LGC | DR EHRENSTORFER™

REFERENCE MATERIAL CERTIFICATE ISO 17034

Certified Reference Material

This certificate is designed in accordance with ISO 17034 and ISO Guide 31. This certified reference material (CRM) 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
Canada Pesticide Mixture 1 ver. 2 10-1000 µg/mL in Acetonitrile	DRE-S50000070AL	2-H414412AL	Multicomponent Solution	22 Jul 2021	≤ -10 ºC

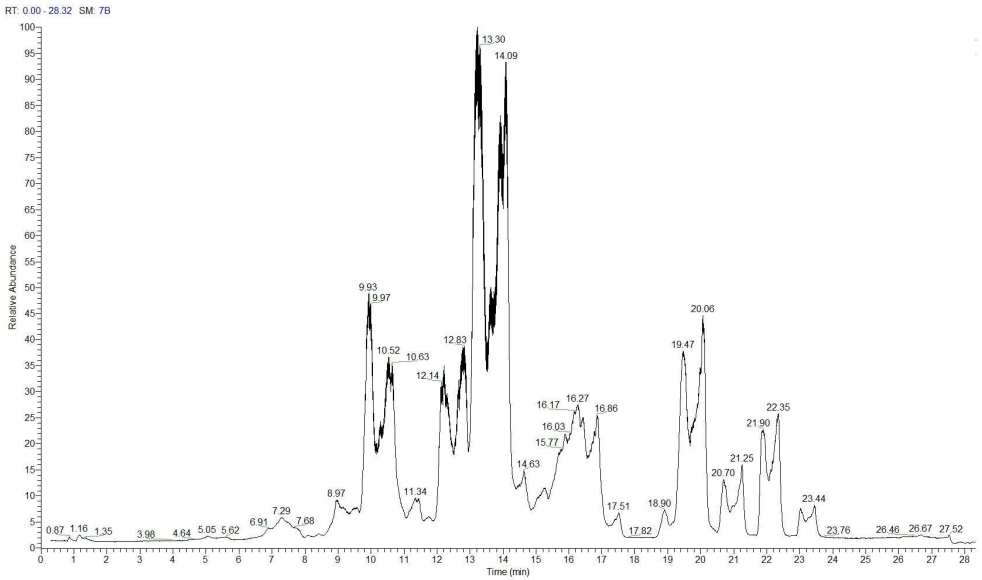
Compound Name	CERTIFIED Conc. (mg/L)	Expanded Uncertainty U (mg/L)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
Dinotefuran	101.5	7.3	165252-70-0	3889.421.1P	99.47	10.20	5.05
Flonicamid	49.94	.66	158062-67-0	2946.421.2P	99.23	4.99	6.88
Thiamethoxam	20.14	.66	153719-23-4	1853.421.5P	99.69	2.01	7.23
Pirimicarb	19.72	1.2	23103-98-2	1636.421.2P	99.6	1.97	7.29
Imidacloprid	19.82	.65	138261-41-3	1533.286.1.2P	99.09	1.98	8.43
Acetamiprid	100.9	5.4	135410-20-7	1856.286.2P	98	10.30	8.95
Phosdrin™ (mevinphos)	49.53	2.7	7786-34-7	477.3.11P	97.5	4.95	9.15
Aldicarb	1002	490	116-06-3	1857.421.6P	98.7	101.50	9.93
Thiacloprid	20.1	1.2	111988-49-9	2302.421.1P	99.52	2.01	10.09
Imazalil	50.55	2.7	35554-44-0	1656.3.3P	99.5	5.05	10.82
Carbofuran	20.27	1.2	1563-66-2	1806.1.3.2P	98.4	2.03	11.74
Spiroxamine (mix Of Isomers)	100.9	5.8	118134-30-8	1838.286.1P	98	10.30	12.82
Carbaryl	50.23	2.9	63-25-2	1653.286.1.3P	98	5.02	13.09
Cyprodinil	249.9	13	121552-61-2	1807.421.1.1P	99.96	25.00	13.23
Spinosad (mixture Of Spinosyn A And D	100.2	3.1	168316-95-8	2251.421.3.1P	93.61	10.70	14.02
Chlorantraniliprole	19.82	1.2	500008-45-7	3636.1.1P	98.1	1.98	14.11
Dimethomorph	49.33	2.6	110488-70-5	1860.286.1.3	97.87	4.93	14.14
Methiocarb	19.98	1.4	2032-65-7	1617.286.2P	97	2.00	15.24
Spinetoram (mixture Of Isomers)	19.9	1.5	935545-74-7	4744.421.1P	99.51	1.99	15.56
Phosmet	19.76	1.7	732-11-6	1408.421.4.2P	96.86	1.98	15.88
Systhane ™	19.78	.68	88671-89-0	1066.421.2P	99.9	1.98	15.88
Azoxystrobin	19.8	1.2	131860-33-8	1802.286.1P	99	1.98	16.00
Boscalid	19.92	1.2	188425-85-6	1804.421.1.4P	99.58	1.99	16.27
Tebuconazol (folicur)	50.55	2.7	107534-96-3	1620.7.2P	99.5	5.05	16.44
Buprofezin	19.98	1.2	69327-76-0	1805.421.1P	99.92	2.00	16.65
Iprodione	1002	54	36734-19-7	1639.286.1.3P	98	102.20	16.86
Malathion	20.18	1.4	121-75-5	474.286.1.3P	97	2.02	16.86
Tebufenozide	20.13	1.2	112410-23-8	1869.421.1.1P	99.64	2.01	16.90
Tetrachlorvinphos (iso)	19.8	1.2	22248-79-9	2989.421.1P	100	1.98	17.01
Trifloxystrobin	19.9	.66	141517-21-7	1845.421.1P	99.48	1.99	18.92

Compound Name	CERTIFIED Conc. (mg/L)	Expanded Uncertainty U (mg/L)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
Novaluron	49.52	2.7	116714-46-6	2923.421.3.1P	99.04	4.95	19.37
Piperonyl Butoxide	201.6	4.5	51-03-6	412.286.1P	96	21.00	20.05
Hexythiazox	9.986	.67	78587-05-0	1819.421.5P	98	1.00	20.93
Etoxazole	20.06	.79	153233-91-1	2061.421.4P	99.33	2.01	21.24
Spirodiclofen	252.1	13	148477-71-8	1837.421.1P	99.25	25.40	22.36
Ethofenprox	49.93	2.7	80844-07-1	1813.421.3P	99.09	4.99	23.44

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
HuiChen Stavros, Ph.D.	7 Jul 2020		

CHROMATOGRAM



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 CRM. This CRM has been confirmed by the appropriate analytical techniques.

Batch Information
Solvent: Acetonitrile, Lot no. 198519, 100 mL

spinosad (mixture of spinosyn A and D isomers) : *A: 80.1%. D: 19.9%. spiroxamine (mix of isomers) : *GC1: 44.5%, GC2: 53.4% spinetoram (mixture of isomers) : J:74.35%, L:22.64%

Intended Use
This CRM 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, long-term stability testing, and transportation stability.

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.

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

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

Instructions for Use
The CRM 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. If handled as recommended, use period after opening is a maximum of 81 days for an estimated 5% drift in concentration as a result of analyte and/or solvent transpiration. 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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The producer of this reference material is registered to ISO 9001:2015 under IZ391-IS4 by NSF-ISR and accredited to ISO 17025:2005 and ISO 17034:2016 by A2LA with the accreditation numbers 3031.01 and 3031.02.

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Cert. No. 3031.02