284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

# Prep Standard - Chemical Standard Summary

**Order ID :** Q1352

**Test :** TCLP Pesticide

**Prepbatch ID :** PB166712,

**Sequence ID/Qc Batch ID:** pl021425,pl021725,

**Standard ID :**
EP2585,PP23673,PP23674,PP23675,PP23676,PP23677,PP23678,PP23679,PP23680,PP23681,PP23682,PP23683,PP23686,PP23687,PP23690,PP23693,PP23695,PP23698,PP23733,PP23793,PP24080,PP24081,PP24091,PP24095,PP24123,

**Chemical ID :**
E3551,E3792,E3805,E3843,E3846,E3847,E3874,E3877,P11146,P11896,P12600,P13036,P13039,P13245,P13349,P13350,P13353,P13359,P13402,P13404,

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# Extractions STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3923 | Baked Sodium Sulfate | EP2585 | 02/07/2025 | 07/01/2025 | Rajesh Parikh | Extraction_SCALE_2 (EX-SC-2) | None | RUPESHKUMAR SHAH 02/07/2025 |

**FROM** 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 84 | Pest/PCB Surrogate Stock 20 PPM | PP23673 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 1.00000ml of P13349 + 9.00000ml of E3792 = Final Quantity: 10.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3629 | 20 PPM PEST stock Solution 1st source(RESTEK) | PP23674 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 1.00000ml of P13036 + 9.00000ml of E3792 = Final Quantity: 10.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1472 | 20 PPM Pest Stock Solution 2nd Source | PP23675 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 1.00000ml of P13039 + 9.00000ml of E3792 = Final Quantity: 10.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1273 | 20 PPM Mirex Stock (Primary Source) | PP23676 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 0.20000ml of P11146 + 9.80000ml of E3792 = Final Quantity: 10.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3663 | 20 PPM MIREX Stock STD (Secondary source) | PP23677 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 0.20000ml of P11146 + 9.80000ml of E3792 = Final Quantity: 10.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3630 | 100/100 PPB PEST Working std.1st Source(RESTEK) | PP23678 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 98.50000ml of E3792 + 0.50000ml of PP23673 + 0.50000ml of PP23674 + 0.50000ml of PP23676 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 80 | 100/100 PPB Pesticide Working Solution 2nd Source | PP23679 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 98.50000ml of E3792 + 0.50000ml of PP23673 + 0.50000ml of PP23675 + 0.50000ml of PP23677 = Final Quantity: 100.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 386 | 1000/100 PPB Chlordane STD (Restek) | PP23680 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 0.10000ml of P11896 + 99.40000ml of E3792 + 0.50000ml of PP23673 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3746 | 1000/100 ppb Chlordane STD-RESTEK 2ND SOURCE | PP23681 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 0.10000ml of P11896 + 99.40000ml of E3792 + 0.50000ml of PP23673 = Final Quantity: 100.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 383 | 1000/100 PPB Toxaphene STD (Restek) | PP23682 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 0.10000ml of P13359 + 99.40000ml of E3792 + 0.50000ml of PP23673 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3669 | 1000/100 PPB TOXAPHENE STD 2nd source (RESTEK) | PP23683 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 0.10000ml of P13402 + 99.40000ml of E3792 + 0.50000ml of PP23673 = Final Quantity: 100.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3632 | 50 PPB ICAL PEST STD(RESTEK) | PP23686 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 0.50000ml of E3792 + 0.50000ml of PP23678 = Final Quantity: 1.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3988 | 50 PPB PEST ICV STD(RESTEK) | PP23687 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 0.50000ml of E3792 + 0.50000ml of PP23679 = Final Quantity: 1.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 529 | CHLOR 500 PPB STD | PP23690 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 0.50000ml of E3792 + 0.50000ml of PP23680 = Final Quantity: 1.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 532 | CHLOR 500 PPB ICV STD | PP23693 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 0.50000ml of E3792 + 0.50000ml of PP23681 = Final Quantity: 1.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 534 | TOX 500 PPB STD | PP23695 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 0.50000ml of E3792 + 0.50000ml of PP23682 = Final Quantity: 1.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3670 | TOX 500 PPB ICV std ( RESTEK) | PP23698 | 09/21/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 10/01/2024 |

**FROM** 0.50000ml of E3792 + 0.50000ml of PP23683 = Final Quantity: 1.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 84 | Pest/PCB Surrogate Stock 20 PPM | PP23733 | 10/03/2024 | 03/30/2025 | Ankita Jodhani | None | None | Yogesh Patel 10/03/2024 |

**FROM** 1.00000ml of P13350 + 9.00000ml of E3805 = Final Quantity: 10.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 518 | Pest/PCB I.BLK 20 PPB | PP23793 | 10/03/2024 | 03/30/2025 | Ankita Jodhani | None | None | Yogesh Patel 10/03/2024 |

**FROM** 99.90000ml of E3805 + 0.10000ml of PP23733 = Final Quantity: 100.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3878 | 1000 PPB TOXAPHENE SPIKE (RESTEK) | PP24080 | 12/16/2024 | 06/05/2025 | Abdul Mirza | None | None | Ankita Jodhani 12/17/2024 |

**FROM** 0.10000ml of P13404 + 99.90000ml of E3843 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1501 | 1000 ppb CHLORDANE SPIKE (RESTEK) | PP24081 | 12/16/2024 | 06/16/2025 | Abdul Mirza | None | None | Ankita Jodhani 12/17/2024 |

**FROM** 0.10000ml of P12600 = Final Quantity: 100.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 79 | 500 PPB Pesticide Spike Solution | PP24091 | 12/17/2024 | 03/11/2025 | Abdul Mirza | None | None | Ankita Jodhani 12/18/2024 |

**FROM** 95.00000ml of E3843 + 2.50000ml of PP23675 + 2.50000ml of PP23677 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 4027 | Pesticide resolution Check Mixture 8081 | PP24095 | 12/23/2024 | 06/16/2025 | Abdul Mirza | None | None | Ankita Jodhani 12/30/2024 |

**FROM** 1.00000ml of P13245 + 99.00000ml of E3847 = Final Quantity: 100.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 465 | 200 PPB Pest/PCB Surrogate Spike | PP24123 | 01/20/2025 | 06/26/2025 | Abdul Mirza | None | None | Ankita Jodhani 01/20/2025 |

**FROM** 1.00000ml of P13353 + 999.00000ml of E3846 = Final Quantity: 1000.000 ml

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1 | 313201 | 07/01/2025 | 01/03/2024 / Rajesh | 07/20/2023 / Rajesh | E3551 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 24C1862008 | 03/11/2025 | 09/12/2024 / Rajesh | 09/11/2024 / Rajesh | E3792 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 24C1862008 | 03/30/2025 | 09/30/2024 / Rajesh | 09/25/2024 / Rajesh | E3805 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9254-03 / Acetone, Ultra Resi (cs/4x4L) | 24H2762008 | 06/05/2025 | 12/05/2024 / Rajesh | 12/05/2024 / Rajesh | E3843 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9254-03 / Acetone, Ultra Resi (cs/4x4L) | 24H2762008 | 06/26/2025 | 12/26/2024 / Rajesh | 12/13/2024 / Rajesh | E3846 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 24G1962003 | 06/16/2025 | 12/16/2024 / Rajesh | 12/13/2024 / Rajesh | E3847 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L) | 25A0262002 | 07/30/2025 | 01/30/2025 / Rajesh | 01/20/2025 / Rajesh | E3874 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 235898 | 08/12/2025 | 02/12/2025 / Rajesh | 02/12/2025 / Rajesh | E3877 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Absolute Standards, Inc. | 79136 / Mirex, 1000 ug/ml | 102821 | 03/21/2025 | 09/21/2024 / Abdul | 10/29/2021 / Abdul | P11146 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 32021 / Chlordane Std. | A0181737 | 03/21/2025 | 09/21/2024 / Abdul | 06/17/2022 / Abdul | P11896 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 32021 / Chlordane Std. | A0193299 | 06/16/2025 | 12/16/2024 / Abdul | 07/03/2023 / Abdul | P12600 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 32291 / Pesticide Mix, CLP method, organochlorine Std AB#1, 200ug/mL, hexane/toluene, 1mL/ampul | A0200423 | 03/21/2025 | 09/21/2024 / Abdul | 12/26/2023 / Abdul | P13036 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 32291 / Pesticide Mix, CLP method, organochlorine Std AB#1, 200ug/mL, hexane/toluene, 1mL/ampul | A0199099 | 03/21/2025 | 09/21/2024 / Abdul | 12/26/2023 / Abdul | P13039 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Absolute Standards, Inc. | 19161 / 8081 pesticide resolution check mixture | 013124 | 06/23/2025 | 12/23/2024 / Abdul | 02/09/2024 / Abdul | P13245 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 32000 / Pesticide Mix, CLP method, Pesticide Surrogate Mix, 200ug/mL, Acetone, 1mL | A0206810 | 03/21/2025 | 09/21/2024 / Abdul | 04/22/2024 / Abdul | P13349 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 32000 / Pesticide Mix, CLP method, Pesticide Surrogate Mix, 200ug/mL, Acetone, 1mL | A0206810 | 04/03/2025 | 10/03/2024 / Ankita | 04/22/2024 / Abdul | P13350 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 32000 / Pesticide Mix, CLP method, Pesticide Surrogate Mix, 200ug/mL, Acetone, 1mL | A0206810 | 07/20/2025 | 01/20/2025 / Abdul | 04/22/2024 / Abdul | P13353 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 32005 / Toxaphene Standard | A0203830 | 03/21/2025 | 09/21/2024 / Abdul | 05/03/2024 / Abdul | P13359 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 32005 / Toxaphene Standard | A0203038 | 03/21/2025 | 09/21/2024 / Abdul | 05/15/2024 / Abdul | P13402 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 32005 / Toxaphene Standard | A0203038 | 06/16/2025 | 12/16/2024 / Abdul | 05/15/2024 / Abdul | P13404 |

(7)

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

## CERTIFIED REFERENCE MATERIAL

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

# Certificate of Analysis

***chromatographic plus***

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

P12596 (7)
↓
P12602

7/3/2023

**Catalog No. :** 32021 **Lot No.:** A0193299

**Description :** Chlordane Standard

Chlordane Standard 1000µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** April 30, 2029 **Storage:** 10°C or colder

**Ship:** Ambient

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | Chlordane<br>10% trans-Chlordane; 9% cis-Chlordane; 81% other isomers | 57-74-9 | 978545 | ----% | 1,010.0 µg/mL | +/- 56.0475 |

* Expanded Uncertainty displayed in same units as Grav. Conc.

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

**Tech Tips:**
CAS #57-74-9 nomenclature is based on EPA method 8081B.

# Quality Confirmation Test

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

**Carrier Gas:**
helium-constant pressure 20 psi.

**Temp. Program:**
200°C to 300°C
@ 25°C/min. ( hold 10 min.)

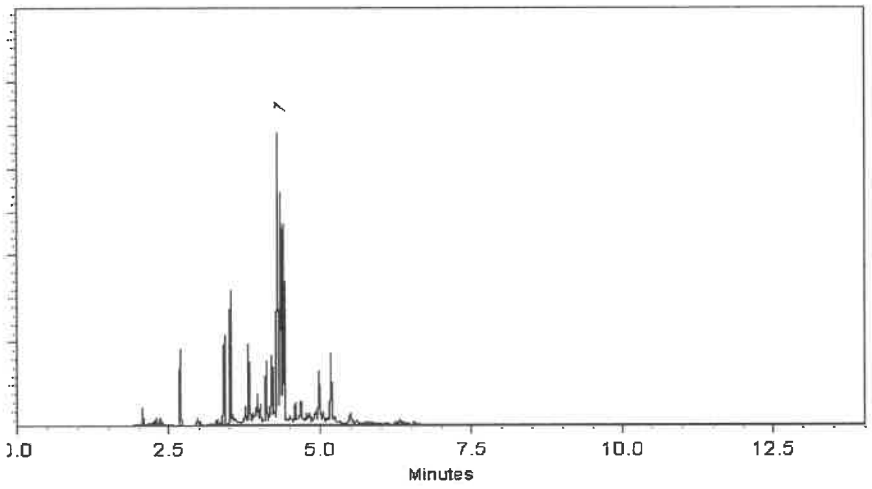
**Inj. Temp:**
250°C

**Det. Temp:**
300°C

**Det. Type:**
ECD

**Split Vent:**
300 ml/min.

**Inj. Vol**
0.2µl




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Bryan Snyder - Operations Tech I

**Date Mixed:** 06-Jan-2023 **Balance Serial #** B442140311

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 09-Jan-2023

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

PRODUCTOS QUIMICOS MONTERREY, S.A. DE C.V.

MIRADOR 201, COL. MIRADOR
MONTERREY, N.L. MEXICO
CP 64070
TEL +52 81 13 52 57 57
www.pqm.com.mx

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| PRODUCT : | SODIUM SULFATE CRYSTALS ANHYDROUS | | |
| QUALITY : | ACS (CODE RMB3375) | FORMULA : | $Na_2SO_4$ |
| SPECIFICATION NUMBER : | 6399 | RELEASE DATE: | ABR/21/2023 |
| LOT NUMBER : | 313201 | | |

| TEST | SPECIFICATIONS | LOT VALUES |
|---|---|---|
| Assay ($Na_2SO_4$) | Min. 99.0% | 99.7 % |
| pH of a 5% solution at 25°C | 5.2 - 9.2 | 6.1 |
| Insoluble matter | Max. 0.01% | 0.005 % |
| Loss on ignition | Max. 0.5% | 0.1 % |
| Chloride (Cl) | Max. 0.001% | <0.001 % |
| Nitrogen compounds (as N) | Max. 5 ppm | <5 ppm |
| Phosphate ($PO_4$) | Max. 0.001% | <0.001 % |
| Heavy metals (as Pb) | Max. 5 ppm | <5 ppm |
| Iron (Fe) | Max. 0.001% | <0.001 % |
| Calcium (Ca) | Max. 0.01% | 0.002 % |
| Magnesium (Mg) | Max. 0.005% | 0.001 % |
| Potassium (K) | Max. 0.008% | 0.003 % |
| Extraction-concentration suitability | Passes test | Passes test |
| Appearance | Passes test | Passes test |
| Identification | Passes test | Passes test |
| Solubility and foreing matter | Passes test | Passes test |
| Retained on US Standard No. 10 sieve | Max. 1% | 0.1 % |
| Retained on US Standard No. 60 sieve | Min. 94% | 97.3 % |
| Through US Standard No. 60 sieve | Max. 5% | 2.5 % |
| Through US Standard No. 100 sieve | Max. 10% | 0.1 % |

COMMENTS

QC: PhC Irma Belmares

If you need further details, please call our factory or contact our local distributor.

Recd. by RB on 7/24/23 E3551

Hexanes (95% n-hexane)
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™ | J.T.Baker®

Material No.: 9262-03
Batch No.: 24C1862008
Manufactured Date: 2024-01-30
Expiration Date: 2025-04-30
Revision No.: 0

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | ≤ 5 | < 1 |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL) | ≤ 10 | 1 |
| ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL) | ≤ 5 | 1 |
| Assay (Total Saturated $C_6$ Isomers) (by GC, corrected for water) | ≥ 99.5 % | 99.7 % |
| Assay (as n-Hexane) (by GC, corrected for water) | ≥ 95 % | 98 % |
| Color (APHA) | ≤ 10 | 5 |
| Residue after Evaporation | ≤ 1.0 ppm | 0.4 ppm |
| Substances Darkened by $H_2SO_4$ | Passes Test | Passes Test |
| Water (by KF, coulometric) | ≤ 0.05 % | < 0.01 % |

For Laboratory,Research,or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd by RP on 09/11/24

E 3792

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

Hexanes (95% n-hexane)
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™ | J.T.Baker®

Material No.: 9262-03
Batch No.: 24C1862008
Manufactured Date: 2024-01-30
Expiration Date: 2025-04-30
Revision No.: 0

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | ≤ 5 | < 1 |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL) | ≤ 10 | 1 |
| ECD-Sensitive Impurities (as Ethylene Dibromide) – Single Impurity Peak (ng/mL) | ≤ 5 | 1 |
| Assay (Total Saturated $C_6$ Isomers) (by GC, corrected for water) | ≥ 99.5 % | 99.7 % |
| Assay (as n-Hexane) (by GC, corrected for water) | ≥ 95 % | 98 % |
| Color (APHA) | ≤ 10 | 5 |
| Residue after Evaporation | ≤ 1.0 ppm | 0.4 ppm |
| Substances Darkened by $H_2SO_4$ | Passes Test | Passes Test |
| Water (by KF, coulometric) | ≤ 0.05 % | < 0.01 % |

For Laboratory,Research,or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd by RP on 9/25/24

E3805

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™ | J.T.Baker

Material No.: 9254-03
Batch No.: 24H2762008
Manufactured Date: 2024-04-18
Expiration Date:2027-04-18
Revision No.: 0

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| Assay ($(CH_3)_2CO$) (by GC, corrected forwater) | >= 99.4 % | 100.0 % |
| Color (APHA) | <= 10 | 5 |
| Residue after Evaporation | <= 1.0 ppm | 0.0 ppm |
| Substances Reducing Permanganate | Passes Test | Passes Test |
| Titrable Acid (µeq/g) | <= 0.3 | 0.2 |
| Titrable Base (µeq/g) | <= 0.6 | <0.1 |
| Water ($H_2O$) | <= 0.5 % | <0.1 % |
| FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL) | <= 5 | 1 |
| ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL) | <= 10 | 1 |

For Laboratory,Research,or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 12/5/24

E 3843

J Croak

Jamie Croak
Director Quality Operations, Bioscience Production

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™ | J.T.Baker

Material No.: 9254-03
Batch No.: 24H2762008
Manufactured Date: 2024-04-18
Expiration Date:2027-04-18
Revision No.: 0

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| Assay ($(CH_3)_2CO$) (by GC, corrected forwater) | >= 99.4 % | 100.0 % |
| Color (APHA) | <= 10 | 5 |
| Residue after Evaporation | <= 1.0 ppm | 0.0 ppm |
| Substances Reducing Permanganate | Passes Test | Passes Test |
| Titrable Acid (µeq/g) | <= 0.3 | 0.2 |
| Titrable Base (µeq/g) | <= 0.6 | <0.1 |
| Water ($H_2O$) | <= 0.5 % | <0.1 % |
| FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL) | <= 5 | 1 |
| ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL) | <= 10 | 1 |

For Laboratory,Research,or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd by RP on 12/13/24

E 3846

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials LLC

n-Hexane 95%
ULTRA RESI-ANALYZED
For Organic Residue Analysis

avantor™ | J.T.Baker®

Material No.: 9262-03
Batch No.: 24G1962003
Manufactured Date: 2024-05-23
Expiration Date: 2025-08-22
Revision No.: 0

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | ≤ 5 | 3 |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL) | ≤ 10 | 1 |
| ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL) | ≤ 5 | 1 |
| Assay (Total Saturated $C_6$ Isomers) (by GC, corrected for water) | ≥ 99.5 % | 99.7 % |
| Assay (as n-Hexane) (by GC, corrected for water) | ≥ 95 % | 98 % |
| Color (APHA) | ≤ 10 | 5 |
| Residue after Evaporation | ≤ 1.0 ppm | 0.1 ppm |
| Substances Darkened by $H_2SO_4$ | Passes Test | Passes Test |
| Water (by KF, coulometric) | ≤ 0.05 % | < 0.01 % |

For Laboratory,Research,or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 12/13/24

E3847

J Croak

Jamie Croak
Director Quality Operations, Bioscience Production

PO: PO2-1178.2 PRODUCT CODE: SHIP DATE: 1/20/2025

Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)

avantor | J.T.Baker

Material No.: 9266-A4
Batch No.: 25A0262002
Manufactured Date: 2024-11-21
Expiration Date:2026-02-20
Revision No.: 0

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL) | <= 5 | 1 |
| ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL) | <= 10 | 4 |
| Assay ($CH_2Cl_2$) (by GC, exclusive of preservative, corrected for water) | >= 99.8 % | 99.9 % |
| Color (APHA) | <= 10 | 10 |
| Residue after Evaporation | <= 1.0 ppm | 0.8 ppm |
| Titrable Acid (µeq/g) | <= 0.3 | <0.1 |
| Chloride (Cl) | <= 10 ppm | <5 ppm |
| Water (by KF, coulometric) | <= 0.02 % | <0.01 % |

For Laboratory,Research,or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

E 3874

Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials,LLC
100 Matsonford Rd, Suite 200,Radnor,PA,19087.U.S.A.Phone 610.386.1700

# Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

| | | | |
|---|---|---|---|
| Catalog Number | H303 | Quality Test / Release Date | 02/23/2024 |
| Lot Number | 235898 | | |
| Description | HEXANES - OPTIMA | | |
| Country of Origin | United States | Suggested Retest Date | Feb/2029 |
| Chemical Origin | Organic - non animal | | |
| BSE/TSE Comment | No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product. | | |

| N/A | | | |
|---|---|---|---|
| Result Name | Units | Specifications | Test Value |
| APPEARANCE | | REPORT | Clear, colorless liquid |
| ASSAY (N-HEXANE) | % | >= 60 | 73 |
| ASSAY (SUM C6 HYDROCARBONS) | % | >= 99.9 | >99.9 |
| COLOR | APHA | <= 5 | <5 |
| DENSITY AT 25 DEGREES C | GM/ML | Inclusive Between 0.653 - 0.673 | 0.670 |
| EVAPORATION RESIDUE | ppm | <= 1 | 0.3 |
| FLUORESCENCE BACKGROUND | ppb | <= 1 | <1 |
| IDENTIFICATION | PASS/FAIL | = PASS TEST | PASS TEST |
| OPTICAL ABS AT 195 NM | ABS. UNITS | <= 1 | 0.64 |
| OPTICAL ABS AT 210 NM | ABS. UNITS | <= 0.25 | 0.16 |
| OPTICAL ABS AT 220 NM | ABS. UNITS | <= 0.07 | 0.06 |
| OPTICAL ABS AT 254 NM | ABS. UNITS | <= 0.005 | 0.002 |
| PESTICIDE RESIDUE ANALYSIS | NG/L | <= 10 | <10 |
| REFRACTIVE INDEX @ 25 DEG C | | Inclusive Between 1.375 - 1.385 | 1.380 |
| SUITABILITY FOR GC/MS | | = PASS TEST | PASS TEST |
| SULFUR COMPOUNDS | % | <= 0.005 | <0.005 |
| THIOPHENE | PASS/FAIL | = PASS TEST | PASS TEST |
| WATER (H2O) | % | <= 0.01 | <0.01 |
| WATER-SOLUBLE TITRABLE ACID | MEQ/G | <= 0.0003 | 0.0001 |

Recd. by RP On 2/12/25

E3877

Harout Sahagian - Quality Control Manager - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32021 **Lot No.:** A0181737

**Description :** Chlordane Standard

Chlordane Standard 1000µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** May 31, 2028 **Storage:** 10°C or colder

**Ship:** Ambient

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | Chlordane | 1,006.0 µg/mL | +/- 5.9753 | µg/mL | Gravimetric |
| | **CAS #** 57-74-9 (Lot 978545) | | +/- 31.8975 | µg/mL | Unstressed |
| | **Purity** ----% | | +/- 41.6615 | µg/mL | Stressed |

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

P 11892 ↓ P 11896 (5)

06/17/2022

**Tech Tips:**
CAS #57-74-9 nomenclature is based on EPA method 8081B.

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

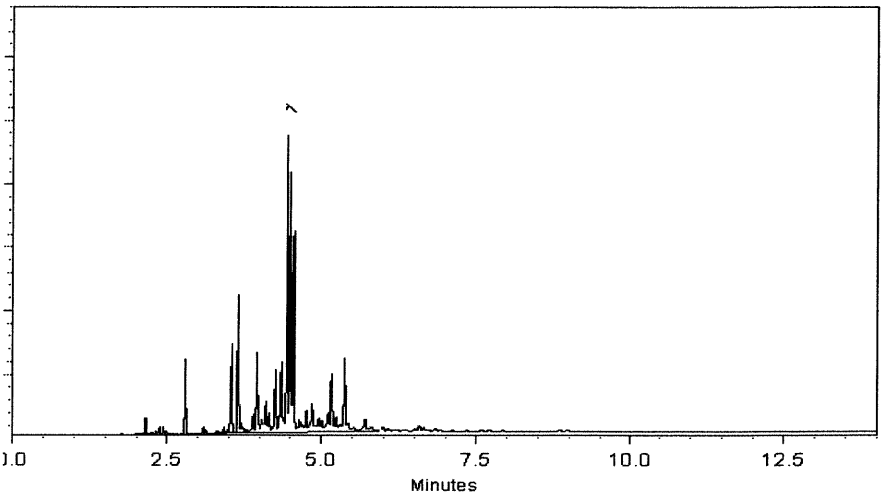
**Carrier Gas:**
helium-constant pressure 20 psi.

**Temp. Program:**
200°C to 300°C
@ 25°C/min. ( hold 10 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
300°C

**Det. Type:**
ECD




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Josh McCloskey - Operations Technician I

**Date Mixed:** 11-Feb-2022 **Balance:** B442140311

Marlina Cowan - Operations Tech I

**Date Passed:** 24-Feb-2022

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

P 11892 | (5)
↓
P 11896
1

06/17/2022

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

***chromatographic plus***

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

P130397 } 5
↓
P130431

12.26.2023

**Catalog No. :** 32291 **Lot No.:** A0199099

**Description :** Organochlorine Pesticide Mix AB #1

Organochlorine Pesticide Mix AB #1 200µg/mL, Hexane/Toluene(50:50), 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** June 30, 2027 **Storage:** 10°C or colder

**Ship:** Ambient

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | alpha-BHC | 319-84-6 | 14434500 | 99% | 200.0 µg/mL | +/- 8.9732 |
| 2 | gamma-BHC (Lindane) | 58-89-9 | 14184400 | 98% | 200.1 µg/mL | +/- 8.9762 |
| 3 | beta-BHC | 319-85-7 | BCCC6425 | 99% | 200.3 µg/mL | +/- 8.9844 |
| 4 | delta-BHC | 319-86-8 | 14450800 | 98% | 200.0 µg/mL | +/- 8.9740 |
| 5 | Heptachlor | 76-44-8 | 813251 | 99% | 200.1 µg/mL | +/- 8.9754 |
| 6 | Aldrin | 309-00-2 | 14389400 | 98% | 200.0 µg/mL | +/- 8.9718 |
| 7 | Heptachlor epoxide (isomer B) | 1024-57-3 | 14448800 | 99% | 200.1 µg/mL | +/- 8.9754 |
| 8 | trans-Chlordane | 5103-74-2 | 32943 | 98% | 199.9 µg/mL | +/- 8.9696 |
| 9 | cis-Chlordane | 5103-71-9 | 31766 | 98% | 200.1 µg/mL | +/- 8.9762 |
| 10 | Endosulfan I | 959-98-8 | BCCF4060 | 99% | 200.1 µg/mL | +/- 8.9754 |
| 11 | 4,4'-DDE | 72-55-9 | GHYQG | 99% | 200.1 µg/mL | +/- 8.9777 |
| 12 | Dieldrin | 60-57-1 | 11129900 | 98% | 200.0 µg/mL | +/- 8.9718 |
| 13 | Endrin | 72-20-8 | 14123200 | 98% | 199.9 µg/mL | +/- 8.9696 |
| 14 | 4,4'-DDD | 72-54-8 | HAN02 | 99% | 200.1 µg/mL | +/- 8.9777 |
| 15 | Endosulfan II | 33213-65-9 | 14374700 | 99% | 200.0 µg/mL | +/- 8.9732 |
| 16 | 4,4'-DDT | 50-29-3 | 230410JLMA | 98% | 200.0 µg/mL | +/- 8.9718 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | Endrin aldehyde | 7421-93-4 | 30720 | 98% | 200.1 | µg/mL | +/- 8.9784 |
| 18 | Endosulfan sulfate | 1031-07-8 | BCCH9010 | 99% | 200.0 | µg/mL | +/- 8.9732 |
| 19 | Methoxychlor | 72-43-5 | 13668200 | 99% | 200.1 | µg/mL | +/- 8.9777 |
| 20 | Endrin ketone | 53494-70-5 | 1-ABS-16-7 | 98% | 200.0 | µg/mL | +/- 8.9740 |

* Expanded Uncertainty displayed in same units as Grav. Conc.

**Solvent:** Hexane/Toluene (50:50)
**CAS #** 110-54-3/108-88-3
**Purity** 99%

P13039 5
↓
P13043 1
12/26/23

## Quality Confirmation Test

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

**Carrier Gas:**
helium-constant pressure 20 psi.

**Temp. Program:**
150°C to 300°C
@ 4°C/min. ( hold 5 min.)

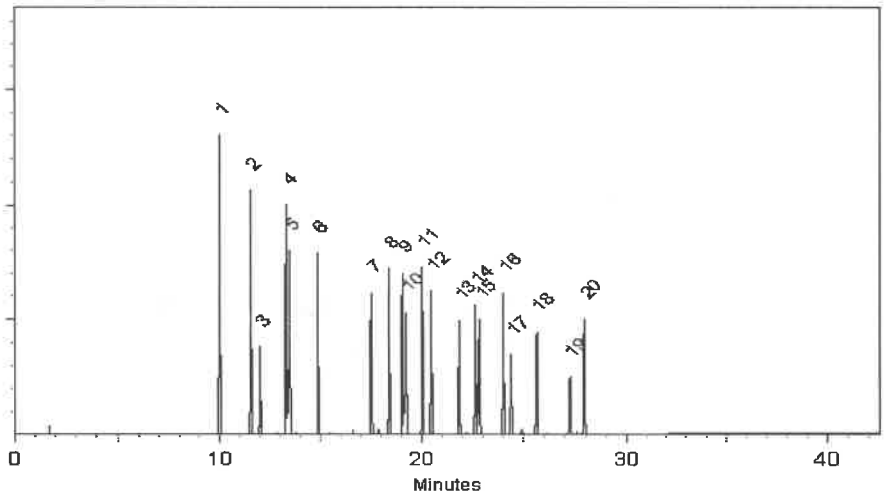
**Inj. Temp:**
200°C

**Det. Temp:**
300°C

**Det. Type:**
ECD

**Split Vent:**
Split ratio 50:1

**Inj. Vol**
1µl




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Josh McCloskey - Operations Technician I

**Date Mixed:** 19-Jun-2023 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 23-Jun-2023

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

**Absolute Standards, Inc.**
800-368-1131
www.absolutestandards.com

***Certified Reference Material CRM***

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

## CERTIFIED WEIGHT REPORT

**Part Number:** 79136
Lot Number: 102821
Description: Mirex

Expiration Date: 102826
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB

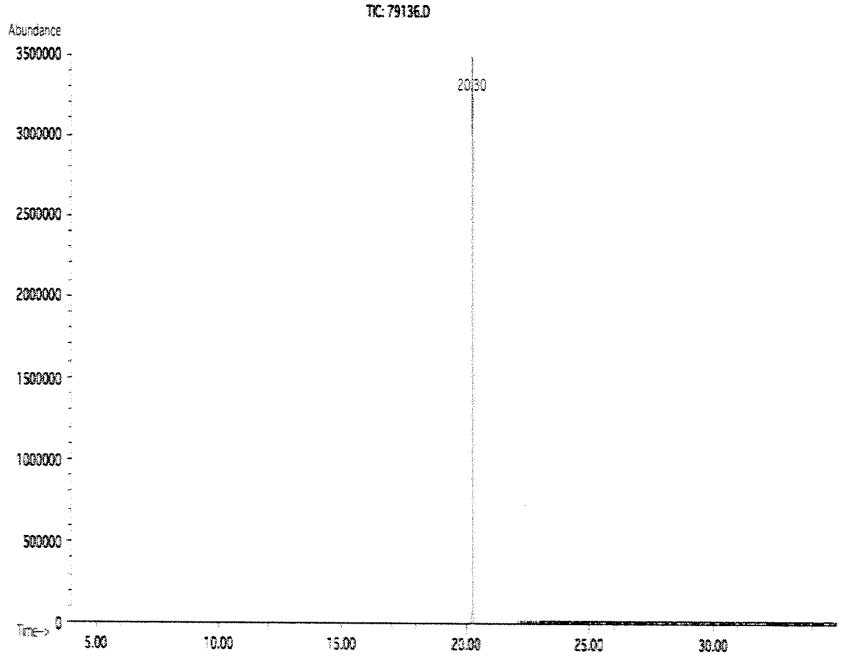
**Solvent(s):** **Lot#**
Acetone 81025

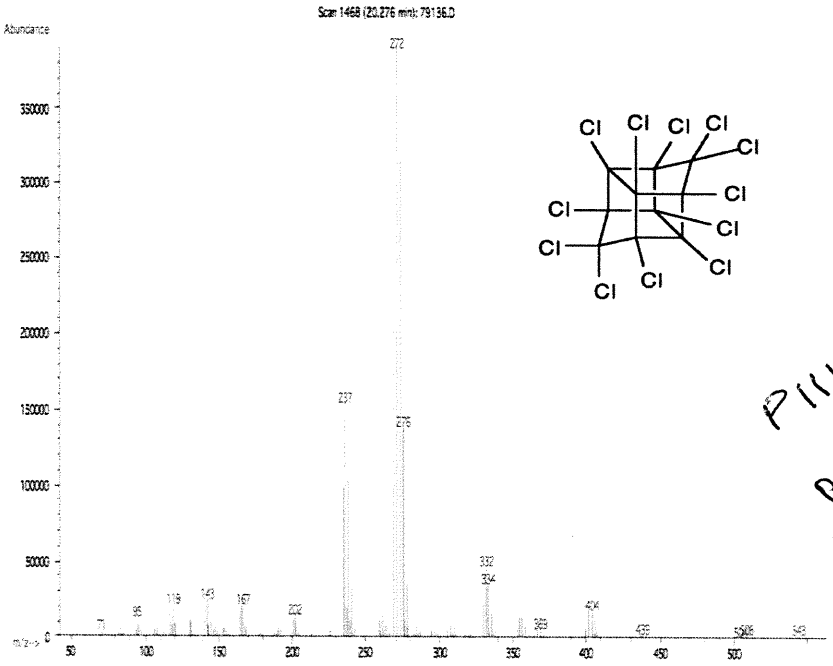
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.006 Flask Uncertainty

| | | |
|---|---|---|
| Eli Aliaga | 102821 |
| Formulated By: Eli Aliaga | DATE |
| Pedro Rentas | 102821 |
| Reviewed By: Pedro L. Rentas | DATE |

| Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity | Target Weight (g) | Actual Weight (g) | Actual Conc(µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Mirex | 437 | 9492400 | 1000 | 99.4 | 0.5 | 0.05034 | 0.05039 | 1000.9 | 10.3 | 2385-85-5 | N/A | orl-rat 306mg/kg |

**Method GC7MSD-1.M**: Column: SPB-608 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 150°C (4min.), Temp 2 = 290°C (13.5 min.), Rate = 8°C/min., Injector B= 200°C, Detector B = 290°C. Split Ratio = 100:1, Scan Rate = 2. Analysis performed by Candice Warren.







P11142 To P11146
AR 11/02/21

- **The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.**
- **Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).**
- **Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.**
- **All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.**
- **Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).**

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

***chromatographic plus***

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ilac-MRA A2LA ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

P 13034 } 5
↓
P 13038

12.26.2023

**Catalog No. :** 32291 **Lot No.:** A0200423

**Description :** Organochlorine Pesticide Mix AB #1

Organochlorine Pesticide Mix AB #1 200µg/mL, Hexane/Toluene(50:50), 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** July 31, 2027 **Storage:** 10°C or colder

**Ship:** Ambient

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | alpha-BHC | 319-84-6 | 14434500 | 99% | 200.5 µg/mL | +/- 8.9956 |
| 2 | gamma-BHC (Lindane) | 58-89-9 | 14184400 | 98% | 199.9 µg/mL | +/- 8.9696 |
| 3 | beta-BHC | 319-85-7 | BCCC6425 | 99% | 200.0 µg/mL | +/- 8.9732 |
| 4 | delta-BHC | 319-86-8 | 14450800 | 98% | 199.9 µg/mL | +/- 8.9696 |
| 5 | Heptachlor | 76-44-8 | 813251 | 99% | 202.0 µg/mL | +/- 9.0629 |
| 6 | Aldrin | 309-00-2 | 14389400 | 98% | 200.9 µg/mL | +/- 9.0136 |
| 7 | Heptachlor epoxide (isomer B) | 1024-57-3 | 14448800 | 99% | 200.0 µg/mL | +/- 8.9732 |
| 8 | trans-Chlordane | 5103-74-2 | 34616 | 99% | 200.5 µg/mL | +/- 8.9956 |
| 9 | cis-Chlordane | 5103-71-9 | 31766 | 98% | 201.4 µg/mL | +/- 9.0356 |
| 10 | Endosulfan I | 959-98-8 | BCCF4060 | 99% | 200.0 µg/mL | +/- 8.9732 |
| 11 | 4,4'-DDE | 72-55-9 | GHYQG | 99% | 201.5 µg/mL | +/- 9.0405 |
| 12 | Dieldrin | 60-57-1 | 14515000 | 98% | 199.9 µg/mL | +/- 8.9696 |
| 13 | Endrin | 72-20-8 | 14485300 | 98% | 200.4 µg/mL | +/- 8.9916 |
| 14 | 4,4'-DDD | 72-54-8 | HAN02 | 99% | 200.5 µg/mL | +/- 8.9956 |
| 15 | Endosulfan II | 33213-65-9 | 14374700 | 99% | 200.0 µg/mL | +/- 8.9732 |
| 16 | 4,4'-DDT | 50-29-3 | 230410JLMA | 98% | 201.9 µg/mL | +/- 9.0575 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | Endrin aldehyde | 7421-93-4 | 30720 | 98% | 201.4 | µg/mL | +/- 9.0356 |
| 18 | Endosulfan sulfate | 1031-07-8 | BCCH9010 | 99% | 200.5 | µg/mL | +/- 8.9956 |
| 19 | Methoxychlor | 72-43-5 | 14563200 | 98% | 200.9 | µg/mL | +/- 9.0136 |
| 20 | Endrin ketone | 53494-70-5 | 14537700 | 98% | 199.9 | µg/mL | +/- 8.9696 |

* Expanded Uncertainty displayed in same units as Grav. Conc.

**Solvent:** Hexane/Toluene (50:50)
**CAS #** 110-54-3/108-88-3
**Purity** 99%

P13034 ) 5
↓
P13038 1

12/26/2023

## Quality Confirmation Test

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

**Carrier Gas:**
helium-constant pressure 20 psi.

**Temp. Program:**
150°C to 300°C
@ 4°C/min. ( hold 5 min.)

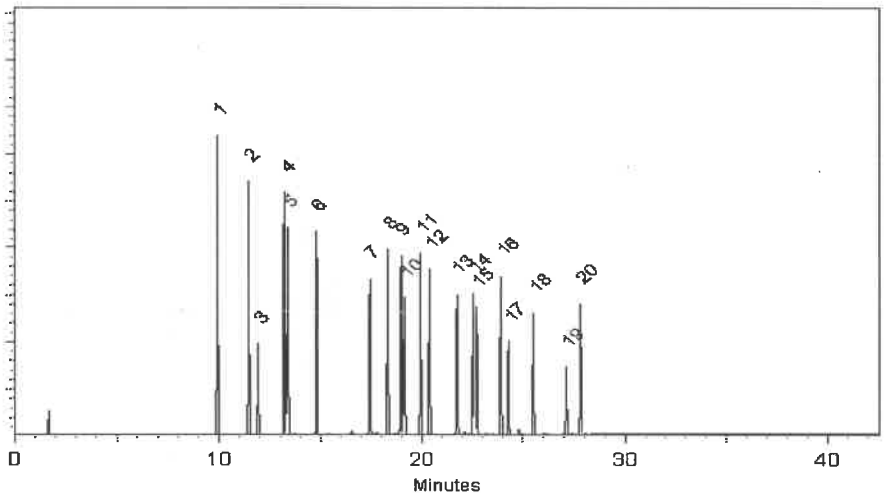
**Inj. Temp:**
200°C

**Det. Temp:**
300°C

**Det. Type:**
ECD

**Split Vent:**
Split ratio 50:1

**Inj. Vol**
1µl




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Sam Moodler - Operations Tech I

**Date Mixed:** 31-Jul-2023 **Balance Serial #** B442140311

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 03-Aug-2023

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

**Absolute Standards, Inc.**
800-368-1131
www.absolutestandards.com

*Certified Reference Material CRM*

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

**Part Number:** 19161
**Lot Number:** 013124
**Description:** CLP Pesticides & PCB's Resolution Check Standard
9 components

| Solvent(s): | Lot# | |
|---|---|---|
| Hexane | 273615 | (50%) |
| Toluene | 28508 | (50%) |

**Expiration Date:** 013129
**Recommended Storage:** Refrigerate (4 °C)
**Nominal Concentration (µg/mL):** Varied
**NIST Test ID#:** 6UTB

Volume(s) shown below were combined and diluted to (mL): 100.0 ± 0.021 Flask Uncertainty

5E-05 Balance Uncertainty

| | | |
|---|---|---|
| Formulated By: | Lawrence Barry | 013124 DATE |
| Reviewed By: | Pedro L. Rentas | 013124 DATE |

| | Compound | Part Number | Lot Number | Dil. Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Initial Conc.(ug/mL) | Final Conc.(ug/mL) | Expanded Uncertainty (+/-) µg/mL | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | trans-Chlordane | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 101.3 | 1.0 | 0.02 | 5103-74-2 | 0.5mg/m3 (skin) | orl-rat 500mg/kg |
| 2. | Endosulfan I | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 101.3 | 1.0 | 0.02 | 959-98-8 | 0.1mg/m3 (skin) | orl-rat 18mg/kg |
| 3. | 4,4'-DDE | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 201.6 | 2.0 | 0.03 | 72-55-9 | N/A | orl-rat 880mg/kg |
| 4. | Dieldrin | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 202.8 | 2.0 | 0.03 | 60-57-1 | 0.25mg/m3 (skin) | orl-rat 38300ug/kg |
| 5. | Endosulfan sulfate | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 204.2 | 2.0 | 0.03 | 1031-07-8 | N/A | orl-rat 18mg/kg |
| 6. | Endrin ketone | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 202.6 | 2.0 | 0.03 | 53494-70-5 | N/A | N/A |
| 7. | 4,4'-Methoxychlor | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 1000.7 | 10.0 | 0.09 | 72-43-5 | 10mg/m3 | orl-rat 6000mg/kg |
| 8. | 2,4,5,6-Tetrachloro-m-xylene | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 202.6 | 2.0 | 0.03 | 877-09-8 | N/A | N/A |
| 9. | Decachlorobiphenyl (209) | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 202.0 | 2.0 | 0.03 | 2051-24-3 | N/A | N/A |

P13243 } (5)
thru
P13247

02/9/2024

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

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Fax: 1-814-353-1309

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## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

***chromatographic plus***

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

P13348 → P13357 (10)

**Catalog No. :** 32000 **Lot No.:** A0206810

**Description :** Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** April 30, 2030 **Storage:** 10°C or colder

**Handling:** Contains PCBs - sonicate prior to use. **Ship:** Ambient

04/25/2024

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 2,4,5,6-Tetrachloro-m-xylene | 877-09-8 | RP220407 | 99% | 200.3 µg/mL | +/- 11.1143 |
| 2 | Decachlorobiphenyl (BZ# 209) | 2051-24-3 | 30638 | 99% | 200.6 µg/mL | +/- 11.1298 |

* Expanded Uncertainty displayed in same units as Grav. Conc.

**Solvent:** Acetone
**CAS #** 67-64-1
**Purity** 99%

**Tech Tips:**

Decachlorobiphenyl has poor solubility in most organic solvents. The maximum concentration that can be prepared in acetone, hexane, or isooctane is 200µg/mL. Temperature will affect the solubility as well. Storing solutions at reduced temperatures will cause decachlorobiphenyl to precipitate.

Products containing decachlorobiphenyl must be sonicated for a minimum of 10 minutes prior to opening the ampul. Because each ultrasonic bath operates at a different energy level, 10 minutes is a guideline only. Longer sonication time will not affect product quality.

These precautions apply to working solutions prepared in your laboratory as well. The amount of compound that precipitates depends on concentration AND temperature. If you store your standards at a temperature lower than 4°C (even dilute solutions), allow extra sonication time.

# Quality Confirmation Test

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

**Carrier Gas:**
hellum-constant pressure 20 psi.

**Temp. Program:**
200°C to 300°C
@ 25°C/min. ( hold 10 min.)

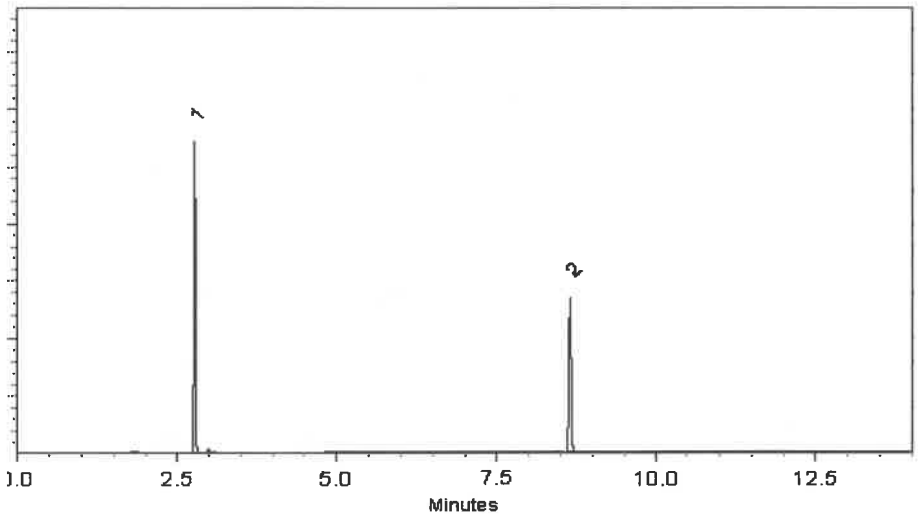
**Inj. Temp:**
250°C

**Det. Temp:**
300°C

**Det. Type:**
ECD

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Laith Clemente - Operations Technician I

**Date Mixed:** 22-Jan-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 24-Jan-2024

**Manufactured under Restek's ISO 9001:2015**
**Registered Quality System**
**Certificate #FM 80397**

P13348 (10)

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P13357

04/25/2025

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P13348 → P13357 (10)

**Catalog No. :** 32000 **Lot No.:** A0206810

**Description :** Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** April 30, 2030 **Storage:** 10°C or colder

**Handling:** Contains PCBs - sonicate prior to use. **Ship:** Ambient

04/25/2024

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 2,4,5,6-Tetrachloro-m-xylene | 877-09-8 | RP220407 | 99% | 200.3 µg/mL | +/- 11.1143 |
| 2 | Decachlorobiphenyl (BZ# 209) | 2051-24-3 | 30638 | 99% | 200.6 µg/mL | +/- 11.1298 |

* Expanded Uncertainty displayed in same units as Grav. Conc.

**Solvent:** Acetone
**CAS #** 67-64-1
**Purity** 99%

**Tech Tips:**

Decachlorobiphenyl has poor solubility in most organic solvents. The maximum concentration that can be prepared in acetone, hexane, or isooctane is 200µg/mL. Temperature will affect the solubility as well. Storing solutions at reduced temperatures will cause decachlorobiphenyl to precipitate.

Products containing decachlorobiphenyl must be sonicated for a minimum of 10 minutes prior to opening the ampul. Because each ultrasonic bath operates at a different energy level, 10 minutes is a guideline only. Longer sonication time will not affect product quality.

These precautions apply to working solutions prepared in your laboratory as well. The amount of compound that precipitates depends on concentration AND temperature. If you store your standards at a temperature lower than 4°C (even dilute solutions), allow extra sonication time.

# Quality Confirmation Test

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

**Carrier Gas:**
hellum-constant pressure 20 psi.

**Temp. Program:**
200°C to 300°C
@ 25°C/min. ( hold 10 min.)

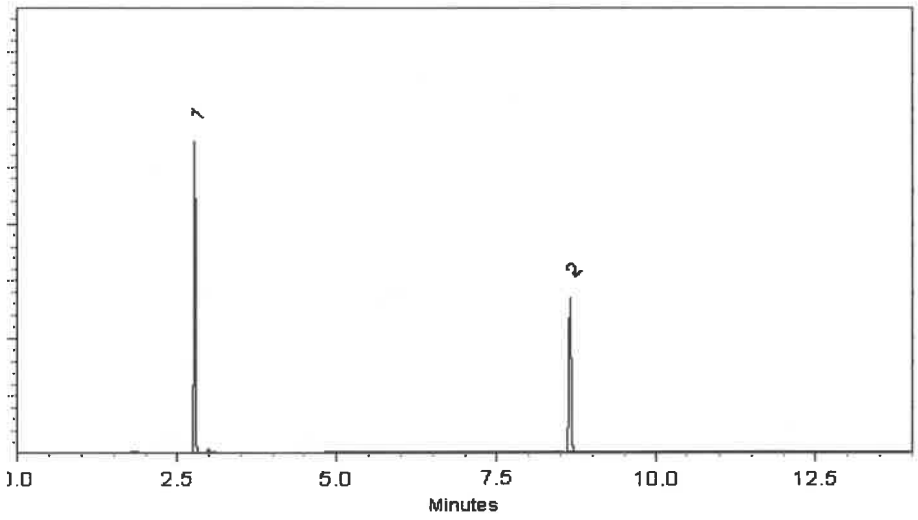
**Inj. Temp:**
250°C

**Det. Temp:**
300°C

**Det. Type:**
ECD

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Laith Clemente - Operations Technician I

**Date Mixed:** 22-Jan-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 24-Jan-2024

**Manufactured under Restek's ISO 9001:2015**
**Registered Quality System**
**Certificate #FM 80397**

P13348 (10)

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P13357

04/25/2025

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P13348 → P13357 (10)

**Catalog No. :** 32000 **Lot No.:** A0206810

**Description :** Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** April 30, 2030 **Storage:** 10°C or colder

**Handling:** Contains PCBs - sonicate prior to use. **Ship:** Ambient

04/25/2024

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 2,4,5,6-Tetrachloro-m-xylene | 877-09-8 | RP220407 | 99% | 200.3 µg/mL | +/- 11.1143 |
| 2 | Decachlorobiphenyl (BZ# 209) | 2051-24-3 | 30638 | 99% | 200.6 µg/mL | +/- 11.1298 |

* Expanded Uncertainty displayed in same units as Grav. Conc.

**Solvent:** Acetone
**CAS #** 67-64-1
**Purity** 99%

**Tech Tips:**

Decachlorobiphenyl has poor solubility in most organic solvents. The maximum concentration that can be prepared in acetone, hexane, or isooctane is 200µg/mL. Temperature will affect the solubility as well. Storing solutions at reduced temperatures will cause decachlorobiphenyl to precipitate.

Products containing decachlorobiphenyl must be sonicated for a minimum of 10 minutes prior to opening the ampul. Because each ultrasonic bath operates at a different energy level, 10 minutes is a guideline only. Longer sonication time will not affect product quality.

These precautions apply to working solutions prepared in your laboratory as well. The amount of compound that precipitates depends on concentration AND temperature. If you store your standards at a temperature lower than 4°C (even dilute solutions), allow extra sonication time.

# Quality Confirmation Test

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

**Carrier Gas:**
hellum-constant pressure 20 psi.

**Temp. Program:**
200°C to 300°C
@ 25°C/min. ( hold 10 min.)

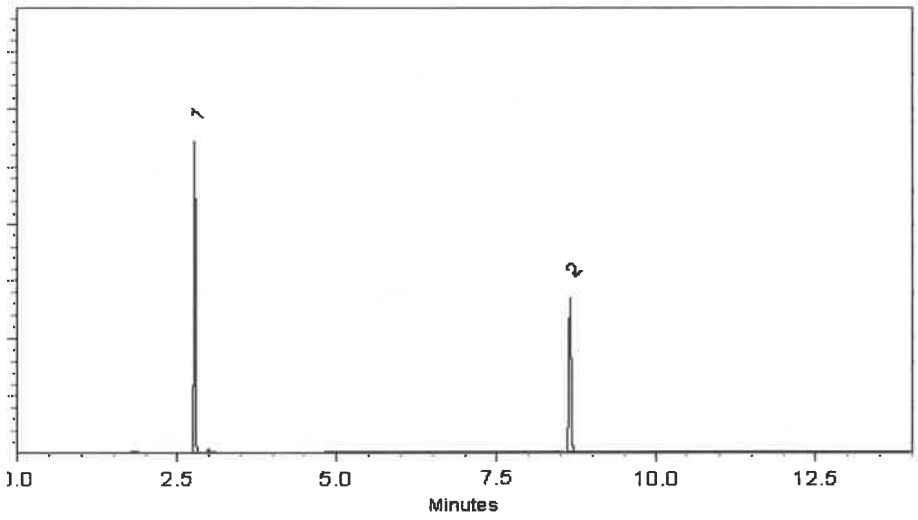
**Inj. Temp:**
250°C

**Det. Temp:**
300°C

**Det. Type:**
ECD

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Laith Clemente - Operations Technician I

**Date Mixed:** 22-Jan-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 24-Jan-2024

**Manufactured under Restek's ISO 9001:2015**
**Registered Quality System**
**Certificate #FM 80397**

P13348 (10)

↓

P13357

04/25/2025

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# Certificate of Analysis

***chromatographic plus***

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32005 **Lot No.:** A0203038

**Description :** Toxaphene Standard

Toxaphene Standard 1000 µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** January 31, 2028 **Storage:** 10°C or colder

**Ship:** Ambient

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | Toxaphene | 8001-35-2 | 1051817 | ----% | 1,009.0 µg/mL | +/- 55.9920 |

* Expanded Uncertainty displayed in same units as Grav. Conc.

**Solvent:** Hexane
**CAS #** 110-54-3
**Purity** 99%

P13358 (12)
↓
P13369

05-06-2024

# Quality Confirmation Test

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

**Carrier Gas:**
helium-constant pressure 20 psi.

**Temp. Program:**
200°C to 300°C
@ 25°C/min. ( hold 10 min.)

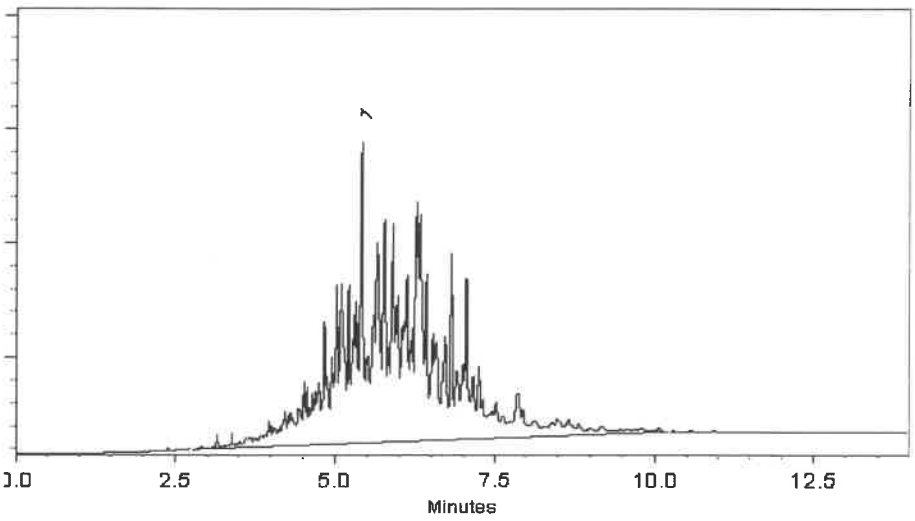
**Inj. Temp:**
250°C

**Det. Temp:**
300°C

**Det. Type:**
ECD

**Split Vent:**
300 ml/min.

**Inj. Vol**
0.2µl




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dakota Parson - Operations Technician I **Date Mixed:** 10-Oct-2023 **Balance Serial #** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 16-Oct-2023

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

P13358 (12)

P13369

05-06-2024

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Certificate #3222.02

# Certificate of Analysis

***chromatographic plus***

**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

P13402 & P13406 (5)

5/22/2024

**Catalog No. :** 32005 **Lot No.:** A0203038

**Description :** Toxaphene Standard

Toxaphene Standard 1000 µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** January 31, 2028 **Storage:** 10°C or colder

**Ship:** Ambient

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | Toxaphene | 8001-35-2 | 1051817 | ----% | 1,009.0 µg/mL | +/- 55.9920 |

* Expanded Uncertainty displayed in same units as Grav. Conc.

**Solvent:** Hexane

**CAS #** 110-54-3

**Purity** 99%

# Quality Confirmation Test

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

**Carrier Gas:**
helium-constant pressure 20 psi.

**Temp. Program:**
200°C to 300°C
@ 25°C/min. ( hold 10 min.)

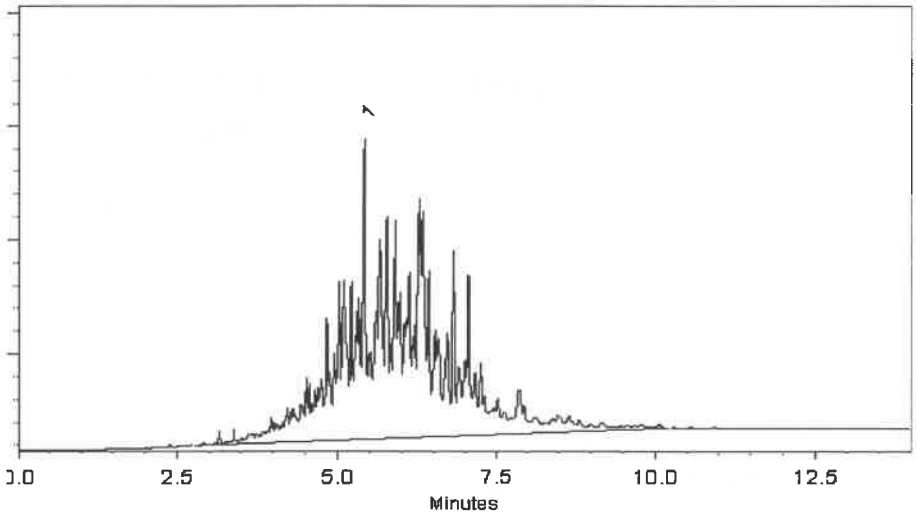
**Inj. Temp:**
250°C

**Det. Temp:**
300°C

**Det. Type:**
ECD

**Split Vent:**
300 ml/min.

**Inj. Vol**
0.2µl




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dakota Parson - Operations Technician I

**Date Mixed:** 10-Oct-2023 **Balance Serial #** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 16-Oct-2023

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

P13402
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P13406
5

5/22/2024

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# Certificate of Analysis

***chromatographic plus***

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*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

P13402 & P13406 (5)

5/22/2024

**Catalog No. :** 32005 **Lot No.:** A0203038

**Description :** Toxaphene Standard

Toxaphene Standard 1000 µg/mL, Hexane, 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** January 31, 2028 **Storage:** 10°C or colder

**Ship:** Ambient

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | Toxaphene | 8001-35-2 | 1051817 | ----% | 1,009.0 µg/mL | +/- 55.9920 |

* Expanded Uncertainty displayed in same units as Grav. Conc.

**Solvent:** Hexane

**CAS #** 110-54-3

**Purity** 99%

# Quality Confirmation Test

**Column:**
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

**Carrier Gas:**
helium-constant pressure 20 psi.

**Temp. Program:**
200°C to 300°C
@ 25°C/min. ( hold 10 min.)

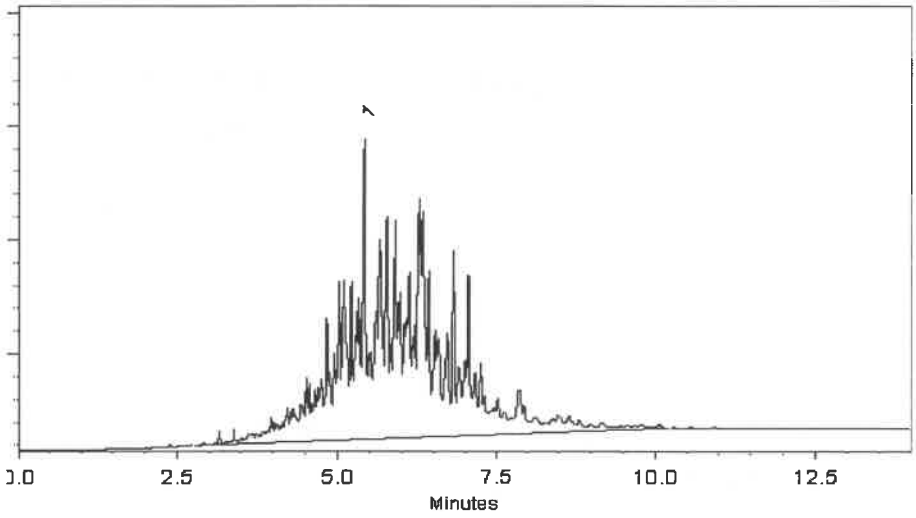
**Inj. Temp:**
250°C

**Det. Temp:**
300°C

**Det. Type:**
ECD

**Split Vent:**
300 ml/min.

**Inj. Vol**
0.2µl




This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dakota Parson - Operations Technician I

**Date Mixed:** 10-Oct-2023 **Balance Serial #** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 16-Oct-2023

**Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397**

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