

▪ Certificate of Analysis ▪

Product: Carbamates Pesticides in Soil
Catalog Number: 926
Lot No. D086-926
Certificate Issue Date: September 03, 2014
Expiration Date: March 17, 2017
Revision Number: Original

CERTIFICATION

Parameter	Certified Value ¹	Uncertainty ²	QC Performance Acceptance Limits ³	PT Performance Acceptance Limits ⁴
	µg/kg	%	µg/kg	µg/kg
Aldicarb	1530	0.794	529 - 1560	602 - 1680
Aldicarb sulfone	<250	-	-	-
Aldicarb sulfoxide	<250	-	-	-
Carbaryl	870	0.652	416 - 957	339 - 957
Carbofuran	2060	0.668	793 - 2390	1020 - 2270
Dioxacarb	<250	-	-	-
Diuron	357	1.05	149 - 357	140 - 419
3-Hydroxycarbofuran	1100	0.792	4.27 - 1420	454 - 1210
Methiocarb	1060	0.794	429 - 1180	455 - 1170
Methomyl	2000	0.788	410 - 2300	892 - 2200
Oxamyl	<250	-	-	-
Promecarb	1300	0.672	611 - 1300	560 - 1430
Propham	886	5.62	211 - 1220	613 - 975
Propoxur (Baygon)	<250	-	-	-

ANALYTICAL VERIFICATION

Parameter	Certified Value ¹	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery ⁵	n	SRM Number	Recovery
	µg/kg	µg/kg	%			%
Aldicarb	1530	1000	65.4	4	-	-
Aldicarb sulfone	<250	-	-	-	-	-
Aldicarb sulfoxide	<250	-	-	-	-	-

ISO/IEC GUIDE 34:2009

ISO/IEC 17025:2005



▪ Certificate of Analysis ▪

Parameter	Certified Value ¹	Proficiency Testing Study		n	NIST Traceability	
		Mean	Recovery ⁵		SRM Number	Recovery
	µg/kg	µg/kg	%			%
Carbaryl	870	607	69.7	4	-	-
Carbofuran	2060	1500	72.6	5	-	-
Dioxacarb	<250	-	-	-	-	-
Diuron	357	279	78.2	3	-	-
3-Hydroxycarbofuran	1100	701	63.8	4	-	-
Methiocarb	1060	732	69.1	4	-	-
Methomyl	2000	1200	59.8	4	-	-
Oxamyl	<250	-	-	-	-	-
Promecarb	1300	782	60.2	2	-	-
Propham	886	613	69.2	1	-	-
Propoxur (Baygon)	<250	-	-	-	-	-

▪ Certificate of Analysis ▪

1. The **Certified Values** are the actual "made-to" concentrations confirmed by ERA analytical verification. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and internal analytical verification of the product by ERA, multiplied by a coverage factor. The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product.

3. The **QC Performance Acceptance Limits (QC PALS™)** are based on actual historical data collected in ERA's Proficiency Testing program. The QC PALS™ reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the QC PALS™ to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALS™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the PT PALS™ when analyzing this QC standard alongside USEPA and NELAC compliant PT standards. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and, therefore, the acceptance limits of this QC standard and any PT standard may differ relative to their difference in concentrations.

5. The **PT Data/Traceability** data include the mean value, percent recovery and number of data points reported by the laboratories in our Proficiency Testing study compared to the Certified Values. In addition, where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. This product is traceable to the lot numbers of its starting materials. All gravimetric and volumetric measurements related to its manufacture are traceable to NIST through an unbroken chain of comparisons.

Traceability Recovery (%) = $[(\% \text{ recovery certified standard})/(\% \text{ recovery NIST SRM})]*100$

The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs.

6. For additional information on this product such as intended use, instructions for use, level of homogeneity, and safety information, please refer to the provided Instruction Sheet

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer

Mike Blades



Quality Officer

Kristina Sanchez

