

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: PSM-105-F
Lot Number: CM-5301

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

Product Name: LC Pesticide Solution #4

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
(E)-pyriminobac-methyl	147411-69-6	RM09683	50.1 µg/mL	51.0 ± 2.2 µg/mL	NW06621;LC/DAD
abamectin	071751-41-2	RM10375	50.1 µg/mL	51.6 ± 2.2 µg/mL	NW06621;LC/DAD
acibenzolar-s-methyl	135158-54-2	RM09173	50.1 µg/mL	51.4 ± 2.3 µg/mL	NW06621;LC/DAD
benzoximate	029104-30-1	RM09851	50.1 µg/mL	51.0 ± 2.2 µg/mL	NW06621;LC/DAD
bifenazate	149877-41-8	RM09951	50.1 µg/mL	50.3 ± 2.3 µg/mL	NW06621;LC/DAD
chromafenozide	143807-66-3	RM10600	50.2 µg/mL	51.2 ± 2.3 µg/mL	NW06621;LC/DAD
cyhalofop-butyl	122008-85-9	RM05475	50.0 µg/mL	51.4 ± 2.3 µg/mL	NW06621;LC/DAD
cyromazine	066215-27-8	RM10419	50.1 µg/mL	50.4 ± 2.1 µg/mL	NW06621;LC/DAD
diphenamid	000957-51-7	RM02894	50.2 µg/mL	50.9 ± 2.2 µg/mL	NW06621;LC/DAD
fenarimol	060168-88-9	RM07334	50.0 µg/mL	51.4 ± 2.2 µg/mL	NW06621;LC/DAD
flumioxazin	103361-09-7	RM02999	50.1 µg/mL	50.7 ± 2.2 µg/mL	NW06621;LC/DAD
furathiocarb	065907-30-4	RM09737	50.1 µg/mL	50.9 ± 2.2 µg/mL	NW06621;LC/DAD
hexazinone	051235-04-2	RM03124	50.1 µg/mL	51.2 ± 2.3 µg/mL	NW06621;LC/DAD
isoprothiolane	050512-35-1	RM05488	50.0 µg/mL	51.2 ± 2.3 µg/mL	NW06621;LC/DAD
kresoxim-methyl	143390-89-0	RM07346	50.2 µg/mL	51.9 ± 2.4 µg/mL	NW06621;LC/DAD
mefenacet	073250-68-7	RM09761	50.1 µg/mL	50.9 ± 2.2 µg/mL	NW06621;LC/DAD
metrafenone	220899-03-6	RM10073	50.0 µg/mL	51.1 ± 2.2 µg/mL	NW06621;LC/DAD
milbemectin A3	051596-10-2	RM06380	50.1 µg/mL	51.6 ± 2.2 µg/mL	NW06621;LC/DAD
napropamide	015299-99-7	RM09777	50.1 µg/mL	51.0 ± 2.2 µg/mL	NW06621;LC/DAD
nuarimol	063284-71-9	RM06994	50.2 µg/mL	51.4 ± 2.1 µg/mL	NW06621;LC/DAD
oxadiazon	019666-30-9	RM03171	50.2 µg/mL	52.1 ± 2.3 µg/mL	NW06621;LC/DAD
pyridaben	096489-71-3	RM04048	50.1 µg/mL	51.3 ± 2.3 µg/mL	NW06621;LC/DAD
pyrimidifen	105779-78-0	RM10462	50.1 µg/mL	50.1 ± 1.8 µg/mL	NW06621;LC/DAD
pyrimisulfan	221205-90-9	RM07465	50.1 µg/mL	50.7 ± 2.3 µg/mL	NW06621;LC/DAD
pyroquilon	057369-32-1	RM09734	50.1 µg/mL	50.8 ± 2.2 µg/mL	NW06621;LC/DAD
tebufenozide	112410-23-8	RM03458	50.1 µg/mL	53.3 ± 2.3 µg/mL	NW06621;LC/DAD

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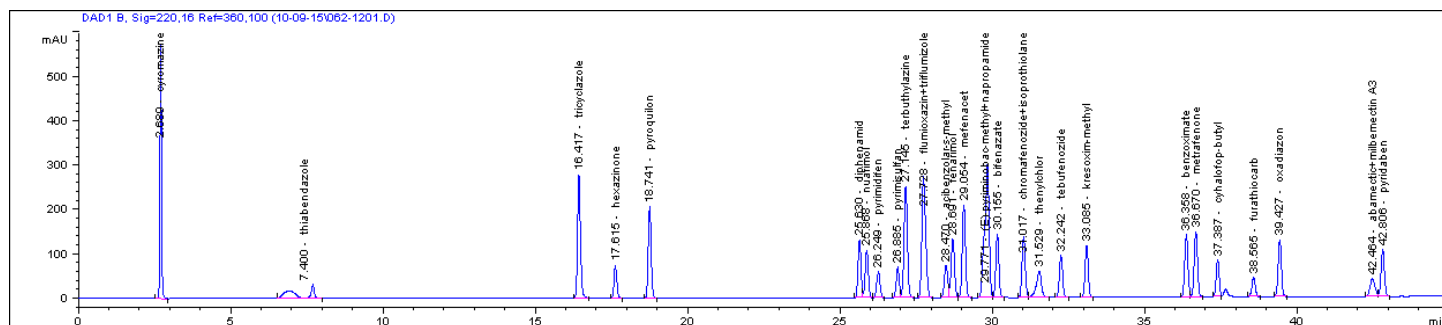
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terbutylazine	005915-41-3	RM03389	50.1 µg/mL	51.0 ± 2.3 µg/mL	NW06621;LC/DAD
thienylchlor	096491-05-3	RM10474	50.1 µg/mL	51.7 ± 3.2 µg/mL	NW06621;LC/DAD
thiabendazole	000148-79-8	RM03382	50.1 µg/mL	51.5 ± 2.3 µg/mL	NW06621;LC/DAD
tricyclazole	041814-78-2	RM03380	50.0 µg/mL	51.0 ± 2.2 µg/mL	NW06621;LC/DAD
triflumizole	068694-11-1	RM07061	50.0 µg/mL	50.9 ± 1.8 µg/mL	NW06621;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/NCCL 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
Vice President, QA/RA