

REFERENCE MATERIAL CERTIFICATE

Reference Material

This certificate is designed in accordance with ISO Guide 31. This reference material (RM) was designed, produced and verified in accordance with a registered quality management system ISO 9001. All measurements were performed according to ISO/IEC 17025 by a DAkkS accredited laboratory (D-PL-19883-01-00).

Product Name

Malathion D10 (diethyl D10)

Product Code

DRE-C14710010

CAS No.

347841-48-9

Mol. Weight

340.42

Mol. Formula

C₁₀D₁₀H₉O₆PS₂

Lot Number

1015172

Format

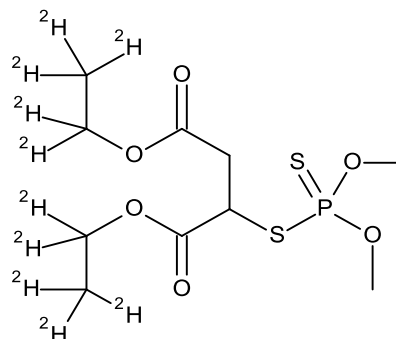
Neat

Expiry Date

09 Jul 2023

Storage Temp

4°C ± 4°C



CERTIFIED

Purity
93.4% (g/g)

CERTIFIED

Expanded Uncertainty (U)
2.0% (g/g)

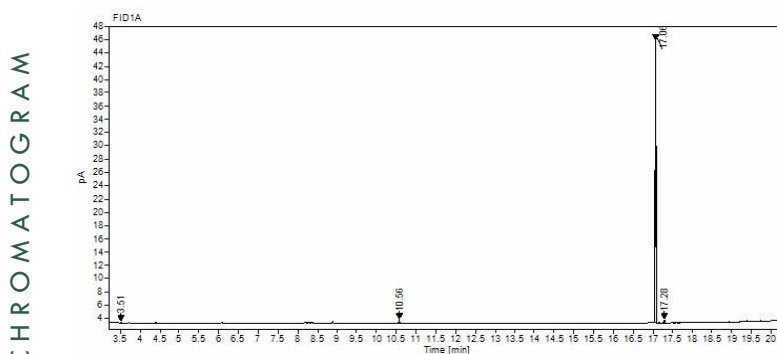
Uncertainty

The certified value(s) and uncertainty(ies) are determined in accordance with EURACHEM/CITAC Guide for "Quantifying Uncertainty in Analytical Measurement, 3rd edition", with an 95% confidence level (k=2). Uncertainty is based on the Total Combined Uncertainty, including uncertainties of characterisation and stability testing. Stability values are based on real evidence opposed to simulation.

The producer certifies that this 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 reference material are set out in the terms and conditions of purchase.

CERTIFIED BY	CERTIFIED ON		RM Release
N. Müller	09 Jul 2019		

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Signal:	FID1A				
Nr.	RT [min]	Area [pA*s]	Height [pA]	Area%	Width [min]
1	3.51	0.23799	0.18	0.36	0.02
2	10.56	0.81652	0.53	1.24	0.134
3	17.06	63.91779	42.42	97.06	0.104
4	17.28	0.88179	0.48	1.34	0.102

Instrument

GC/FID

Detection

FID

Column

Optima-5MS, 0.25 µm, 0.25 mm

Method Details

Initial Temp: 60°C / 5 min, End Temp: 280°C / 1 min, Gradient: 15°C/min

Inj.-Vol.

1.0 µL

Flow

1.0 mL/min mL/min

Method of Characterisation

Purity = 100% - Assay impurities – Residual Solvents (NMR)

Method of Identification

NMR, RT, MS

Batch InformationChemical Purity: 96.9 %, Expanded Uncertainty U = 0.5 %; Isotopic Value: 96.3 %, Expanded Uncertainty U = 0.5 %
No Isotopic Composition available.**Intended Use**

This RM 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).

Storage

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

Instructions for use

It is recommended to use 1 mg 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 RM should be tightly closed and kept from light and moisture. If the RM 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.

LGC Labor GmbH

Bgm.-Schlosser-Straße 6A
86199 Augsburg, Germany
T | +49 821 906080
F | +49 821 9060888
E | dr.ehrenstorfer@lgcgroup.com