

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: PSM-105-G
Lot Number: CM-5299

Lot Issue Date: 13-Oct-2015
Expiration Date: 30-Nov-2017

Product Name: LC Pesticide Solution #5

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
bendiocarb	022781-23-3	RM02689	50.1 µg/mL	46.7 ± 0.8 µg/mL	NW06603;LC/DAD
benfuracarb	082560-54-1	RM09073	50.2 µg/mL	47.3 ± 0.4 µg/mL	NW06603;LC/DAD
diethofencarb	087130-20-9	RM01766	50.1 µg/mL	49.9 ± 0.5 µg/mL	NW06603;LC/DAD
diuron	000330-54-1	RM02890	50.2 µg/mL	49.1 ± 0.4 µg/mL	NW06603;LC/DAD
ethiofencarb	029973-13-5	RM10391	49.9 µg/mL	49.1 ± 0.4 µg/mL	NW06603;LC/DAD
fenobucarb	003766-81-2	RM03927	50.2 µg/mL	49.0 ± 0.5 µg/mL	NW06603;LC/DAD
flufenoxuron	101463-69-8	RM01638	50.2 µg/mL	49.6 ± 0.4 µg/mL	NW06603;LC/DAD
iprovalicarb	140923-17-7	RM10424	50.1 µg/mL	50.0 ± 0.5 µg/mL	NW06603;LC/DAD
isoprocab	002631-40-5	RM07083	50.1 µg/mL	50.0 ± 0.4 µg/mL	NW06603;LC/DAD
linuron	000330-55-2	RM10061	50.1 µg/mL	50.0 ± 0.5 µg/mL	NW06603;LC/DAD
malathion	000121-75-5	RM07001	50.1 µg/mL	50.4 ± 0.7 µg/mL	NW06603;LC/DAD
methabenzthiazuron	018691-97-9	RM09369	50.0 µg/mL	50.0 ± 0.6 µg/mL	NW06603;LC/DAD
methiocarb	002032-65-7	RM00219	50.0 µg/mL	49.0 ± 0.5 µg/mL	NW06603;LC/DAD
metolcarb	001129-41-5	RM10680	50.1 µg/mL	48.9 ± 0.4 µg/mL	NW06603;LC/DAD
monocrotophos	006923-22-4	RM03145	50.0 µg/mL	51.8 ± 0.5 µg/mL	NW06603;LC/DAD
ofurace	058810-48-3	RM09872	49.9 µg/mL	49.1 ± 0.4 µg/mL	NW06603;LC/DAD
omethoate	001113-02-6	RM10350	50.0 µg/mL	47.7 ± 0.6 µg/mL	NW06603;LC/DAD
pencycuron	066063-05-6	RM03766	50.1 µg/mL	49.7 ± 0.4 µg/mL	NW06603;LC/DAD
phenthoate	002597-03-7	RM09753	49.9 µg/mL	50.0 ± 0.5 µg/mL	NW06603;LC/DAD
phosalone	002310-17-0	RM03270	50.0 µg/mL	50.4 ± 0.9 µg/mL	NW06603;LC/DAD
phosphamidon	013171-21-6	RM09704	50.2 µg/mL	47.2 ± 0.4 µg/mL	NW06603;LC/DAD
phoxim	014816-18-3	RM03236	50.1 µg/mL	48.2 ± 0.2 µg/mL	NW06603;LC/DAD
piperophos	024151-93-7	RM07114	50.2 µg/mL	50.2 ± 0.3 µg/mL	NW06603;LC/DAD
pirimiphos-methyl	029232-93-7	RM07287	50.0 µg/mL	50.4 ± 0.7 µg/mL	NW06603;LC/DAD
profenophos	041198-08-7	RM10242	50.1 µg/mL	50.0 ± 0.4 µg/mL	NW06603;LC/DAD
pyrazophos	013457-18-6	RM03243	50.0 µg/mL	47.2 ± 0.5 µg/mL	NW06603;LC/DAD
quinalphos	013593-03-8	RM07683	50.1 µg/mL	48.8 ± 0.4 µg/mL	NW06603;LC/DAD
quizalofop-ethyl	076578-14-8	RM10708	50.1 µg/mL	49.7 ± 0.4 µg/mL	NW06603;LC/DAD

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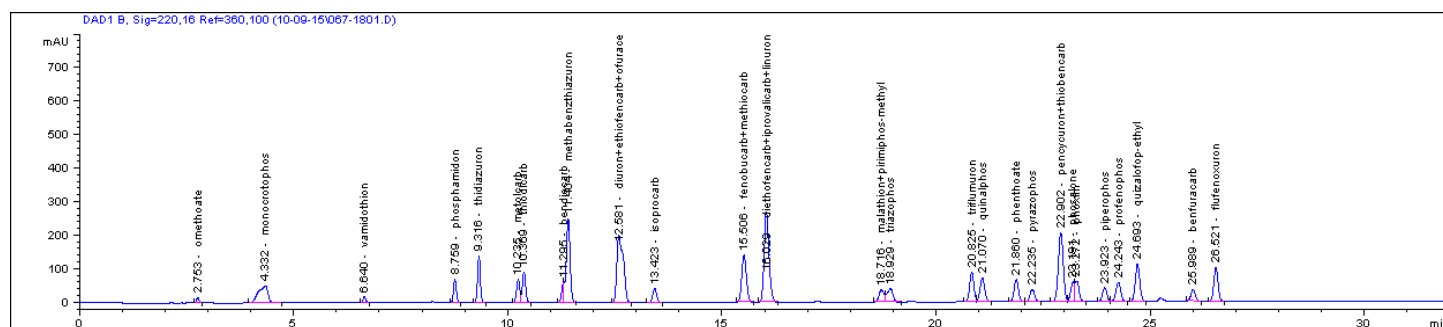
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thidiazuron	051707-55-2	RM09699	50.0 µg/mL	49.1 ± 0.3 µg/mL	NW06603;LC/DAD
thiobencarb (benthicarb)	028249-77-6	RM10737	50.1 µg/mL	49.7 ± 0.4 µg/mL	NW06603;LC/DAD
thiodicarb	059669-26-0	RM03442	50.0 µg/mL	49.0 ± 0.4 µg/mL	NW06603;LC/DAD
triazophos	024017-47-8	RM10899	50.1 µg/mL	50.1 ± 0.6 µg/mL	NW06603;LC/DAD
triflumuron	064628-44-0	RM10735	50.1 µg/mL	48.9 ± 0.5 µg/mL	NW06603;LC/DAD
vamidothion	002275-23-2	RM00822	50.0 µg/mL	51.3 ± 0.8 µg/mL	NW06603;LC/DAD

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/NCSL 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.

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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 re-dissolve 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.

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
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