



Catalog Number: 1700-0190

Lot No. 007011

Description: Custom Organic Standard

Matrix: HPLC Acetonitrile

Manufactured Date: July 18, 2020

Expiration Date: July 18, 2023

This Pickering Laboratories, Inc. Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, HPLC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

<u>Compound</u>	<u>CAS #</u>	<u>Labeled</u>	<u>Purity</u>	<u>Certified†</u>	<u>Uncertainty</u>
Carbaryl	63-25-2	100 µg/mL	99.9%	98.7 µg/mL	± 0.85 µg/mL
Carbofuran	1563-66-2	100 µg/mL	98%	98.4 µg/mL	± 0.85 µg/mL
3-Hydroxycarbofuran	16655-82-6	100 µg/mL	97.4%	98.2 µg/mL	± 0.84 µg/mL
Methiocarb	2032-65-7	100 µg/mL	99.5%	101 µg/mL	± 0.87 µg/mL
Methomyl	16752-77-5	100 µg/mL	99.1%	99.9 µg/mL	± 0.86 µg/mL
1-Naphthol	90-15-3	100 µg/mL	100%	101 µg/mL	± 0.87 µg/mL
Oxamyl	23135-22-0	100 µg/mL	99.5%	99.1 µg/mL	± 0.85 µg/mL
Aldicarb sulfoxide	1646-87-3	100 µg/mL	99.3%	98.9 µg/mL	± 0.85 µg/mL
Baygon (Propoxur)	114-26-1	100 µg/mL	99%	99.8 µg/mL	± 0.86 µg/mL
Aldicarb	116-06-3	100 µg/mL	98.9%	101 µg/mL	± 0.87 µg/mL
Aldicarb sulfone	1646-88-4	100 µg/mL	96.8%	100 µg/mL	± 0.86 µg/mL

* - Isomer ratios (when applicable) are an uncertified parameter.

Final Solution Verification:

Final solution integrity of this CRM has been verified and confirmed by LC/MS.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long-term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at support@pickeringlabs.com.

Date of Certification: July 18, 2020

Certifying Officer: Shannon Moore

Report of Certification

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This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS) and ISO 17025 (accredited by A2LA), and ISO 17034 (accredited by A2LA) quality system consistent with the following standards:

- ISO 9001: Quality management systems - Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials - Selected terms and definitions
- ISO Guide 31: Reference Materials - Contents of certificates and labels
- ISO Guide 35: Reference Materials - General and Statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement - Third Edition
- NIST Technical Note 1297

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a freezer (-15°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is stored under the laboratory specified conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary, sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of Pickering Laboratories, Inc. CRMs are tracked and documented. For assistance, please contact sales support at support@pickeringlabs.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = k u_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i , where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

Pickering Laboratories, Inc. Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against Pickering Laboratories, Inc. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall Pickering Laboratories, Inc. be liable for any loss of profits or any incidental, special, or consequential damages.



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