

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 4 10 µg/mL in Isooctane:Toluene (50:50)

Product Code
DRE-A500002951T

Lot Number
2-H441412NA

Format
Multicomponent Solution

Expiry Date
19 Feb 2026

Storage
≤ -10 °C

Compound Name	CERTIFIED Conc. (ug/mL)	Expanded Uncertainty U (ug/mL)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
Hexachloroethane	9.87	.54	67-72-1	49.1.3P	99.9	0.49	5.80
2,6-dimethylphenol	10.02	.55	576-26-1	2080.18.1P	99.8	0.50	6.20
2,4-dichlorophenol	10.12	.59	120-83-2	104.9.1.1P	99.2	0.51	7.15
3,4-dimethylphenol	10	.59	95-65-8	550.1.1P	99.6	0.50	7.45
Hexachlorobutadiene	10.09	.59	87-68-3	47.158.2P	97	0.52	7.78
1,2,3,5-tetrachlorobenzene	9.989	.58	634-90-2	1153.421.2P	99.3	0.50	9.54
1,2,4,5-tetrachlorobenzene	9.89	.54	95-94-3	53.7.2P	99.7	0.50	9.58
2,4,6-trichlorophenol	9.809	.55	88-06-2	113.421.1P	99.69	0.49	9.95
1,2,3,4-tetrachlorobenzene	9.87	.54	634-66-2	1125.1.4P	98.7	0.50	10.36
3,4-Dichloroaniline	10.05	.58	95-76-1	1050.1.1P	99.7	0.50	11.23
2,3,4,6-tetrachlorophenol	9.878	.58	58-90-2	120.286.2P	98	0.50	13.55
Methomyl	9.9	.54	16752-77-5	1852.286.1.1P	99	0.50	13.67
Dicrotophos	9.869	.58	141-66-2	926.421.1P	97.52	0.51	15.63
Brominal	10.05	.56	1689-84-5	1221.3.2P	99.1	0.51	16.01
Tebutam	10.03	.57	35256-85-0	3005.421.1.1P	98.7	0.51	16.06
Pentachloroanisole	10.01	.59	1825-21-4	1404.3.2P	99.5	0.50	16.70
Dimethipin	10.02	.55	55290-64-7	3629.421.2P	99	0.51	17.25
Pentachloronitrobenzene	9.842	.58	82-68-8	95.286.1P	95	0.52	17.37
Aminocarb	10.04	.56	2032-59-9	2100.3.2P	98.8	0.51	17.54
Cyanophos	10.13	.57	2636-26-2	3286.3.5P	99.3	0.51	17.71
Dinoterb	10.06	.56	1420-07-1	4825.421.1.1P	99	0.51	17.89
Chlordene	9.93	.58	3734-48-3	1426.3.2P	99.5	0.50	18.14
Isazophos	9.991	.55	42509-80-8	3628.421.4.1P	99.12	0.50	18.27
D-bhc	10.02	.56	319-86-8	260.421.4P	99	0.51	18.42
Ethiofencarb	10.09	.56	29973-13-5	2043.3.3P	98.5	0.51	18.84
Dimethachlor	10.06	.57	50563-36-5	4332.421.1P	99	0.51	19.05
Metribuzin	9.91	.58	21087-64-9	1004.421.1.2P	99.5	0.50	19.20
Tolclofos-methyl	9.961	.58	57018-04-9	1625.421.1.1P	99.61	0.50	19.39
Cymiazole	10.06	.56	61676-87-7	4301.421.2.1P	99.8	0.50	19.48
Metalaxyl	9.839	.58	57837-19-1	1055.286.1.2P	98	0.50	19.58

Compound Name	CERTIFIED Conc. (ug/mL)	Expanded Uncertainty U (ug/mL)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
Ametryne	9.846	.55	834-12-8	913.421.1.1P	98.07	0.50	19.61
Terbutryne	9.821	.55	886-50-0	915.421.1P	99	0.50	19.96
Ethofumesate	10.01	.58	26225-79-6	1812.421.1.1P	97.17	0.52	20.04
Di-n-butyl Phthalate	9.99	.58	84-74-2	40.9.2P	99.8	0.50	20.12
Thiobencarb	9.826	.54	28249-77-6	641.286.1P	98.65	0.50	20.36
Aldrin	10.02	.56	309-00-2	258.421.2P	98.2	0.51	20.41
Diuron	9.936	.58	55-38-9	1561.286.1P	98	0.51	20.43
Fenpropimorph 2	10.05	.55	67564-91-4	1863.421.2P	94.8	0.53	20.50
Isocarbophos	10.07	.55	24353-61-5	3478.1.1P	98	0.51	20.61
Nitrothal Isopropyl	9.949	.58	10552-74-6	1665.421.1.1P	98.5	0.51	20.70
Isobenzan	9.95	.56	297-78-9	929.3.1P	99.5	0.50	20.70
Bentazon	9.93	.56	25057-89-0	1405.3.7P	99.5	0.50	20.82
Fosthiazate	10.07	.59	98886-44-3	2885.286.1.2	95	0.53	20.86
Fipronil	10.04	.59	120068-37-3	2048.286.1P	98	0.51	21.19
Clozolinat	9.98	.54	84332-86-5	1661.421.4P	95.96	0.52	21.24
Tolylfluand	10	.65	731-27-1	1843.421.2P	99.32	0.50	21.27
Heptachlor Epoxide Isomer B	10.01	.55	1024-57-3	262.421.3P	99.3	0.50	21.27
Procymidone	9.864	.58	32809-16-8	1629.421.4P	99.64	0.50	21.48
Prallethrin	10.09	.59	23031-36-9	2963.286.1.3	97	0.52	21.65
Trans-chlordane	10	.55	5103-74-2	265.4.2.9P	99.6	0.50	21.75
Butachlor	9.851	.58	23184-66-9	1003.286.1P	94	0.52	21.89
Picoxystrobin	9.983	.6	117428-22-5	3765.421.2.2P	99.04	0.50	21.96
Butamifos	10.08	.56	36335-67-8	3283.421.1P	96.9	0.52	22.03
Fenamiphos	9.901	.55	22224-92-6	1189.421.1.1P	100	0.50	22.11
Tokuthion®	9.992	.56	34643-46-4	584.3.9P	97.2	0.51	22.25
Oxyfluorfen	9.996	.68	42874-03-3	562.286.1P	98	0.51	22.50
Dieldrin	9.84	.54	60-57-1	240.1.2P	98.4	0.50	22.55
Fenthion Sulfoxide	9.992	.58	3761-41-9	3684.421.2.1P	99.52	0.50	23.05
Endosulfan li	9.9	.58	33213-65-9	253.421.3P	99	0.50	23.15
Ethion	10.01	.55	563-12-2	1453.421.3P	98.8	0.51	23.18

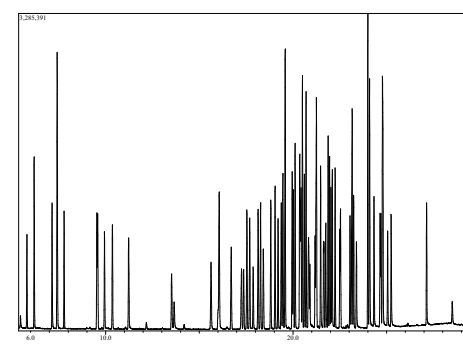


REFERENCE MATERIAL CERTIFICATE

ISO 17034

Compound Name	CERTIFIED		CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
	Conc. (ug/mL)	Expanded Uncertainty U (ug/mL)					
O,p'-ddt	10.01	.55	789-02-6	395.286.2.2P	97.72	0.51	23.24
Desmethyl Norflurazon	10.02	.59	23576-24-1	5932.286.2P	99	0.51	23.39
Bis(2-ethylhexyl)adipate	9.831	.54	103-23-1	874.7.1P	99.5	0.49	23.99
Diflufenicen	9.97	.58	83164-33-4	1809.7.1P	99.7	0.50	24.09
Tebuconazol (folicur)	10.13	.56	107534-96-3	1620.7.2P	99.5	0.51	24.10
Epoxiconazole (iso)	10.04	.56	133855-98-8	2848.421.2P	98.8	0.51	24.35
Endrin Ketone	9.86	.54	53494-70-5	257.286.2P	98.21	0.50	24.67
Bromopropylate	9.99	.89	18181-80-1	1567.421.2P	95.42	0.52	24.70
Fenpropathrin	10	.55	64257-84-7	2857.421.3P	98.45	0.51	24.78
Flurtamone	10.03	.56	96525-23-4	4831.421.2P	99.5	0.50	25.06
Triticonazole	9.99	.55	131983-72-7	2774.421.1P	99.5	0.50	25.27
Acequinocyl	9.989	.56	57960-19-7	2868.3.4P	99.1	0.50	27.14
Tralomethrin	10.03	.56	66841-25-6	2884.18.1P	98.1	0.51	28.50

CHROMATOGRAM

Instrument
GC/MSDetection
MSColumn/Flow
Phenomenex ZB-Semivolatiles 30m x 0.25
mm, ID 0.25 um / 1 mL/minMethod 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

In: -Vol

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, 50 mL

tralomethrin : *HPLC1 isomer: 35.2%, HPLC2 isomer: 64.7%

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 168 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**
HuiChen Stavros, Ph.D. 24 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