LGC | DR EHRENSTORFER™

Reference Material

REFERENCE MATERIAL CERTIFICATE

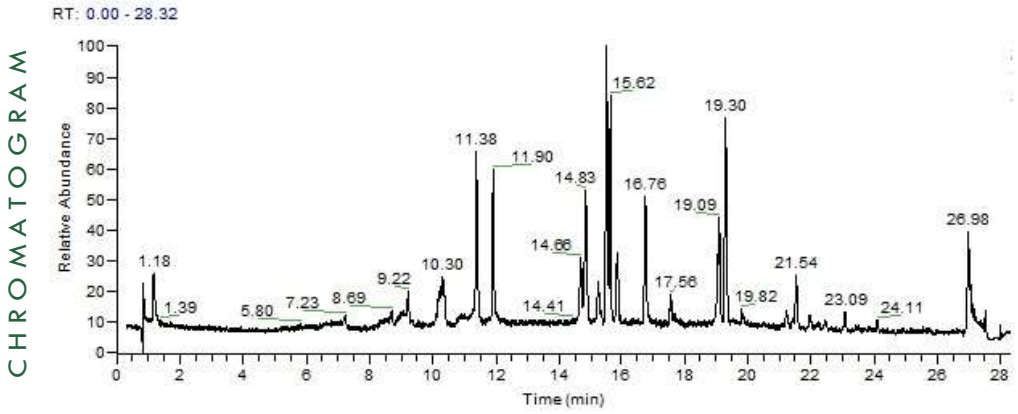
This certificate is designed in accordance with ISO Guide 31. This reference material (RM) was designed, produced and verified in accordance with a registered quality management system ISO 9001. All measurements were performed according to ISO/IEC 17025 by an A2LA accredited laboratory (3031.01)

Product Name	Product Code	Lot Number	Format	Expiry Date	Storage Temp
Michigan Pesticide Mixture 2 100 µg/mL in Acetonitrile	DRE-S50000100AL	2-G414414AL	Multicomponent Solution	7 Jan 2022	≤ -10 ºC

Compound Name	CERTIFIED Concentration (mg/L)	Uncertainty (mg/L)	CAS	Lot Number	Combined Purity (%)	Amount (mg)	RT (min)
Imidacloprid	99.88	.87	138261-41-3	1533.286.1.2P	99.09	2.52	8.41
Aldicarb	101.7	1	116-06-3	1857.421.6P	98.7	2.58	9.93
Imazalil	99.79	1	35554-44-0	1656.421.1.2P	99	2.52	10.84
Flonicamid	101.1	1	158062-67-0	2946.286.1P	99.5	2.54	14.06
Spinosad (mixture Of Spinosyn A And D Isomers)	100.3	1	168316-95-8	2251.421.3.1P	93.61	2.68	14.69
Fludioxonil	99.96	1	131341-86-1	1816.286.1.2P	98	2.55	15.69
Methiocarb	100.1	2	2032-65-7	1617.286.2P	97	2.58	19.57
Fipronil	98.98	1	120068-37-3	2048.286.1P	98	2.53	20.69
Pyrethrin (mixture Of Isomers)	100.6	1	8003-34-7	2382.1.2P	54.4	4.63	21.16
Prallethrin	98.22	2	23031-36-9	2963.286.1.2P	95.82	2.56	21.16
Systhane ™	99.79	1	88671-89-0	1066.286.1P	99	2.52	21.93
Abamectin	99.96	.81	71751-41-2	2299.29.1P	91.2	2.74	21.97
Trifloxystrobin	98.98	1	141517-21-7	1845.286.1P	98	2.53	23.02
Acetamiprid	98.98	1	135410-20-7	1856.286.2P	98	2.53	23.88
Bifenthrin	98.98	1	82657-04-3	1068.421.4P	98	2.53	23.96
Fenoxycarb	101.7	1	72490-01-8	1871.421.1.1P	99.69	2.55	24.04
Permethrin (mixture Of Isomers)	101.7	1	52645-53-1	1184.421.4.2P	97.79	2.60	25.53
Baythroid (mixture Of Isomers)	99.96	1	68359-37-5	1067.3.11P	98	2.55	25.91
Cypermethrin (mix Of Isomers)	100.6	2	52315-07-8	1624.9.1P	99.6	2.53	26.17
Boscalid	101.6	1	188425-85-6	1804.421.1.4P	99.58	2.55	26.19
Thiacloprid	100.5	.88	111988-49-9	2302.286.1.2P	99.69	2.52	26.72
Azoxystrobin	99.79	1	131860-33-8	1802.286.1P	99	2.52	27.59

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		
HuiChen Stavros, Ph.D.	10 Jul 2020		RM Release



Instrument
LC/HRMS - Positive Mode

Column/Flow
Vanquish C18+ 100mm x 2.1mm ID
1.5um Particle / 0.2 mL/min

Method Details
Mobile Phase A: Water w/0.1% Formic Acid
Mobile Phase B: Acetonitrile w/ 0.1% Formic Acid

Time	%A	%B
0.0	95	5
1.0	95	5
22	5	95
22.25	5	95
28.5	95	5

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: Acetonitrile, Lot no. 198519, 25 mL

permethrin (mixture of isomers) : *cis: 24%. trans 76% pyrethrin (mixture of isomers) : *C I: 4.4%, C II: 3.2%, J I: 4.2%, J II: 2.7%, P I: 55.8%, P II: 29.7% baythroid (mixture of isomers) : *GC1: 29%, GC2: 29%, GC3&4; 40% abamectin : *A1a: 3.1%, A2a: 19.0% B1a/A1b: 74.8%, B1b: 3.1% spinosad (mixture of spinosyn A and D isomers) : *A: 80.1%. D: 19.9%. cypermethrin (mix of isomers) : *GC1: 29.6%, GC2: 24.7%, GC3&4: 32.9%

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 EURACHEM/CITAC Guide for “Quantifying Uncertainty in Analytical Measurements, 3rd Edition”, with an 95% confidence level (k=2). Uncertainty is based on the Characterization Uncertainty, which includes uncertainties of preparation and purity of neat materials.

Traceability

The balances used for gravimetric measurements are calibrated with weights traceable to the national standards (NIST). 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.

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 µL as the minimum sample size. If storage after opening is necessary, it should be transferred to an amber vial with minimum head space and a Teflon lined silicon septum. After opening, please consult your own quality management system for proper use and storage. 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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