

## CERTIFIED REFERENCE MATERIAL Organic substance

Ref No: CM 30616  
Barcode: 41570036

Lot No: 1054192

Certification Date: 28.10.2024  
Expiry date: 28.11.2026

Description: Bromodichloromethane  
CAS No: 75-27-4

Empirical formula: CHBrCl<sub>2</sub>

MW: 163.829

**Certified Purity / Uncertainty:** 0.9870 +/- 0.0010 g/g (98.70 +/- 0.10 %)

Purity=100% - Assay organic impurities

**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. | <b>For Laboratory Use Only.</b><br>This CRM is intended for:<br>Calibration of TLC, GC/FID, GC/TCD, GC/ECD, GC/MS, GC/MS/MS, LC/UV, LC/MS and LC/MS/MS.<br>Validation of analytical methods.<br>Preparation of "working reference samples".<br>Detection limit and linearity studies.<br>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.<br><b>Hazardous situation:</b><br>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:      | He, constant flow                               | 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\07.2024\  
Data File : Bromodichloromethane-41570036-41570050-s2.D  
Acq On : 8 Jul 2024 14:23  
Operator : MD  
Sample : Bromodichloromethane-41570036-41570050-s2  
Misc :  
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: autoint1.e  
Integrator: ChemStation

Method : C:\METHODS\Quant\1019406.M  
Title :

Signal : TIC: Bromodichloromethane-41570036-41570050-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      | 5.836    | 301        | 314      | 327       | M     | 32834       | 743119     | 0.14%        | 0.143%     |
| 2      | 6.148    | 381        | 399      | 421       | M3    | 21939       | 593614     | 0.12%        | 0.114%     |
| 3      | 7.364    | 698        | 728      | 772       | M     | 16497839    | 512818697  | 100.00%      | 98.699%    |
| 4      | 7.655    | 794        | 807      | 827       | M5    | 27189       | 748369     | 0.15%        | 0.144%     |
| 5      | 8.004    | 883        | 902      | 926       | M3    | 133057      | 3717445    | 0.72%        | 0.715%     |
| 6      | 9.353    | 1252       | 1268     | 1285      | M4    | 25315       | 694616     | 0.14%        | 0.134%     |
| 7      | 10.430   | 1531       | 1560     | 1580      | M4    | 7734        | 263809     | 0.05%        | 0.051%     |

Sum of corrected areas: 519579670

1019406.M Mon Jul 08 15:27:52 2024

