

CERTIFIED REFERENCE MATERIAL Organic substance

Ref No: CM 30446
Barcode: 41551929

Lot No: 1054189

Certification Date: 28.10.2024
Expiry date: 28.11.2026

Description: Tetrachloroethene

CAS No: 127-18-4

Empirical formula: C₂Cl₄

MW: 165.833

Certified Purity / Uncertainty: 0.9980 +/- 0.0010 g/g (99.80 +/- 0.10 %)

Purity=100% - Assay organic impurities

Water content: 0.2

Storage Conditions: Store in a refrigerator at temperatures between 2°C to 8°C

Method of certification:	Concept of Certification and traceability statement:	Intended use:	Instructions for the correct use of this reference material:	Stability and storage:	Level of homogeneity:
CRM's calibration procedure (WQP 5.15.1/22)	The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k = 2, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA 4/02. Metrological traceability is established through in-house validated method. The measurement results are traceable to SI.	For Laboratory Use Only. This CRM is intended for: Calibration of TLC, GC/FID, GC/TCD, GC/ECD, GC/MS, GC/MS/MS, LC/UV, LC/MS and LC/MS/MS. Validation of analytical methods. Preparation of "working reference samples". Detection limit and linearity studies. This statement is not intended to restrict the use for other purposes.	This CRM can be used directly or can be diluted in an appropriate solvent. Only a clean glassware should be used. Hazardous situation: The normal laboratory safety precautions should be observed when working with this CRM. Further details for the handling of this chemical are available as safety data sheet.	This CRM is with a guaranteed purity +/- 2% deviation prior to the expiration date. Stability is guaranteed, provided that the material is kept in its original packaging, tightly closed stored, as written in the section: Storage Conditions.	The material was tested for homogeneity by analyzing randomly selected samples according to an in-house procedure. The level of homogeneity proved satisfactory for a sample volume of min. 2 mg. The uncertainty incorporates the sample standard deviation combined with the uncertainty calculated from homogeneity and stability studies.

This certificate relates solely to the lot number given above.

All processes (including generating of this certificate) are completely controlled by the specialized Computer-Aided-Manufacturing (CAM) software.

This Certified Reference Material was produced under a quality management system that is:

- Registered to ISO 9001 Quality Management System (Lloyd's Register Quality Assurance Ltd Cert No 0039638)
- Accredited according to ISO/IEC 17025
- Accredited according to ISO 17034

This document is designed and the certified value and uncertainty are determined in accordance with ISO 33401, ISO 33405, and Eurachem / CITAC Guides

Names of certifying officers:

Laboratory:  Margarita Dimitrova

Manager:  Krassimira Taralova

Analytical Data:

GC-Conditions

	He, constant flow	Oven	Temperature	Hold
Carrier gas:		Initial	70°C	0
Column:	Agilent CP9105 J&W VF-624ms 60m, 0.32mm, 1.80µm	10°C/min	120°C	0
Flow rate:	1.6 ml/min	5°C/min	160°C	0
Injection volume:	1µl split	30°C/min	220°C	3
Injector:	220 °C			

MS Conditions

Ionization mode:	EI
MS Quad:	150°C
MS Source:	230°C
Mode:	Scan
Transfer line:	230°C

Area Percent Report

Data Path : C:\DATA\2024\03.2024\
Data File : Tetrachloroethene_41551929-s3.D
Acq On : 2 Apr 2024 4:45
Operator : MD
Sample : Tetrachloroethene_41551929-s3
Misc :
ALS Vial : 77 Sample Multiplier: 1

Integration Parameters: autoint1.e
Integrator: ChemStation

Method : C:\METHODS\Quant\989733.M
Title :

Signal : TIC: Tetrachloroethene_41551929-s3.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	8.789	1090	1114	1154	M3	14545255	560911448	100.00%	99.822%
2	14.014	2510	2531	2569	M2	19467	1002223	0.18%	0.178%

Sum of corrected areas: 561913671

989733.M Tue Apr 02 09:15:26 2024

