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
GC PestiMix 5 10 µg/mL in Isooctane:Toluene (50:50)

Product Code
DRE-A50000296IT

Lot Number
2-H444782NA

Format
Multicomponent Solution

Expiry Date
25 Sep 2022

Storage
≤ -10 °C

Compound Name	CERTIFIED Conc. (ug/mL)	Expanded Uncertainty U (ug/mL)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
2-nitro-m-xylene	9.97	.64	81-20-9	1159.29.1.1P	99.7	0.25	7.79
1-chloro-3-nitrobenzene	9.97	.61	121-73-3	946.7.1P	99.7	0.25	8.44
Allidochlor	9.995	.59	93-71-0	3634.421.1P	97.04	0.26	9.20
N-(2,4-dimethylphenyl)formamide	10.05	.61	60397-77-5	3692.1.1P	99.5	0.25	12.54
Cis-1,2,3,6-tetrahydrophthalimide	10	.58	1469-48-3	5112.7.1P	100	0.25	12.78
Methyl-2,4-dichlorophenylacetate (dcaa	9.96	.61	55954-23-9	1954.7.1P	99.6	0.25	12.96
Tebuthiuron	10.15	.63	34014-18-1	647.3.2P	99.5	0.26	13.29
Tetraethyl Pyrophosphate	10.05	.58	107-49-3	1455.421.2.1P	97.2	0.26	13.60
Flonicamid	10	.73	158062-67-0	2946.286.1.2	100	0.25	14.70
2,3,5,6-tetrachloroaniline	10.1	.59	3481-20-7	4795.3.1P	99	0.26	15.27
Fluometuron	10	.6	2164-17-2	331.3.2P	99.5	0.25	15.34
Chlordimeform	10.05	.61	6164-98-3	3136.3.3P	99.3	0.25	15.87
Dazomet	10.05	.62	533-74-4	2954.3.1P	99.5	0.25	17.07
Desmedipham	10.02	.59	13684-56-5	1864.421.3P	99.16	0.25	17.13
Ethoxyquin	10.08	.65	91-53-2	1616.286.1P	96	0.26	17.32
Pentachlorocyanobenzene	9.999	.61	20925-85-3	4564.286.1P	99	0.25	17.72
Propetamphos	9.999	.62	31218-83-4	1792.421.2P	93.45	0.27	17.97
E-bhc	9.94	.58	6108-10-7	3683.421.4P	99.9	0.25	18.83
Pentachloroaniline	10.18	.65	527-20-8	2286.7.1P	98.5	0.26	18.98
Fenchlorphos-oxon	9.975	.61	3983-45-7	4027.421.1.2P	97.79	0.26	18.99
Endosulfan Ether	9.89	.61	3369-52-6	544.1.1P	95.5	0.26	19.04
Prothoate	10.05	.62	2275-18-5	5272.3.1P	99.5	0.25	19.36
Malaoxon	10.11	.74	1634-78-2	2278.421.2.1P	97.2	0.26	19.47
Transfluthrin	9.847	.61	118712-89-3	3401.421.1P	98.47	0.25	19.64
Propisochlor	9.999	.58	86763-47-5	2915.421.2.1P	98.03	0.26	19.64
Acibenzolar-s-methyl	9.96	.64	135158-54-2	2786.421.1.1P	99.6	0.25	19.67
S 421	9.984	.62	127-90-2	3902.421.1.1P	98.85	0.25	19.92
Prodiamine	10.05	.59	29091-21-2	1919.421.1P	97.56	0.26	20.07
Spiroxamine (mixture Isomers)	9.996	.64	118134-30-8	1838.286.1P	98	0.26	20.11
Methyl Pentachlorophenyl Sulfide	9.932	.61	1825-19-0	3585.421.2P	99.8	0.25	20.15

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Linuron	10.02	.62	330-55-2	332.421.2.3P	98.64	0.25	20.19
Fenthion	9.828	.63	55-38-9	1561.286.1P	94.5	0.26	20.51
Anthraquinone	10.1	.62	84-65-1	322.1.1P	100	0.25	20.52
Dicapthon	9.98	.63	2463-84-5	4329.421.1.1P	98.81	0.25	20.63
4,4'-dichlorobenzophenone	10.04	.65	90-98-2	1204.24.1P	99.4	0.25	20.74
Thiocarbazyl	10.03	.62	36756-79-3	1674.421.2.2P	99.35	0.25	20.77
Fenson	9.838	.69	80-38-6	1664.421.1P	98.38	0.25	20.85
Isopropalin	10.04	.61	33820-53-0	1649.421.1.1P	99.38	0.25	20.96
Thiamethoxam	9.951	.61	153719-23-4	1853.286.1.1P	99.51	0.25	20.99
Mgk-264 (mixture Of Isomers)	9.9	.64	113-48-4	1186.7.1.1P	98	0.25	21.16
Bromfenvinphos-methyl	9.916	.58	13104-21-7	4875.421.1.2P	99.16	0.25	21.30
Mecarbam	10.05	.62	2595-54-2	1667.421.2P	98.56	0.26	21.33
Irgarol (cybutryne)	10.09	.74	28159-98-0	4586.286.1P	98	0.26	21.38
Allethrin	10.02	.62	584-79-2	2049.3.3P	99.2	0.25	21.38
Triflumizole	9.994	.61	68694-11-1	1846.421.2.2P	97.98	0.26	21.51
Chlorbensid	10.09	.58	103-17-3	4294.421.1.3P	98.9	0.26	21.73
4,4'-ddmu	9.98	.61	1022-22-6	4428.8.1P	99.8	0.25	21.76
Paclobutrazol (mixture Of Stereo	9.999	.61	76738-62-0	1918.7.1.1P	99	0.25	21.84
Bromofenvinphos-ethyl	10	.58	33399-00-7	4799.421.2.2P	98.07	0.26	22.03
Flutriafol	9.898	.64	76674-21-0	3403.1.1P	98	0.25	22.04
Iodofenphos	9.959	.61	18181-70-9	2277.421.2.2P	98.6	0.25	22.15
Chlorfenson	10.03	.62	80-33-1	2199.421.1P	99.27	0.25	22.17
Fludioxonil	9.898	.61	131341-86-1	1816.286.1.2P	98	0.25	22.17
Bupirimate	10.07	.62	41483-43-6	1673.421.1.1P	95.94	0.26	22.45
Azaconazole	9.956	.62	60207-31-0	3408.421.3P	97.61	0.26	22.55
Fluazifop-butyl	9.845	.6	69806-50-4	2451.421.2P	97.04	0.25	22.75
(z)-pyriminobac-methyl	9.999	.64	147411-70-9	8538.421.2P	99	0.25	22.88
Chlorpropylat	10.01	.61	5836-10-2	2861.3.2P	99.1	0.25	22.92
Methiocarb Sulfone	9.999	.61	2179-25-1	1855.421.1.1P	99.99	0.25	23.19
Kepone	9.88	.64	143-50-0	285.3.6P	99.2	0.25	23.48

Certificate Verified

06 APR 2021

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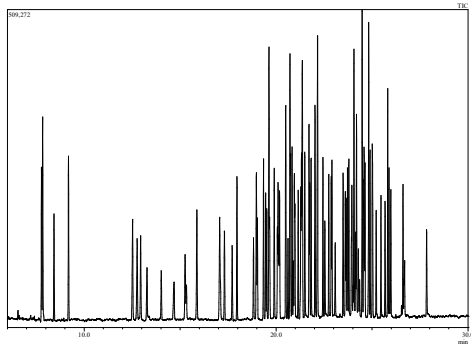
P,p'-methoxychlor-olefin	9.965	.58	2132-70-9	5294.3.1.1P	97.7	0.26	23.50
Quinoxyfen	10.09	.65	124495-18-7	1836.286.1P	99.9	0.25	23.62
Lenacil	9.834	.6	2164-08-1	2497.421.1P	98.34	0.25	23.67
Fenhexamid	10.08	.63	126833-17-8	1830.421.1P	99.85	0.25	23.73
O,p'-methoxychlor	10.05	.59	30667-99-3	4495.3.3P	99.5	0.25	23.80
Propargite	9.894	.64	2312-35-8	1833.286.1P	97	0.26	23.96
Nitralin	9.851	.61	4726-14-1	928.3.2P	99.5	0.25	24.02
Resmethrin	9.952	.63	10453-86-8	629.421.2.3P	99.52	0.25	24.06
Oxycarboxin	10.01	.62	5259-88-1	2314.421.1P	99.12	0.25	24.08
Zoxamide	9.808	.58	156052-68-5	2814.421.3P	98.08	0.25	24.16
Benzoylprop Ethyl	10	.62	22212-55-1	2790.421.3.1P	98.04	0.26	24.20
Fenamiphos Sulfone	10	.62	31972-44-8	2316.421.1.3P	99.03	0.25	24.29
Iprodione	10.04	.64	36734-19-7	1639.286.1.3P	98	0.26	24.30
Tetramethrin	9.999	.64	7696-12-0	2050.286.1P	99	0.25	24.49
Epn	10.02	.62	2104-64-5	473.421.2P	98.23	0.26	24.50
Picolinafen	9.98	.61	137641-05-5	3631.421.1P	99.8	0.25	24.50
Cloquintocet-mexyl	9.98	.61	99607-70-2	4328.7.1P	99.8	0.25	24.57
Fenamidone	9.961	.61	161326-34-7	2518.421.2.1P	99.61	0.25	24.64
Bis(2-ethylhexyl)phthalate	10.04	.65	117-81-7	33.29.1P	99.4	0.25	24.84
Phenothrin	9.973	.64	26002-80-2	677.421.1.1P	96.83	0.26	24.91
Dibutyl Chlorendate	10.15	.63	1770-80-5	298.3.6P	99.5	0.25	25.02
Leptophos	9.991	.64	21609-90-5	1670.286.1P	97	0.26	25.04
Gamma-cyhalothrin	9.971	.73	76703-62-3	4492.421.1.1P	97.75	0.26	25.22
Fenarimol	9.826	.6	60168-88-9	1063.421.4P	99.7	0.25	25.48
Fenoxaprop-ethyl	10.03	.62	66441-23-4	4330.421.1P	97.42	0.26	25.69
Spirodiclofen	10.15	.63	148477-71-8	1837.286.1P	99	0.26	25.83
Cis-permethrin (1rs)	9.87	.61	61949-76-6	3226.341.1P	99.7	0.25	25.89
Trans-permethrin	9.8	.72	61949-77-7	4443.286.1P	98	0.25	25.99
Halfenprox	10.04	.61	111872-58-3	3584.341.2P	99.4	0.25	26.62
Beta-cypermethrin	9.913	.61	65731-84-2	2309.3.2P	95	0.26	26.71
Indoxacarb	10.05	.62	173584-44-6	1867.3.7P	99.5	0.25	27.86

CHROMATOGRAM



Instrument
GC/MS

Detection
MS

Column/Flow
Phenomenex ZB-Semivolatile 30m x 0.25 mm, ID 0.25 um / 1 mL/min

Method Details
Rate Temp.(C) Hold time (min)

	40.0	2.0
10.0	100.0	0.0
15.0	250.0	0.0
20.0	345.0	3.25

Inj.-Vol
1 µL

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: Tol.:Isooct. 1:1, Lot no. 197558:17040656, 25 mL

beta-Cypermethrin : *Isomer1: 53.2%, Isomer2: 41.7% spiroxamine (mixture isomers) : *GC1: 44.5%, GC2: 53.4%
MGK-264 (mixture of isomers) : *A: 30%, B: 70%

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 150 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.

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		
Susan Mathews	29 Mar 2021	Susan Mathews	RM Release

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The producer of this reference material is registered to ISO 9001:2015 under 56 100 19560019 by TUV USA and accredited to ISO 17025:2017 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