

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 3 10 µg/mL in Isooctane:Toluene (50:50)

Product Code

DRE-A500002941T

Lot Number

2-H432732NA

Format

Multicomponent Solution

Expiry Date

13 Oct 2023

Storage

≤ -10 °C

Compound Name	CERTIFIED Conc. (ug/mL)	Expanded Uncertainty U (ug/mL)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
Propamocarb	9.827	.56	24579-73-5	2298.421.2P	97.1	1.01	10.51
Propham	9.91	.56	122-42-9	1568.3.1P	99.5	1.00	11.62
Metolcarb	9.978	.59	1129-41-5	2125.421.1.2P	99.78	1.00	11.65
Pentachlorobenzene	10.05	.66	608-93-5	51.1.1.3P	99.5	1.01	12.69
Oxamyl	9.957	.59	23135-22-0	1848.286.1.2	98	1.02	12.86
Propoxur	9.83	.55	114-26-1	2042.421.1.4P	99.9	0.98	14.35
Cycloate	9.95	.55	1134-23-2	1044.3.3P	99.1	1.00	14.91
Ethalfuralin	9.816	.55	55283-68-6	1062.421.2.2P	99.76	0.98	15.17
Desethyl Atrazine	9.939	.68	6190-65-4	1017.286.1P	97.82	1.02	15.29
Benfluralin (benefin)	9.88	.56	1861-40-1	553.3.4P	99.2	1.00	15.59
Di-allate (mixture Of Isomers)	10.1	.62	2303-16-4	287.421.2P	95.6	1.06	15.98
2,4-d-isopropyl	9.8	.58	94-11-1	2976.3.1P	98	1.00	16.52
Dichloran	9.85	.55	99-30-9	1061.421.2P	98.9	1.00	16.55
Prometon	9.986	.65	1610-18-0	680.421.2P	99.36	1.01	16.91
Command (clomazone)	10.09	.56	81777-89-1	1052.421.1.1P	100	1.01	17.11
G-bhc	10.14	.63	58-89-9	238.286.1P	99	1.02	17.24
Terbutylazine	10.18	.6	5915-41-3	684.421.3.1P	98.69	1.03	17.47
Dyfonate (tm)	10.05	.57	944-22-9	1002.421.2.1P	98.52	1.02	17.53
Fluchloralin	9.898	.58	33245-39-5	3425.421.2P	100	0.99	17.76
Disulfoton	9.99	.56	298-04-4	282.3.11P	99.5	1.00	17.95
Etrifos	9.922	.57	38260-54-7	2622.1.1.3P	65.62	1.51	18.14
Pirimicarb	10.06	.67	23103-98-2	1636.421.2.1P	99.6	1.01	18.35
Dioxcarb	9.971	.76	6988-21-2	2104.421.1P	97.75	1.02	18.71
Propanil	10.05	.69	709-98-8	645.286.1P	99.5	1.01	18.80
Methyl Parathion	9.899	.68	298-00-0	284.421.2P	98.2	1.01	19.04
Simetryn	9.821	.58	1014-70-6	683.286.1P	99	0.99	19.18
Metalaxyl-m	10	.57	70630-17-0	1058.421.2.1P	99.41	1.01	19.27
Paraoxon Ethyl	9.933	.56	311-45-5	1668.421.2.2P	98.93	1.00	19.37
Fenpropidin	9.957	.55	67306-00-7	2046.421.4P	97.62	1.02	19.59
Methiocarb	9.972	.68	2032-65-7	1617.286.2P	97	1.03	19.68

Compound Name	CERTIFIED Conc. (ug/mL)	Expanded Uncertainty U (ug/mL)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
Thiazopyr	10	.66	117718-60-2	2895.421.2.4P	99.51	1.01	19.91
S-metolachlor	9.996	.56	87392-12-9	2804.3.1P	98	1.02	19.94
Phorat-sulfone	10.06	.6	2588-04-7	2780.3.2P	96.7	1.04	20.00
Bladex	9.974	.55	21725-46-2	333.421.1.2P	97.4	1.02	20.11
Flufenacet	9.999	.66	142459-58-3	2517.3.1P	99	1.01	20.19
Carbetamide	9.953	.75	16118-49-3	2551.5.1P	95.7	1.04	20.29
Trichloronate	10.07	.56	327-98-0	571.421.1P	97.4	1.03	20.35
Pirimphos-ethyl	10	.55	23505-41-1	1654.1.2P	99.6	1.00	20.47
Diphenamid	9.978	.55	957-51-7	1171.421.2.1P	99.78	1.00	20.47
Pendimethalin	9.927	.55	40487-42-1	1254.421.1P	98.87	1.00	20.68
Metazachlor	10.02	.56	67129-08-2	1584.421.1.1P	98.02	1.02	20.72
Oxychlorane	9.84	.58	27304-13-8	353.421.4P	98.8	1.00	20.85
Isofenphos	9.973	.55	25311-71-1	1627.421.2P	99.93	1.00	20.87
Quinalphos	10	.55	13593-03-8	1638.421.2P	99.4	1.01	21.01
Captan	9.84	.54	133-06-2	554.7.1.1P	100	0.98	21.04
Folpet (folpel)	9.944	.56	133-07-3	871.421.2P	99.44	1.00	21.15
O,p'-dde	9.821	.55	3424-82-6	396.421.3P	99.4	0.99	21.37
Endosulfan I	9.996	.77	959-98-8	266.286.1P	98	1.02	21.57
Flutolanil	9.892	.55	66332-96-5	1438.421.1P	99.72	0.99	21.74
Pretilachlor	9.826	.55	51218-49-6	2495.421.2P	99.86	0.98	21.84
P,p'-dde	10.01	.55	72-55-9	236.7.1.6P	99.9	1.00	21.97
Systhanetm (myclobutanil)	10.03	.56	88671-89-0	1066.421.2P	99.9	1.00	22.03
O,p'-ddd	10.03	.59	53-19-0	235.286.1P	98.1	1.02	22.09
Diclobutrazol (mixture Of Stereo Isomers)	9.947	.58	75736-33-3	2056.421.3P	91.76	1.08	22.14
Fluazifop-p-butyl	9.995	.56	79241-46-6	2296.421.2P	98.76	1.01	22.39
Perthane (tm)	9.831	.54	72-56-0	870.3.2P	99.5	0.99	22.41
Cis-nonachlor	9.948	.59	5103-73-1	350.421.1P	98.3	1.01	22.71
Chlorthiophos	9.801	.6	60238-56-4	2065.421.1.1P	99	0.99	22.73
Endrin Aldehyde	9.8	.54	7421-93-4	256.5.5.1P	100	0.98	22.88
Mepronil	9.99	.59	55814-41-0	2596.421.2.1P	99.11	1.01	22.92



REFERENCE MATERIAL CERTIFICATE

ISO 17034

Compound Name	CERTIFIED Conc. (ug/mL)	Expanded Uncertainty U (ug/mL)	CAS	Lot No.	Purity (%)	Amount (mg)	RT (min)
Carfentrazone-ethyl	9.92	.58	128639-02-1	1911.286.1P	98.8	1.00	23.06
Trifloxystrobin	9.984	.55	141517-21-7	1845.286.1.2P	99.64	1.00	23.13
Carbophenothion	9.831	.56	786-19-6	555.421.1.2P	99.5	0.99	23.15
Endosulfan Sulfate	9.89	.58	1031-07-8	254.1.2.1P	99.7	0.99	23.28
Clodinafop-propargyl	10.03	.56	105512-06-9	4333.7.1P	100.1	1.00	23.30
Diclofop-methyl	10.12	.6	51338-27-3	2246.421.2.2P	99.63	1.02	23.55
Piperonyl Butoxide	9.984	.59	51-03-6	412.286.1P	96	1.04	23.66
Captafol	9.87	.55	2425-06-1	1060.421.1.2P	97.53	1.01	23.71
Spiromesifen	9.839	.55	283594-90-1	2623.421.2.2P	99.59	0.99	23.83
Acetamiprid	9.839	.54	135410-20-7	1856.286.2P	98	1.00	23.97
Fenoxycarb	9.929	.55	72490-01-8	1871.421.1.1P	99.69	1.00	24.15
Methoxychlor	9.958	.59	72-43-5	241.1.1P	94.3	1.06	24.21
Bromconazole (mixture Of Isomers)	9.979	.56	116255-48-2	2773.3.3P	99	1.01	24.40
Lambda Cyhalothrin	10.01	.66	91465-08-6	1824.421.4.2P	99.1	1.01	24.87
Ipconazole	9.925	.55	125225-28-7	4878.421.4P	98.85	1.00	25.01
Ametoctradin	10.14	.6	865318-97-4	4843.421.1.2P	99.8	1.02	25.23
Pyraclöfos	9.95	.55	77458-01-6	2883.341.1P	99.9	1.00	25.28
Permethrin (mixture Of Isomers)	10.01	.55	52645-53-1	1184.421.4.2P	97.79	1.02	25.64
Pyridaben	9.99	.59	96489-71-3	1834.3.2P	99.5	1.00	25.69
Baythroid (mixture Of Isomers)	9.976	.56	68359-37-5	1067.3.11P	98	1.02	26.01
Boscalid	10.04	.59	188425-85-6	1804.421.1.4P	99.58	1.01	26.29
Flumorph	9.831	.55	211867-47-9	4579.3.1P	99.5	0.99	26.40
Decachlorobiphenyl (bz# 209)	9.99	.59	2051-24-3	301.18.1P	96.5	1.04	26.59
Pyraclostrobin	9.996	.68	175013-18-0	1920.286.1.2	98	1.02	27.01
Esfenvalerate	9.972	.59	66230-04-4	1811.286.1P	97	1.03	27.10
Azoxystrobin	9.996	.59	131860-33-8	1802.286.1.2	98	1.02	27.74
Famoxadone	9.957	.62	131807-57-3	1815.286.1P	98	1.02	27.96

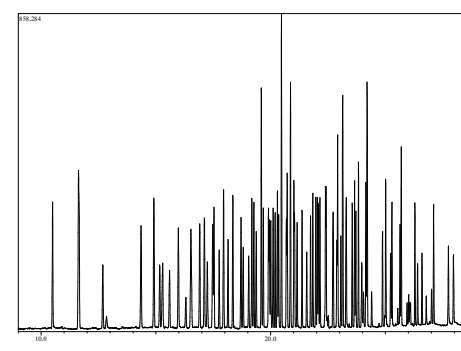
The producer certifies that this reference material meets the specification stated in this certificate until the expiry date, provided it is stored unopened at the recommended temperature herein. Product warranties for this reference material are set out in the terms and conditions of purchase.

CERTIFIED BY
Susan Mathews

CERTIFIED ON
12 Feb 2021

RM Release

CHROMATOGRAM



Instrument
GC/MS

Detection
MS

Column/Flow
Phenomenex ZB-Semivolatiles 30m x 0.25 mm, ID 0.25 µm / 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

Int. -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. 197558:191312, 100 mL

permethrin (mixture of isomers) : *cis: 24%, trans 76% baythroid (mixture of isomers) : *GC1: 29%, GC2: 29%, GC3&4; 40% flumorph : *GC1: 67.3%; GC2: 32.7%

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 84 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 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