

▪ **Certificate of Analysis** ▪

Product: Custom OCPs in Soil
Catalog Number: 093
Lot No: 07231806
Certificate Issue Date: August 3, 2018
Expiration Date: August 3, 2021
Revision Number: Original

CERTIFICATION

| Parameter | CAS No. | Certified Value ¹ | Uncertainty ² | QC Performance Acceptance Limits ³ | | | NIST Traceability ⁴ | |
|---------------------|----------|------------------------------|--------------------------|---|---|-----|--------------------------------|------------|
| | | µg/kg | % | µg/kg | | | SRM# | Recovery % |
| alpha-BHC | 319-84-6 | 406 | 1.52 | 153 | - | 441 | NA | NA |
| beta-BHC | 319-85-7 | 466 | 1.43 | 183 | - | 512 | NA | NA |
| delta-BHC | 319-86-8 | 424 | 1.05 | 169 | - | 479 | NA | NA |
| gamma-BHC (Lindane) | 58-89-9 | 477 | 1.13 | 181 | - | 522 | NA | NA |
| 4,4'-DDD | 72-54-8 | 447 | 1.43 | 200 | - | 522 | NA | NA |
| 4,4'-DDE | 72-55-9 | 444 | 1.44 | 218 | - | 509 | NA | NA |
| 2,4'-DDT | 789-02-6 | 431 | 1.26 | 193 | - | 502 | NA | NA |
| 4,4'-DDT | 50-29-3 | 493 | 1.52 | 201 | - | 583 | NA | NA |

Matrix: Soil
Density: NA
Storage: 4±2°C

Manufacturing Notes: This standard is packaged in flame sealed ampules each containing 15 ± 0.1 grams of soil. Using a smaller sample size than 15 grams may invalidate the assigned value and/or uncertainty shown above. Although this soil standard has been thoroughly blended prior to shipping it is necessary to homogenize this sample prior to opening. Carefully snap the top off the ampule in a fume hood to avoid inhalation of dust. Transfer the entire contents of the ampule to the extraction vessel. Use a weight of 15 grams for calculation purposes. Prepare and analyze the soil standard according to your normal analytical procedures.

1. The Certified Values are equal to 100% of the "made to" values as determined by volumetric and/or gravimetric measurements made during the manufacture of this product.

2. The stated Uncertainty is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and (as noted) 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 Performance Acceptance Limits (PALs™) are listed as guidelines for acceptable analytical results given the limitations of the USEPA methodologies commonly used to determine these parameters and closely approximate the 95% confidence interval. The PALs™ are based on analytical verification data generated by ERA, independent referee laboratory results and/or data from USEPA methods, WP, WS and CLP interlaboratory studies. Recovery and advisory range data for these studies are based on ERA's normal manufacturing ranges. **The Performance Acceptance Limits (PALs™) for 2,4'-DDT are the average historical recoveries of 4,4'-DDD, 4,4'-DDE and 4,4'-DDT.** If your result falls outside of the PALs™, ERA recommends that you investigate potential sources of error in your preparation and/or analytical procedures. For further technical assistance, call ERA at 1-800-372-0122.

4. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. Traceability Recovery % = [(% recovery certified standard)/(% 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.

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:
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Quality Officer:
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