

Certified Reference Material

2000 µg/mL IN ACETONE

Product Name
ORGANOCHLORINE PESTICIDE MIXTURE 1012

REFERENCE MATERIAL CERTIFICATE

ISO 17034

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 Code Lot Number

DRE-GA09001012AC 2-H421014AC

Format Multicomponent Solution Expiry Date 12 Nov 2023 Storage Temp ≤ -10 °C

Compound Name	CERT Concentration (mg/L)	F I E D Expanded Uncertainty U (mg/L)	CAS	Lot Number	Purity (%)	Amount (mg)	RT (min)
A-bhc	2010	760	319-84-6	237.3.8P	98.9	4.88	17.64
3-bhc	2004	63	319-85-7	259.3.6P	99.3	4.84	18.47
G-bhc	1993	71	58-89-9	238.286.1P	99	4.83	18.68
D-bhc	1998	59	319-86-8	260.4.5.6P	98.6	4.86	19.52
Heptachlor	2008	63	76-44-8	261.3.7P	97.7	4.93	20.56
Aldrin	2000	60	309-00-2	258.3.8P	97.9	4.90	21.39
Heptachlor Epoxide Isomer B	1997	63	1024-57-3	262.3.10P	98.8	4.85	22.23
Endosulfan I	1998	63	959-98-8	266.421.2P	98.1	4.89	22.97
P,p'-dde	2014	60	72-55-9	236.7.1.4P	99.9	4.84	23.33
Dieldrin	1999	72	60-57-1	240.1.1P	91.8	5.23	23.50
Endrin	2002	60	72-20-8	255.3.16P	98.6	4.87	23.91
Endosulfan li	2001	72	33213-65-9	253.421.3P	99	4.85	24.11
P,p'-ddd	2008	85	72-54-8	234.1.1P	97	4.97	24.12
Endrin Aldehyde	2000	62	7421-93-4	256.1.1P	99.9	4.80	24.37
P,p'-ddt	2003	72	50-29-3	233.1.1P	98.3	4.89	24.78
Endosulfan Sulfate	1999	60	1031-07-8	254.18.2P	99.7	4.81	24.78
Methoxychlor	2001	72	72-43-5	241.1.1P	94.3	5.09	25.65

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.

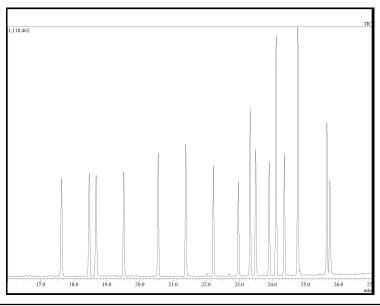
CERTIFIED BY
HuiChen Stavros, Ph.D.

CERTIFIED ON 21 Aug 2020

Nurther Steres

RM Release





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: Acetone, Lot no. 18040123, 2.4 mL

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 224 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 IZ391-IS4 by NSF-ISR and accredited to ISO 17025:2005 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