



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 1 10 µg/mL in Isooctane:Toluene
(50:50)

Product Code
DRE-A50000292IT

Lot Number
2-H441416NA

Format
Multicomponent Solution

Expiry Date
24 Feb 2024

Storage
≤ -10 °C

Compound Name	Conc. (ug/mL)	Expanded Uncertainty U (ug/mL)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
1,2-dibromo-3-chloropropane	10.18	.69	96-12-8	160.7.2.1P	98.4	0.26	6.03
Disulfoton Sulfoxide	9.925	.61	2497-07-6	2446.3.8P	97.3	0.26	9.30
2,6-dichlorobenzonitrile (dichlobenil)	9.99	.61	1194-65-6	558.7.1P	99.9	0.25	9.56
Phosdrin [™] (mevinphos)	9.945	.62	7786-34-7	477.3.11P	97.5	0.26	10.92
Acephate	9.898	.64	30560-19-1	970.286.1P	98	0.25	11.05
Etridiazole	10.05	.62	2593-15-9	1163.3.3P	99.5	0.25	11.34
Methacrifos	9.949	.61	62610-77-9	2689.421.4.1	98.5	0.25	12.19
Chloroneb	10.06	.71	2675-77-6	1165.7.1.1P	97.7	0.26	12.34
2-phenylphenol	9.99	.64	90-43-7	1154.24.1.1P	99.9	0.25	12.58
Isoproc carb	9.915	.6	2631-40-5	2236.3.1P	98.2	0.25	12.88
Molinate	10.02	.71	2212-67-1	1005.421.2P	99.2	0.25	12.99
Heptenophos	10.15	.63	23560-59-0	1631.3.6P	98.7	0.26	13.49
Tecnazene	10.05	.64	117-18-0	1841.1.1P	99.5	0.25	13.86
Propachlor	9.95	.62	1918-16-7	563.3.4P	99.5	0.25	14.18
2,4,5,6-tetrachloro-m-xylene	9.976	.62	877-09-8	300.421.2P	98.8	0.25	14.38
Demeton-s-methyl	9.908	.68	919-86-8	1866.3.12P	98.1	0.25	14.45
Diphenylamine	9.893	.64	122-39-4	78.29.1P	99.9	0.25	14.56
Ethoprophos (prophos)	10.17	.62	13194-48-4	478.421.2P	97.9	0.26	14.73
Atrazine Desisopropyl	9.902	.6	1007-28-9	1054.421.4P	99.02	0.25	14.95
Chlorpropham	10.05	.61	101-21-3	1166.7.1.2P	99.5	0.25	15.18
Trifluralin	9.848	.68	1582-09-8	335.3.6P	99	0.25	15.36
Tetraethyl Dithiopyrophosphate	9.894	.64	3689-24-5	290.286.1.2P	97	0.26	15.48
Cadusafos	9.999	.71	95465-99-9	2064.421.3.1	99	0.25	15.71
Phorate	9.915	.61	298-02-2	295.421.1.3P	98.17	0.25	15.84
A-bhc	10.04	.71	319-84-6	237.421.3P	99.9	0.25	15.94
Hexachlorobenzene	10.05	.71	118-74-1	46.158.4P	99	0.25	16.04
Thiometon	10.2	.7	640-15-3	3070.3.6P	99	0.26	16.25
Dimethoate	9.916	.61	60-51-5	283.286.1.3P	99.16	0.25	16.44
Atraton	10.15	.7	1610-17-9	914.421.1.1P	97.16	0.26	16.57
Simazine	10.04	.68	122-34-9	916.29.1P	99.9	0.25	16.77

Compound Name	Conc. (ug/mL)	Expanded Uncertainty U (ug/mL)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
Atrazine	10	.68	1912-24-9	337.7.3P	99.5	0.25	16.93
Propazine	9.998	.69	139-40-2	334.421.1P	98.5	0.25	17.05
Terbufos	9.984	.7	13071-79-9	1007.421.3.1	97.88	0.26	17.32
Diazinon	10.15	.69	333-41-5	578.421.2P	99.53	0.26	17.58
Pyrimethanil	9.996	.79	53112-28-0	1185.286.1.2	98	0.26	17.64
Methyl Paraoxon	10.1	.7	950-35-6	1167.421.2.2	99	0.26	17.84
Tefluthrin	9.858	.68	79538-32-2	2178.421.2.2	98.58	0.25	18.02
Iprobenfos	9.842	.7	26087-47-8	2900.421.1.2	98.91	0.25	18.25
Dichlofenthion	9.899	.68	97-17-6	483.3.3P	98.5	0.25	18.65
Chlorpyrifos-methyl	9.91	.68	5598-13-0	1080.3.4P	99.1	0.25	18.78
Vinclozolin	10.05	.69	50471-44-8	1065.421.1.1	99.51	0.25	18.90
Heptachlor	10.05	.71	76-44-8	261.421.3P	99	0.25	19.11
Prometryn	9.99	.91	7287-19-6	329.421.3P	99.9	0.25	19.26
Prosulfocarb	10.12	.69	52888-80-9	2124.421.2P	99.72	0.25	19.42
Dichlofuanid	9.95	.68	1085-98-9	1626.3.2P	99.5	0.25	19.68
Chlorpyrifos	10.09	.7	2921-88-2	543.421.3P	99.4	0.25	19.90
Chlorthal-dimethyl (dacthal)	10.04	.71	1861-32-1	557.7.1.1P	99	0.25	19.99
Tetraconazole	10.18	.7	112281-77-3	1842.421.2.1	98.83	0.26	20.15
Butralin	10.05	.69	33629-47-9	2962.3.2P	99.5	0.25	20.29
Cyprodinil	10.15	.69	121552-61-2	1807.421.1.1	99.96	0.25	20.61
Chlorfenvinphos (mixture Of Z And E	9.976	.68	470-90-6	925.421.3P	99.26	0.25	20.80
Phosfolan	10.12	.7	947-02-4	989.421.2.1P	98.47	0.26	20.81
Phenthoate	10.13	.69	2597-03-7	1628.1.2.2P	98.8	0.26	20.90
Triadimenol (baitan)	10.04	.68	55219-65-3	1844.421.1.2	98.91	0.25	20.99
Bromophos Ethyl	10.13	.72	4824-78-6	1645.421.4P	98.8	0.26	21.19
Pyrifenox	9.961	.68	88283-41-4	1835.421.3.2	99.61	0.25	21.28
Cis-chlordane	10.01	.68	5103-71-9	264.4.3.5P	99.61	0.25	21.47
Napropamide	9.949	.71	15299-99-7	1173.286.1P	98.5	0.25	21.61
Hexaconazole	9.998	.71	79983-71-4	1646.286.1P	98.5	0.25	21.70
Profenofos	10.01	.79	41198-08-7	990.421.3.1P	95.8	0.26	21.80



REFERENCE MATERIAL CERTIFICATE

ISO 17034

Compound Name	Conc. (ug/mL)	CERTIFIED Expanded Uncertainty U (ug/mL)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
Oxadiazon	9.95	.71	19666-30-9	561.286.1.1P	99.5	0.25	21.88
Flusilazole	10.05	.68	85509-19-9	1818.421.3P	99.47	0.25	21.99
Chlorfenapyr	10.03	.71	122453-73-0	2775.421.2P	96.9	0.26	22.17
Cyproconazole (mixture Of	9.97	.68	94361-06-5	2047.29.1P	96.8	0.26	22.27
Chlorobenzilate	10.2	.69	510-15-6	291.421.3.2P	99.47	0.26	22.46
Diniconazole (z Isomer)	10.18	.69	70217-36-6	2898.8.3P	99.8	0.26	22.55
Diniconazole (e Isomer)	9.751	.69	83657-24-3	3950.286.1.1	98	0.25	22.55
P,p'-ddd	9.99	.68	72-54-8	234.7.1P	99.4	0.25	22.62
Triazophos	10.04	.69	24017-47-8	991.421.1.1P	98.95	0.25	22.86
Benalaxyl	10	.69	71626-11-4	1644.421.1P	99.5	0.25	23.01
Propiconazole (mixture Of Isomers)	9.965	.71	60207-90-1	1064.286.1.1	97.7	0.26	23.22
Hexazinon	9.99	.68	51235-04-2	1176.7.1P	99.9	0.25	23.32
Nuarimol	9.91	.68	63284-71-9	1658.3.3P	99.1	0.25	23.44
Mefenpyr-diethyl	9.9	.68	135590-91-9	4316.3.2P	99.5	0.25	23.70
Pyridaphenthion	10.02	.7	119-12-0	1630.421.1.2	99.23	0.25	23.86
Bifenthrin	9.947	.71	82657-04-3	1068.421.4P	98	0.25	23.99
Etoazole	9.95	.68	153233-91-1	2061.286.1.2	99	0.25	24.12
Tebufoenpyrad	9.947	.71	119168-77-3	1840.286.1.1	98	0.25	24.24
Fenazaquin	9.985	.69	120928-09-8	1887.421.1P	99.85	0.25	24.33
Tetradifon	9.951	.68	116-29-0	872.421.3P	99.01	0.25	24.48
Pyriproxyfen	10.04	.69	95737-68-1	1870.421.2P	99.9	0.25	24.68
Pyrazophos	9.941	.68	13457-18-6	1641.421.2P	98.92	0.25	24.96
Mirex	9.96	.69	2385-85-5	352.421.4P	99.6	0.25	24.97
Fenoxaprop-p-ethyl	9.987	.68	71283-80-2	2793.421.1P	99.37	0.25	25.25
Bitertanole (mixture Of Isomers)	9.955	.68	55179-31-2	1803.421.3.2	99.55	0.25	25.43
Fluquinconazole	9.941	.68	136426-54-5	1817.421.4P	98.92	0.25	25.59
Fenbuconazole	9.969	.68	114369-43-6	1829.421.1.2	99.19	0.25	25.89
Flucythrinate	9.941	.71	70124-77-5	2055.421.2.1	93.34	0.27	26.24
Ethofenprox	9.959	.68	80844-07-1	1813.421.3P	99.09	0.25	26.38
Fenvalerate (mixture Of	9.935	.72	51630-58-1	1623.421.2.2	98.37	0.25	26.84
Difenoconazole (mixture Of Isomers)	9.958	.7	119446-68-3	1051.421.4.1	99.58	0.25	27.30
Deltamethrin	10.02	.69	52918-63-5	1622.421.4.2	99.73	0.25	27.50

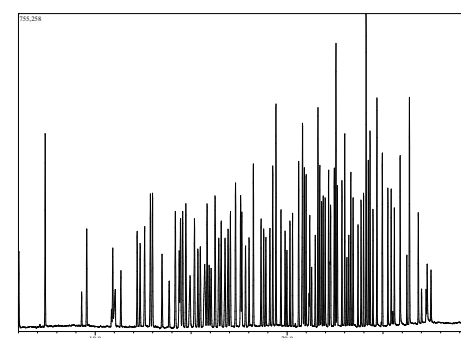
The producer certifies that this reference material meets the specification stated in this certificate until the expiry date, provided it is stored unopened at the recommended temperature herein. Product warranties for this reference material are set out in the terms and conditions of purchase.

CERTIFIED BY
Susan Mathews

CERTIFIED ON
22 Feb 2021

RM Release

CHROMATOGRAM



Instrument
GC/MS

Detection
MS

Column/Flow
Phenomenex ZB-Semivolatiles 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

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

phosdrin™ (mevinphos) : *E: 78.0%, Z: 19.5% Propiconazole (mixture of isomers) : *isomers are not separated fenvalerate (mixture of diastereoisomers) : *GC1: 76.5%; GC2: 23.4%

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 139 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.

LGC Group
7290-B Investment Drive
North Charleston, SC 29418
United States
T | +1 843 763 4884
F | +1 866 509 5146
E | dr.ehrenstorfer@lgcgroup.com

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