

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: PSM-105-C
Lot Number: CM-5454

Lot Issue Date: 20-Oct-2015
Expiration Date: 30-Nov-2017

Product Name: LC Pesticide Solution #1

Description:

This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under ULTRA Scientific's ISO 9001 registered quality system. The neat materials used for this product have been verified by ULTRA's ISO 17025 laboratory and under ULTRA's ISO Guide 34 accreditation. The analyte concentrations were verified by ULTRA's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	CAS#	Analyte Lot	Calculated Value	True Value	Traceability & Method
benthiavalicarb-isopropyl	177406-68-7	RM07785	50.1 µg/mL	49.4 ± 0.6 µg/mL	NW06584;LC/DAD
bitertanol	055179-31-2	RM02709	50.2 µg/mL	49.3 ± 0.3 µg/mL	NW06584;LC/DAD
bromacil	000314-40-9	RM01706	50.0 µg/mL	48.8 ± 0.4 µg/mL	NW06584;LC/DAD
buprofezin (buprofezin)	069327-76-0	RM06732	50.1 µg/mL	48.5 ± 0.2 µg/mL	NW06584;LC/DAD
carbaryl (sevin)	000063-25-2	RM09161	50.0 µg/mL	48.2 ± 0.2 µg/mL	NW06584;LC/DAD
clethodim	099129-21-2	RM09136	50.0 µg/mL	52.8 ± 1.1 µg/mL	NW06584;LC/DAD
clomazone (command)	081777-89-1	RM08207	50.0 µg/mL	48.8 ± 0.7 µg/mL	NW06584;LC/DAD
cyazofamid	120116-88-3	RM10390	50.0 µg/mL	48.0 ± 0.9 µg/mL	NW06584;LC/DAD
cymoxanil	057966-95-7	RM09774	50.1 µg/mL	49.5 ± 0.3 µg/mL	NW06584;LC/DAD
dimethenamid	087674-68-8	RM02938	50.1 µg/mL	48.9 ± 0.3 µg/mL	NW06584;LC/DAD
dimethomorph	110488-70-5	RM00591	50.1 µg/mL	48.5 ± 0.1 µg/mL	NW06584;LC/DAD
ethoxyquin	000091-53-2	RM10916	50.2 µg/mL	52.4 ± 0.4 µg/mL	062915;LC/DAD
etofenprox	080844-07-1	RM10727	50.0 µg/mL	48.3 ± 0.3 µg/mL	NW06584;LC/DAD
famoxadone	131807-57-3	RM10238	50.0 µg/mL	49.0 ± 0.3 µg/mL	NW06584;LC/DAD
fenoxaprop ethyl	066441-23-4	RM10416	50.1 µg/mL	47.8 ± 0.5 µg/mL	NW06584;LC/DAD
fenpyroximate	111812-58-9	RM10369	50.1 µg/mL	49.5 ± 0.2 µg/mL	NW06584;LC/DAD
hexythiazox	078587-05-0	RM04900	50.2 µg/mL	49.6 ± 0.4 µg/mL	NW06584;LC/DAD
iprobenfos	026087-47-8	RM10413	50.1 µg/mL	49.4 ± 0.3 µg/mL	NW06584;LC/DAD
mandipropamid	374726-62-2	RM09695	50.0 µg/mL	49.4 ± 0.3 µg/mL	NW06584;LC/DAD
methoxyfenozide	161050-58-4	RM09625	50.0 µg/mL	48.0 ± 6.0 µg/mL	NW06584;LC/DAD
molinate	002212-67-1	RM07614	50.2 µg/mL	50.1 ± 0.3 µg/mL	NW06584;LC/DAD
myclobutanil	088671-89-0	RM07096	50.1 µg/mL	48.9 ± 0.3 µg/mL	NW06584;LC/DAD
propanil	000709-98-8	RM03261	50.1 µg/mL	49.4 ± 0.6 µg/mL	NW06584;LC/DAD
propaquizafop	111479-05-1	RM08243	50.1 µg/mL	52.8 ± 1.2 µg/mL	NW06584;LC/DAD
pyriproxyfen	095737-68-1	RM10710	50.0 µg/mL	49.0 ± 0.3 µg/mL	NW06584;LC/DAD
spirodiclofen	148477-71-8	RM05394	50.1 µg/mL	49.5 ± 0.2 µg/mL	NW06584;LC/DAD

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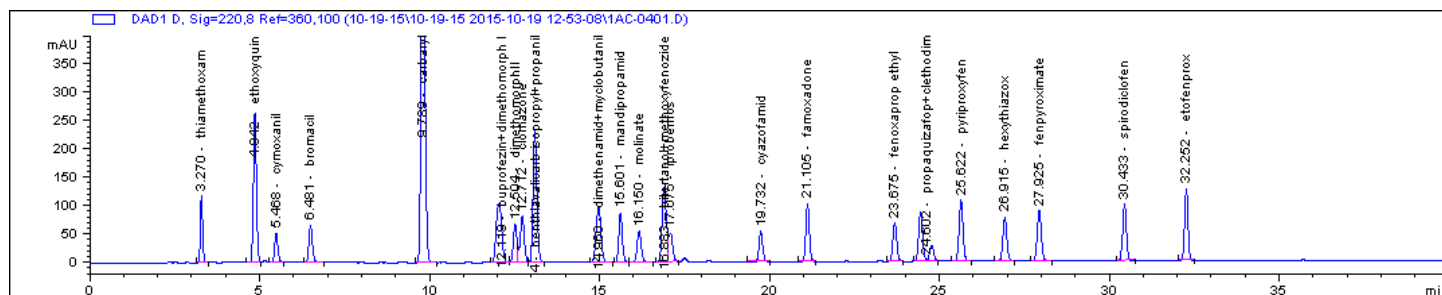
Product Number: PSM-105-C
Lot Number: CM-5454

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thiamethoxam	153719-23-4	RM09268	50.2 µg/mL	49.2 + 0.3 µg/mL	NW06584;LC/DAD
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Solvent: Acetonitrile

Storage: Store Refrigerated (2° - 8°C)



Traceability:

Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NC SL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:

The true value is reported, with its uncertainty value calculated at the 95% confidence level.

Homogeneity:

This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Each unit contains slightly more than the stated labeled volume to facilitate transfer of the material for testing.

Should crystallization occur after refrigeration, gentle warming (<40°C) and shaking of the container is usually sufficient to redissolve the material. If this is unsuccessful, an ultrasonic bath may be used. Solutions containing volatile components (such as gases) should be chilled prior to opening to minimize headspace problems.



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Hazards:

Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:

The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

The real-time, long term stability of the RM may be monitored over the lifetime of the certification. If substantive changes occur that affect the certification before the expiration of this certificate, ULTRA Scientific will notify the purchaser.



William J. Leary
Vice President, QA/RA