

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 2 10 µg/mL in Isooctane:Toluene
(50:50)

Product Code
DRE-A50000293IT

Lot Number
2-H432728NA

Format
Multicomponent Solution

Expiry Date
13 Oct 2023

Storage
≤ -10 °C

Compound Name	Conc. (µg/mL)	Expanded Uncertainty U (µg/mL)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
O,o,o-triethylphosphorothioate	9.97	.63	126-68-1	293.3.8P	99.3	0.20	6.98
Methamidophos	9.831	.62	10265-92-6	479.3.7P	99.5	0.20	7.92
Dichlorvos	9.987	.63	62-73-7	572.3.5P	98.3	0.20	8.20
Hexachlorocyclopentadiene	10.04	.66	77-47-4	48.2.1P	96.5	0.21	9.54
1-bromo-2-nitrobenzene	10.18	.64	577-19-5	2356.7.1P	99	0.21	9.59
Eptc (s-ethyl Dipropylthiocarbamate)	10.19	.64	759-94-4	910.3.6P	99.5	0.20	9.92
Biphenyl	9.95	.62	92-52-4	366.29.1P	99.9	0.20	10.40
Butylate	9.959	.63	2008-41-5	1160.421.1P	98.8	0.20	11.10
Chlormephos	9.969	.61	24934-91-6	1219.421.1P	97.74	0.20	11.26
Vernolate	10.02	.66	1929-77-7	1161.421.1P	98.6	0.20	11.41
2,6-dinitrotoluene	10.07	.63	606-20-2	88.7.2P	99.4	0.20	11.58
Pebulate	10.08	.64	1114-71-2	1162.3.4P	98.4	0.20	11.66
2,6-di-tert-butyl-4-methylphenol (bht)	9.979	.63	128-37-0	1577.1.1.1.1P	99	0.20	12.45
2,4-dinitrotoluene	10	.62	121-14-2	87.7.3P	100	0.20	12.92
N,n-diethyl-m-toluidide	9.848	.65	134-62-3	411.1.1P	97.7	0.20	13.74
Omethoate	10.19	.64	1113-02-6	1614.3.12P	99.5	0.20	13.96
Thionazine (zinophos)	10.11	.66	297-97-2	289.286.1.3P	98	0.21	14.26
Demeton O&s	10.03	.74	8065-48-3	577.286.1P	94.6	0.21	14.41
Tributyl Phosphate	9.99	.65	126-73-8	251.1.4P	99.5	0.20	15.02
Dibrom (naled)	10.09	.66	300-76-5	356.286.1P	97	0.21	15.20
Bendiocarb	9.9	.63	22781-23-3	1909.421.1.1	99	0.20	15.58
Monocrotophos	9.929	.63	6923-22-4	476.421.1P	98.5	0.20	15.77
Promecarb	10.02	.63	2631-37-0	1851.421.1.1	99	0.20	15.95
Carbofuran	10.04	.63	1563-66-2	1806.1.3.2P	98.4	0.20	16.85
B-bhc	10.13	.63	319-85-7	259.3.6.1P	99.3	0.20	17.01
Terbumeton	9.87	.62	33693-04-8	1647.3.2P	99.5	0.20	17.22
Profluralin	10.15	.64	26399-36-0	2284.421.2P	99.1	0.20	17.40
Propyzamide (pronamide)	9.865	.62	23950-58-5	296.7.1.1P	97.1	0.20	17.57
Chlorothalonil	10.14	.63	1897-45-6	556.7.2P	98.6	0.21	17.73
Terbacil	9.938	.65	5902-51-2	1006.3.2.1P	98.2	0.20	18.03

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Triallate	10.03	.66	2303-17-5	2120.3.2P	99.5	0.20	18.16
Tebupirimfos	10.02	.63	96182-53-5	1619.3.3P	97.5	0.21	18.34
Phosphamidon	10	.63	13171-21-6	1635.3.6P	97.3	0.21	18.70
Dimethenamid	10.08	.64	87674-68-8	2037.3.6P	99.2	0.20	18.76
Acetochlor	10.06	.75	34256-82-1	642.286.1P	97.1	0.21	18.87
Alachlor	9.89	.62	15972-60-8	552.1.1P	99.3	0.20	19.09
Carbaryl	9.996	.65	63-25-2	1653.286.1.3	98	0.20	19.19
Fenchlorphos	9.82	.64	299-84-3	582.421.4P	98.2	0.20	19.30
Pirimiphos Methyl	10.09	.64	29232-93-7	1659.3.18P	99.3	0.20	19.60
Fenitrothion	9.945	.62	122-14-5	1019.421.2.1	98.66	0.20	19.64
Bromacil	10	.62	314-40-9	1168.286.1P	98.84	0.20	19.75
Malathion	9.933	.74	121-75-5	474.286.1.3P	97	0.20	19.87
Metolachlor	9.999	.63	51218-45-2	909.3.15P	98.8	0.20	19.94
Parathion	9.989	.65	56-38-2	292.421.1P	99.1	0.20	20.16
Triadimefon	9.978	.62	43121-43-3	1169.450.1P	98.6	0.20	20.23
Kelthane® (dicofol)	9.99	.62	115-32-2	559.1.2.3P	99.5	0.20	20.31
Bromophos Methyl	9.86	.62	2104-96-3	1637.421.3P	99	0.20	20.44
Isofenphos-methyl	10.02	.63	99675-03-3	2802.3.10P	99	0.20	20.58
Isodrin	10	.66	465-73-6	242.1.2.1P	100	0.20	20.65
Penconazol	9.999	.63	66246-88-6	1657.421.4P	98.8	0.20	20.80
Heptachlor Epoxide Isomer A	10.07	.64	28044-83-9	2051.421.1P	99.9	0.20	20.93
Methidathion	9.8	.64	950-37-8	475.286.1.2P	98	0.20	21.27
Tetrachlorvinphos (iso)	10.02	.63	22248-79-9	2989.421.2P	98.99	0.20	21.40
Disulfoton Sulfone	9.963	.63	2497-06-5	2445.421.1P	99.23	0.20	21.47
Trans-nonachlor	9.9	.78	39765-80-5	351.5.3P	99	0.20	21.62
Imazalil	10.01	.63	35554-44-0	1656.421.2P	99.72	0.20	21.78
Isoprothiolane	9.99	.63	50512-35-1	2902.421.2.1	99.9	0.20	21.83
Tricyclazole	9.957	.65	41814-78-2	1174.286.1.1	98	0.20	21.87
2,4-d Ethylhexyl Ester	10.07	.63	1928-43-4	2108.421.1P	99.5	0.20	22.09
Kresoxim Methyl	9.84	.82	143390-89-0	1823.421.2P	100	0.20	22.10

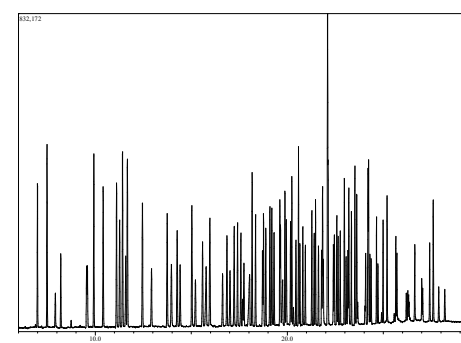


REFERENCE MATERIAL CERTIFICATE

ISO 17034

Compound Name	CERTIFIED Conc. (ug/mL)	Expanded Uncertainty U (ug/mL)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
Carboxine	9.979	.63	5234-68-4	2187.421.1.1	99	0.20	22.12
Nitrofen	10.05	.63	1836-75-5	560.7.1P	99.7	0.20	22.39
Endrin	10.06	.63	72-20-8	255.3.16P	98.6	0.20	22.44
Fensulfothion	9.845	.67	115-90-2	579.421.5.1P	97.67	0.20	22.57
Fenthion-sulfone	10.03	.63	3761-42-0	3685.3.4P	99.5	0.20	22.64
Aclonifen	10.06	.66	74070-46-5	2859.286.1P	99	0.20	22.75
Sulprofos	9.845	.62	35400-43-2	575.421.1P	99.24	0.20	22.97
Famphur	9.999	.63	52-85-7	288.3.11P	99.2	0.20	23.06
Norflurazon	9.95	.62	27314-13-2	1175.421.1.2	97.93	0.20	23.15
Edifenphos	9.985	.63	17109-49-8	2864.421.2.1	98.28	0.20	23.20
P,p'-ddt	10.01	.63	50-29-3	233.1.2P	97.8	0.20	23.33
Fluroxypyr-meptyl	10.02	.63	81406-37-3	2613.421.1.1	98.97	0.20	23.51
Triphenyl Phosphate	9.98	.65	115-86-6	908.7.1P	99.8	0.20	23.61
Phosmet	9.972	.65	732-11-6	1408.286.1P	97	0.21	24.07
Danitol	9.95	.65	39515-41-8	1116.421.1.1	99.9	0.20	24.23
Bifenox	10.06	.63	42576-02-3	2860.421.1P	99.43	0.20	24.36
Phosalone	10.15	.75	2310-17-0	1640.286.1P	98.61	0.21	24.64
Guthion®	10.18	.64	86-50-0	574.3.5P	98.6	0.21	24.72
Acrinathrin [iso]	10.05	.63	101007-06-1	1801.421.1.2	98.12	0.20	24.98
Guthion Ethyl	10.1	.66	2642-71-9	1621.421.1P	99.45	0.20	25.19
Coumaphos	9.894	.62	56-72-4	576.286.1.1P	99.34	0.20	25.65
Prochloraz	9.917	.62	67747-09-5	1652.421.1P	99.17	0.20	25.70
Cypermethrin (mix Of Isomers)	10.06	.63	52315-07-8	1624.421.1P	97.47	0.21	26.19
Fluridone	9.988	.62	59756-60-4	1177.18.1P	98.7	0.20	26.63
Tau-fluvalinate	9.808	.63	102851-06-9	1839.421.4.3	97.3	0.20	27.00
Indoxacarb (mixture Of Isomers)	9.957	.65	144171-61-9	2170.286.1P	98	0.20	27.41
9,10-diphenylanthracene	10	.66	1499-10-1	2447.9.1P	99.6	0.20	27.59
Dimethomorph	9.984	.65	110488-70-5	1860.286.1.4	96	0.21	27.88

CHROMATOGRAM

Instrument
GC/MSDetection
MSColumn/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
15.0	250.0
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. 197558:191312, 20 mL

Demeton O&S : *O: 47.4 %, S. 47.2% dimethomorph : *GC1: 61.9%, GC2: 36.3% cypermethrin (mix of isomers) :
*GC1: 29.9%; GC2: 28.5%, GC3&4: 38.5% phosphamidon : *GC1: 27%, GC2: 70.3%

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 156 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

Susan Mathews

CERTIFIED ON

11 Feb 2021

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.



ISO 17034 Accredited
Reference Material Producer
Cert. No. 3031.02