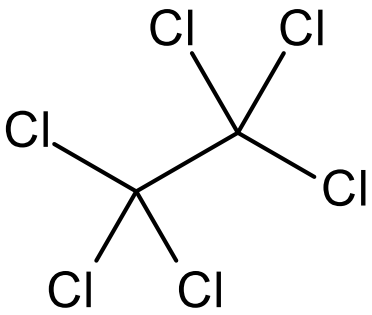
REFERENCE MATERIAL CERTIFICATE ISO 17034

Certified Reference Material

This certificate is designed in accordance with ISO 17034 and ISO Guide 31. This certified reference material (CRM) was designed, produced and verified in accordance with ISO/IEC 17025, ISO 17034 and a registered quality management system ISO 9001.

Product Name
Hexachloroethane 100 µg/mL in Methanol



Product Code
DRE-XA14172000ME

Lot Number
H1133267ME

CAS No.
67-72-1

Format
Solution

Mol. Weight
236.74

Expiry Date
24 Mar 2026

Mol. Formula
C_2Cl_6

Storage Temp
20°C ± 4°C

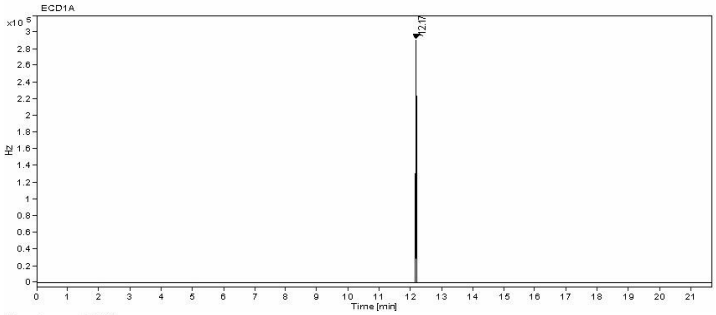
CERTIFIED	CERTIFIED
Concentration 100.03 µg/mL	Expanded Uncertainty (U) 2.16 µg/mL

Uncertainty
The certified value(s) and uncertainty(ies) are determined in accordance with ISO 17034 with an 95% confidence level (k=2). Uncertainty is based on the Total Combined Uncertainty, including uncertainties of preparation, purity of neat materials, homogeneity and stability testing. Stability values are based on real evidence opposed to simulation.

The producer certifies that this certified reference material meets the specification stated in this certificate until the expiry date, provided it is stored unopened at the recommended temperature herein. Product warranties for this certified reference material are set out in the terms and conditions of purchase.

CERTIFIED BY	CERTIFIED ON		
N. Müller	24 Mar 2021		RM Release

CHROMATOGRAM



Signal:	ECD1A				
Nr.	RT [min]	Area [Hz*s]	Height [Hz]	Area%	Width [min]
1	12.17	385963.5901	290767.81	100	0.219

Instrument
GC/ECD

Detection
ECD

Column
Optima-5MS, 0.25 µm, 0.25 mm

Method Details
Initial Temp: 40°C / 5 min, End Temp: 200°C / 6 min, Gradient: 15°C/min

Inj.-Vol.
1.0 µL

Flow
1 mL/min

Method of Preparation
The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by the appropriate analytical techniques.

Batch Information
Solvent: Methanol, Lot No. V9L010049M11, 60.00 mL.

Gravimetric Data

Compound Name	Lot No.	Weight (mg)	Purity (%)
Hexachloroethane	1018921	6.032	99.5

Intended Use
This CRM is intended for use in a laboratory as a calibration and quality control standard or in method development for analytical techniques.

Safety
Proper precautions should be observed while handling. See Safety Data Sheet.

Traceability
The balances used for gravimetric measurements are calibrated with weights traceable to the national standards (DKD). The calibration of the balances is verified daily internally and annually by an external accredited calibration service. Chromatographic methods are traceable to the International System of Units (SI).

Homogeneity
Random replicate samples of the final packaged CRM have been analysed to prove homogeneity compliant with ISO 17034.

Storage
The CRM should be stored in the original sealed container at the indicated temperature.

Instructions for use
The CRM should be used shortly after opening to avoid concentration changes due to evaporation. It is recommended to use 1 mL as the minimum sample size and if less material is used, to increase the certified uncertainty by a factor of two for half sample and four for a quarter of sample. If storage after opening is necessary, the CRM should be tightly closed and kept from light and moisture. If the CRM was in a sealed ampoule, it should be transferred to a vial with minimum head space. Visit the support section of our website lgcstandards.com for a series of Dr. Ehrenstorfer Tech Tip videos and frequently asked questions.

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LGC Labor GmbH is accreditated by DAkkS accreditation numbers D-RM-19883-01-00 & D-PL-19883-01-00 on ISO 17034:2017 & ISO/IEC 17025:2018

DAkkS Deutsche Akkreditierungsstelle D-RM-19883-01-00