,4-Dichloroaniline



Signal: FID1A

Nr.	RT [min]	Area [pA*s]	Height [pA]	Area%	Width [min]
1	7.33	78.60668	43.43	99.64	0.122
2	15.06	0.28351	0.17	0.36	0.023
	Sum	78.89			