

Gravimetric Certificate



ISO 17034 Certified Reference Material

Product Identification

Article Code: DRE-XA17358300ME
Article Name: Tetrachloroethene
Formula: C₂Cl₄
Mol. Weight: 165.82
CAS No.: 127-18-4

Lot Number: H999673ME
Expiry Date: 01.02.2023
Storage Temperature: 20°C ± 4°C

Storage and handling: The CRM 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 and light. The expiry date is valid for original sealed bottles under recommended storage conditions only.

Gravimetric Data

Product was prepared by dilution of a stock solution

Compound Name: Tetrachloroethene	Lot. No.: 136300	Purity: 99.9 %	Weight: 502.355 mg
Stock Solution Solvent: Methanol	Solvent Lot: V8F518048G5	Volume: 50.00 ml	
Batch Solvent: Methanol	Solvent Lot: V8F518048G5	Batch size: 250.00 ml	

Concentration: 100.37 mg/l Expanded Uncertainty U: 2.61 mg/l

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 $U(\text{exp}) = u(\text{CRM}) \times k$, where k is the coverage factor at the 95% confidence level ($k=2$). Uncertainty $u(\text{CRM})$ is based on the combination of the uncertainties associated with each individual operation involved in the analysis of the product: $u(\text{CRM}) = \sqrt{u(\text{char})^2 + u(\text{bb})^2 + u(\text{ts})^2 + u(\text{sts})^2}$; $u(\text{char})$ is the uncertainty of characterisation; $u(\text{bb})$ uncertainty of homogeneity test; $u(\text{ts})$ uncertainty of stability test long-term; $u(\text{sts})$ uncertainty of stability test short-term. $u(\text{ts})$ 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 ml 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 CRM 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: 200°C
Detection: FID	Initial Temp: 40°C for 5 min
Column: Optima-SMS, 0.25 µm, 0.25 mm	End Temp: 200°C for 16 min
Inj.-Vol.: 1 µl	Gradient: 15°C/min
Flow: 1.0 ml/min	
Ret.Time: 7.85 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.

Attachment: Exemplary chromatogram of given method

Certificate Revision 1 - 01.02.2019 - D. Schmid

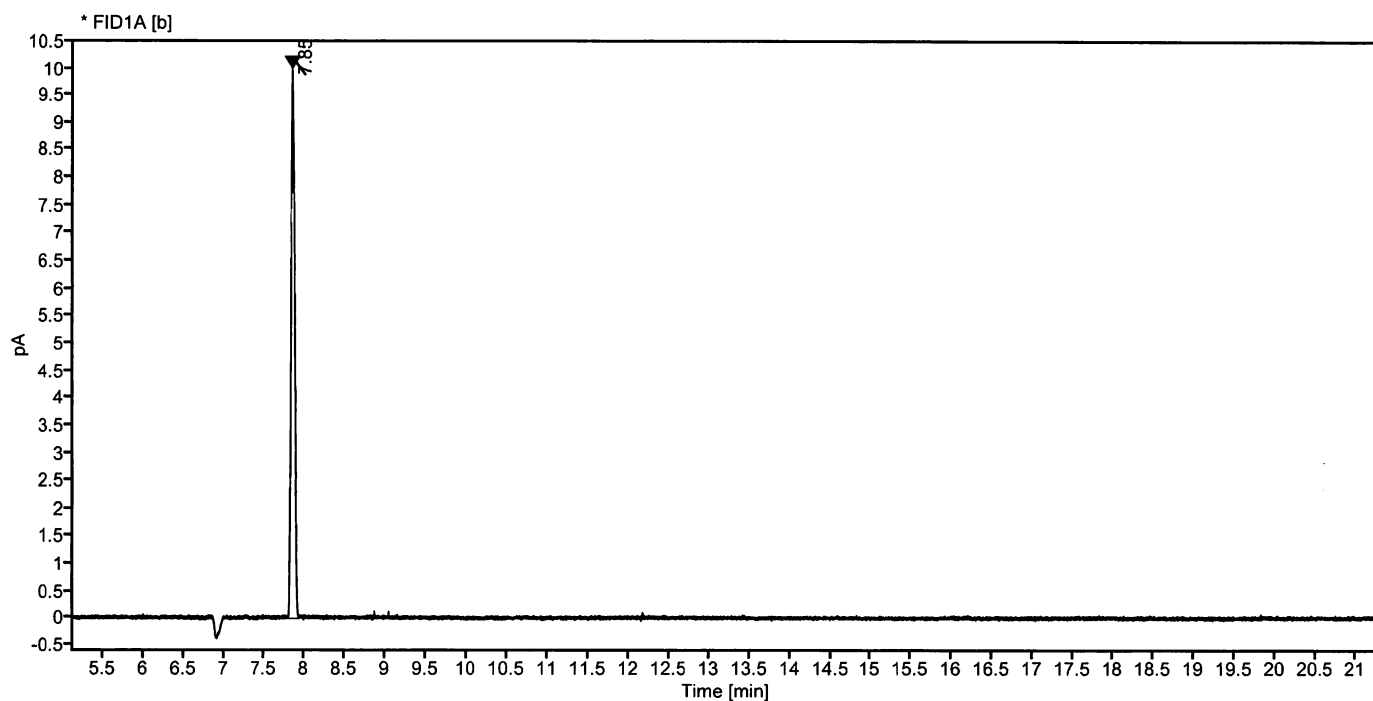
Certified on: 01.02.2019
Certified by: D. Schmid
RM Release

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: 17358300-10.dx **Instrument:** FID 3
Sample name: H999673ME **Sequence Name:** 2019KW05-0130a
Inj. volume [µl]: 1.0 **Injection date:** 1/30/2019 4:56:43 PM
Acq. method: 200.amx **Location:** 53

Sample Description Tetrachloroethene



Signal: * FID1A [b]

Nr.	RT [min]	Area [pA*s]	Height [pA]	Area%	Width [min]
1	7.85	31.05214	10.00	100.00	0.133
	Sum	31.05			

Schmid D.