

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: PSM-105-M
Lot Number: CM-5306

Lot Issue Date: 29-Oct-2015
Expiration Date: 30-Nov-2017

Product Name: LC/GC Pesticide Solution #2

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
carbofuran	001563-66-2	RM02695	50.2 µg/mL	41.9 ± 2.1 µg/mL	NW06610;GC/FID
dimethoate	000060-51-5	RM10515	50.1 µg/mL	52.6 ± 0.8 µg/mL	NW06610;GC/FID
fenamiphos	022224-92-6	RM03736	50.1 µg/mL	50.2 ± 0.4 µg/mL	NW06610;GC/FID
metobromuron	003060-89-7	RM10684	50.2 µg/mL	50.6 ± 1.2 µg/mL	NW06610;GC/FID
mevinphos (phosdrin)	007786-34-7	RM10706	50.0 µg/mL	48.2 ± 0.6 µg/mL	NW06610;GC/FID
pendimethalin	040487-42-1	RM10320	50.0 µg/mL	49.0 ± 0.5 µg/mL	NW06610;GC/FID
phorate	000298-02-2	RM10514	50.0 µg/mL	49.1 ± 0.5 µg/mL	NW06610;GC/FID
prometryn	007287-19-6	RM09358	50.0 µg/mL	52.7 ± 0.4 µg/mL	NW06610;GC/FID
propiconazole	060207-90-1	RM09366	50.1 µg/mL	49.7 ± 0.4 µg/mL	NW06610;GC/FID
simetryn	001014-70-6	RM05399	50.1 µg/mL	50.2 ± 0.3 µg/mL	NW06610;GC/FID
tebupirimphos	096182-53-5	RM07041	50.2 µg/mL	51.2 ± 0.8 µg/mL	NW06610;GC/FID
terbutryn(e)	000886-50-0	NT02013	50.0 µg/mL	50.6 ± 0.4 µg/mL	NW06610;GC/FID
tolclofos-methyl	057018-04-9	RM07055	50.1 µg/mL	50.2 ± 0.3 µg/mL	NW06610;GC/FID

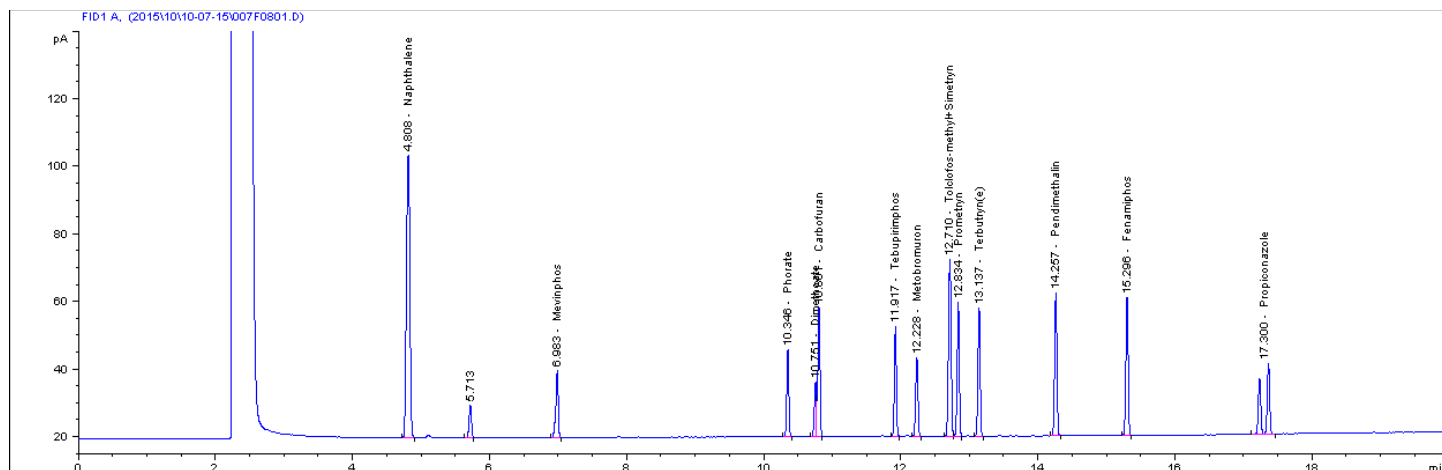
Solvent: Acetonitrile

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

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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.

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.

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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