# Certificate of Analysis

## CERTIFIED REFERENCE MATERIAL
## Organic substance

**Ref No:** CM 30345 **Lot No:** 1054187 **Certification Date:** 28.10.2024
**Barcode:** 41550755 **Expiry date:** 28.11.2026

**Description:** 1,2-Dichloroethane
CAS No: 107-06-2 Empirical formula: $C_2H_4Cl_2$ MW: 98.959

**Certified Purity / Uncertainty:** 0.9990 +/- 0.0010 g/g (99.90 +/- 0.10 %)
Purity=100% - Assay organic impurities

**Water content:** 0.3

**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

| | | | | |
|---|---|---|---|---|
| Carrier gas: | He, constant flow | Oven | Temperature | Hold |
| Injector: | 200 °C | Initial | 50°C | 0 |
| Injection volume: | 1µl split | 5°C/min | 100°C | 2 |
| Flow rate: | 1.6 ml/min | 20°C/min | 160°C | 1 |
| Column: | Agilent CP9105 J&W VF-624ms 60m, 0.32mm, 1.80µm | | | |

MS Conditions

| | |
|---|---|
| Mode: | Scan |
| MS Source: | 230°C |
| MS Quad: | 150°C |
| Ionization mode: | EI |
| Transfer line: | 180°C |

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Area Percent Report

Data Path : C:\DATA\2024\02.2024\
Data File : 1,2-Dichloroethane_41550755-s2.D
Acq On : 29 Feb 2024 23:55
Operator : MD
Sample : 1,2-Dichloroethane_41550755-s2
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: autoint1.e
Integrator: ChemStation

Method : C:\METHODS\Quant\981908-02.M
Title :

Signal : TIC: 1,2-Dichloroethane_41550755-s2.D\data.ms

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.705 | 593 | 603 | 621 | M4 | 8864 | 252999 | 0.10% | 0.095% |
| 2 | 9.456 | 1317 | 1349 | 1386 | M | 6252606 | 265389917 | 100.00% | 99.905% |

Sum of corrected areas: 265642916

981908-02.M Fri Mar 01 11:31:27 2024