LGC | DR EHRENSTORFER™

REFERENCE MATERIAL CERTIFICATE ISO 17034

Reference Material

This certificate is designed in accordance with ISO 17034 and ISO Guide 31. This reference material (RM) was designed, produced and verified in accordance with ISO/IEC 17025, ISO 17034 and a registered quality management system ISO 9001.

Product Name	Product Code	Lot Number	Format	Expiry Date	Storage Temp
Pesticide-Mix 195 5-10 µg/mL in Isooctane	DRE-LA18000195IO	G1302299IO	Multicomponent Solution	06 Jun 2028	20°C ± 4°C

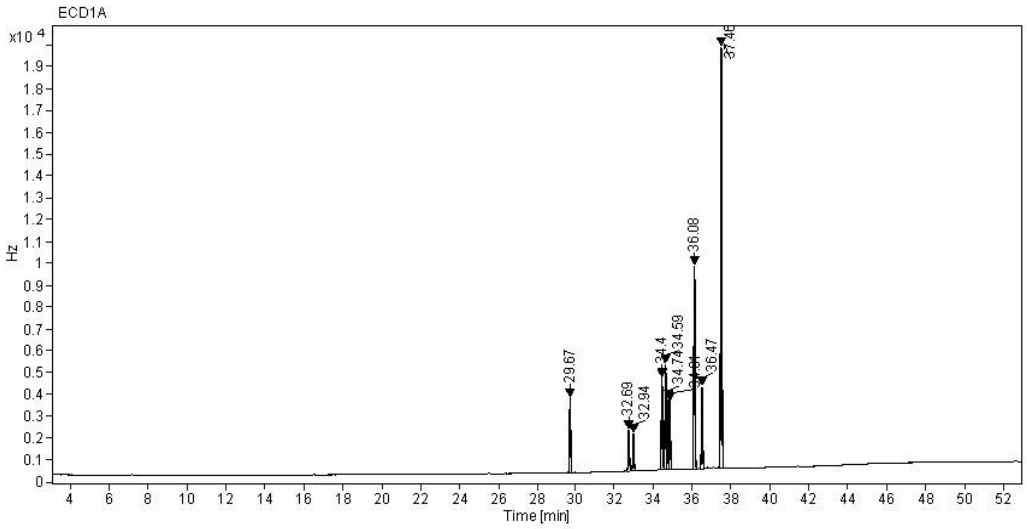
	CERTIFIED						
Compound Name	Concentration (µg/mL)	Expanded Uncertainty U (µg/mL)	CAS	Lot Number	Purity (%)	Amount (mg)	RT (min)
Fenpropathrin	5.00	0.12	39515-41-8	G986922	98.3	1.018	29.65
Permethrin*	10.00	0.21	52645-53-1	1049792	99.7	2.007	32.67
Cypermethrin*	9.97	0.32	52315-07-8	R1090057	97.2	2.052	34.38
Fenvalerate*	9.98	0.23	51630-58-1	G1153047	98.7	2.022	36.06
Deltamethrin	10.01	0.24	52918-63-5	175257	99.6	2.011	37.44

*mixture of isomeres -- See Batch information

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		
N. Müller	06 Jun 2023		RM Release

CHROMATOGRAM



Instrument
GC/ECD

Detection
ECD

Column
Optima-5MS, 0.25 µm, 0.25 mm

Method Details
Temp: 120°C / 5 min-> 320°C / 8 min, Gradient: 5°C/min

Inj.-Vol.
4.0 µL

Flow
1 mL/min

Method of Preparation
The certified value is based on gravimetric and volumetric preparation of this RM. This RM has been confirmed by the appropriate analytical techniques.

Batch Information
Solvent: Isooctane, Lot No. L254026, 200.00 mL. Permethrin (RT 32.6 and 32.9 min), Cypermethrin (RT 34.3 to 34.7 min) and Fenvalerate (RT 36.0 and 36.4 min) are mixtures of isomers.

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.

Uncertainty
The certified value(s) and uncertainty(ies) are determined in accordance with ISO 17034 with an 95% confidence level (k=2). Uncertainty is based on the Total Combined Uncertainty, including uncertainties of preparation, purity of neat materials, homogeneity and stability testing. Stability values are based on real evidence opposed to simulation.

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. Only Class A glassware is used for volumetric measurements.

Homogeneity
Random replicate samples of the final packaged RM have been analysed to prove homogeneity consistent with ISO 17034.

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

Instructions for Use
The RM should be used shortly after opening to avoid concentration changes due to evaporation. It is recommended to use 1 mL 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 the RM was in a sealed ampoule and storage after opening is necessary, it should be transferred to an amber vial with minimum head space and a Teflon-lined silicon septum. Visit the support section of our website lgcstandards.com for a series of Dr. Ehrenstorfer Tech Tip videos and frequently asked questions.

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LGC Labor GmbH is accreditated by
DAkkS accreditation numbers
D-RM-19883-01-00 & D-PL-19883-01-00
on ISO 17034:2017 & ISO/IEC 17025:2018

DAkkS Deutsche Akkreditierungsstelle D-RM-19883-01-00