

## Prep Standard - Chemical Standard Summary

**Order ID :** P4660

**Test :** TCLP Pesticide

**Prepbatch ID :** PB164753,

**Sequence ID/Qc Batch ID:** PL110724,PL110824,PL111124,

**Standard ID :**

EP2556,PP23474,PP23476,PP23517,PP23638,PP23673,PP23674,PP23675,PP23676,PP23677,PP23678,PP23679,P  
P23680,PP23681,PP23682,PP23683,PP23686,PP23687,PP23690,PP23693,PP23695,PP23698,PP23733,PP23793,P  
P23858,

**Chemical ID :**

E3551,E3762,E3770,E3788,E3792,E3805,E3815,E3823,E3825,P11145,P11146,P11896,P13035,P13036,P13039,P132  
44,P13349,P13350,P13351,P13359,P13402,



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	<a href="#">EP2556</a>	11/03/2024	01/03/2025	Rajesh Parikh	Extraction_SC ALE_2 (EX-SC-2)	None	RUPESHKUMAR SHAH 11/03/2024
<b><u>FROM</u></b> 4000.00000gram of E3551 = Final Quantity: 4000.000 gram								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1472	20 PPM Pest Stock Solution 2nd Source	<a href="#">PP23474</a>	06/20/2024	12/18/2024	Abdul Mirza	None	None	Ankita Jodhani 06/21/2024
<u>FROM</u>	1.00000ml of P13035 + 9.00000ml of E3762 = Final Quantity: 10.000 ml							

## Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3663	20 PPM MIREX Stock STD (Secondary source)	<a href="#">PP23476</a>	06/20/2024	12/18/2024	Abdul Mirza	None	None	Ankita Jodhani
06/21/2024								

**FROM** 0.20000ml of P11145 + 9.80000ml of E3762 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4027	Pesticide resolution Check Mixture 8081	<a href="#">PP23517</a>	07/12/2024	01/12/2025	Abdul Mirza	None	None	Ankita Jodhani
07/16/2024								

**FROM** 1.00000ml of E3770 + 99.00000ml of P13244 = Final Quantity: 100.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
79	500 PPB Pesticide Spike Solution	<a href="#">PP23638</a>	09/05/2024	12/18/2024	Abdul Mirza	None	None	Ankita Jodhani
								09/10/2024

**FROM** 95.00000ml of E3788 + 2.50000ml of PP23474 + 2.50000ml of PP23476 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
84	Pest/PCB Surrogate Stock 20 PPM	<a href="#">PP23673</a>	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

## Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3629	20 PPM PEST stock Solution 1st source(RESTEK)	<a href="#">PP23674</a>	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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1472	20 PPM Pest Stock Solution 2nd Source	<a href="#">PP23675</a>	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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3630	100/100 PPB PEST Working std.1st Source(RESTEK)	<a href="#">PP23678</a>	09/21/2024	03/11/2025	Abdul Mirza	None	None	Ankita Jodhani 10/01/2024
<b><u>FROM</u></b> 98.50000ml of E3792 + 0.50000ml of PP23673 + 0.50000ml of PP23674 + 0.50000ml of PP23676 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
80	100/100 PPB Pesticide Working Solution 2nd Source	<a href="#">PP23679</a>	09/21/2024	03/11/2025	Abdul Mirza	None	None	Ankita Jodhani 10/01/2024
<b><u>FROM</u></b> 98.50000ml of E3792 + 0.50000ml of PP23673 + 0.50000ml of PP23675 + 0.50000ml of PP23677 = Final Quantity: 100.000 ml								

## Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
386	1000/100 PPB Chlordane STD (Restek)	<a href="#">PP23680</a>	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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3746	1000/100 ppb Chlordane STD-RESTEK 2ND SOURCE	<a href="#">PP23681</a>	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

## Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
383	1000/100 PPB Toxaphene STD (Restek)	<a href="#">PP23682</a>	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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3669	1000/100 PPB TOXAPHENE STD 2nd source (RESTEK)	<a href="#">PP23683</a>	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

## Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3632	50 PPB ICAL PEST STD(RESTEK)	<a href="#">PP23686</a>	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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3988	50 PPB PEST ICV STD(RESTEK)	<a href="#">PP23687</a>	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

## Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
529	CHLOR 500 PPB STD	<a href="#">PP23690</a>	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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
532	CHLOR 500 PPB ICV STD	<a href="#">PP23693</a>	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

## Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
534	TOX 500 PPB STD	<a href="#">PP23695</a>	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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3670	TOX 500 PPB ICV std ( RESTEK)	<a href="#">PP23698</a>	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

## Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
84	Pest/PCB Surrogate Stock 20 PPM	<a href="#">PP23733</a>	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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
518	Pest/PCB I.BLK 20 PPB	<a href="#">PP23793</a>	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



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
465	200 PPB Pest/PCB Surrogate Spike	<a href="#">PP23858</a>	10/14/2024	04/04/2025	Abdul Mirza	None	None	Ankita Jodhani 10/14/2024
<b><u>FROM</u></b> 1.00000ml of P13351 + 999.00000ml of E3815 = Final Quantity: 1000.000 ml								

## 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	01/03/2025	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	12/18/2024	06/18/2024 / Rajesh	06/17/2024 / Rajesh	E3762

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	05/09/2025	07/12/2024 / Rajesh	07/02/2024 / Rajesh	E3770

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)	23H1462005	04/23/2025	08/13/2024 / Rajesh	08/13/2024 / Rajesh	E3788

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

## CHEMICAL RECEIPT LOG BOOK

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)	24H1462005	04/04/2025	10/04/2024 / Rajesh	10/04/2024 / Rajesh	E3815

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)	24I2662006	05/03/2025	11/03/2024 / Rajesh	10/24/2024 / Rajesh	E3823

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	11/06/2025	11/06/2024 / Rajesh	11/01/2024 / Rajesh	E3825

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	12/20/2024	06/20/2024 / Abdul	10/29/2021 / Abdul	P11145

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

## 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	A0200423	12/20/2024	06/20/2024 / Abdul	12/26/2023 / Abdul	P13035

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

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	01/12/2025	07/12/2024 / Abdul	02/09/2024 / Abdul	P13244

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

### CHEMICAL RECEIPT LOG BOOK

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	04/14/2025	10/14/2024 / Abdul	04/22/2024 / Abdul	P13351

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

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



**PRODUCTOS  
QUÍMICOS  
MONTERREY, S.A. DE C.V.**

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TEL +52 81 13 52 57 57  
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## CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE CRYSTALS ANHYDROUS		
QUALITY :	ACS (CODE RMB3375)	FORMULA :	Na <sub>2</sub> SO <sub>4</sub>
SPECIFICATION NUMBER :	6399	RELEASE DATE:	ABR/21/2023
LOT NUMBER :	313201		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na <sub>2</sub> SO <sub>4</sub> )	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 <sub>4</sub> )	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 foreign 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 R3 on 7/24/23 E 3551

RC-02-01, Ed. 3

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

avantor™



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 <sub>6</sub> 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 <sub>2</sub> SO <sub>4</sub>	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 6/11/24

E 3762

Jamie Croak  
Director Quality Operations, Bioscience Production

Acetone

BAKER RESI-ANALYZED® Reagent

For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 23H1462005

Manufactured Date: 2023-07-26

Expiration Date: 2026-07-25

Revision No.: 0

## Certificate of Analysis

Test	Specification	Result
Assay ((CH <sub>3</sub> ) <sub>2</sub> CO) (by GC, corrected for water)	≥ 99.4 %	99.7 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (μeq/g)	≤ 0.3	0.1
Titration Base (μeq/g)	≤ 0.6	< 0.1
Water (H <sub>2</sub> O)	≤ 0.5 %	0.3 %
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

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 7/21/24

E 3769

Ken Koehnlein  
Sr. Manager, Quality Assurance

Acetone

BAKER RESI-ANALYZED® Reagent  
For Organic Residue Analysis

Avantor™



Material No.: 9254-03  
Batch No.: 23H1462005  
Manufactured Date: 2023-07-26  
Expiration Date: 2026-07-25  
Revision No.: 0

## Certificate of Analysis

Test	Specification	Result
Assay ((CH <sub>3</sub> ) <sub>2</sub> CO) (by GC, corrected for water)	≥ 99.4 %	99.7 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (μeq/g)	≤ 0.3	0.1
Titration Base (μeq/g)	≤ 0.6	< 0.1
Water (H <sub>2</sub> O)	≤ 0.5 %	0.3 %
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

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 8/13/24

E 3788

Ken Koehnlein  
Sr. Manager, Quality Assurance

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

Avantor™



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 <sub>6</sub> 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 <sub>2</sub> SO <sub>4</sub>	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 3192

Jamie Croak  
Director Quality Operations, Bioscience Production

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

Avantor™



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 <sub>6</sub> 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 <sub>2</sub> SO <sub>4</sub>	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

E 3805

Jamie Croak  
Director Quality Operations, Bioscience Production

Acetone  
BAKER RESI-ANALYZED® Reagent  
For Organic Residue Analysis



Material No.: 9254-03  
Batch No.: 24H1462005  
Manufactured Date: 2024-05-24  
Expiration Date: 2027-05-24  
Revision No.: 0

## Certificate of Analysis

Test	Specification	Result
Assay ((CH <sub>3</sub> ) <sub>2</sub> CO) (by GC, corrected for water)	>= 99.4 %	99.8 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (µeq/g)	<= 0.3	0.2
Titration Base (µeq/g)	<= 0.6	<0.1
Water (H <sub>2</sub> O)	<= 0.5 %	0.2 %
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

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

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

E3815

  
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

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

 **avantors<sup>TM</sup>**



Material No.: 9266-A4

Batch No.: 24I2662006

Manufactured Date: 2024-08-29

Expiration Date: 2025-11-28

Revision No.: 0

## Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	$\leq 5$	2
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	$\leq 10$	3
Assay ( $\text{CH}_2\text{Cl}_2$ ) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	99.9%
Color (APHA)	$\leq 10$	5
Residue after Evaporation	$\leq 1.0$ ppm	0.2 ppm
Titration Acid ( $\mu\text{eq/g}$ )	$\leq 0.3$	$< 0.1$
Chloride (Cl)	$\leq 10$ ppm	$< 5$ ppm
Water (by KF, coulometric)	$\leq 0.02\%$	$< 0.01\%$

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3823



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



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)	$\leq 5$	3
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	$\leq 10$	1
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	$\leq 5$	1
Assay (Total Saturated C <sub>6</sub> Isomers) (by GC, corrected for water)	$\geq 99.5 \%$	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	98 %
Color (APHA)	$\leq 10$	5
Residue after Evaporation	$\leq 1.0$ ppm	0.1 ppm
Substances Darkened by H <sub>2</sub> SO <sub>4</sub>	Passes Test	Passes Test
Water (by KF, coulometric)	$\leq 0.05 \%$	< 0.01 %

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

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

£3825

Jamie Croak  
Director Quality Operations, Bioscience Production



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

# Certificate of Analysis



## 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 CAS # 57-74-9 (Lot 978545) Purity ----%	1,006.0 µg/mL	+/- 5.9753 µg/mL Gravimetric +/- 31.8975 µg/mL Unstressed +/- 41.6615 µg/mL Stressed

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

### Tech Tips:

CAS #57-74-9 nomenclature is based on EPA method 8081B.

P 11892  
↓  
P 11896  
5

06/17/2022

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

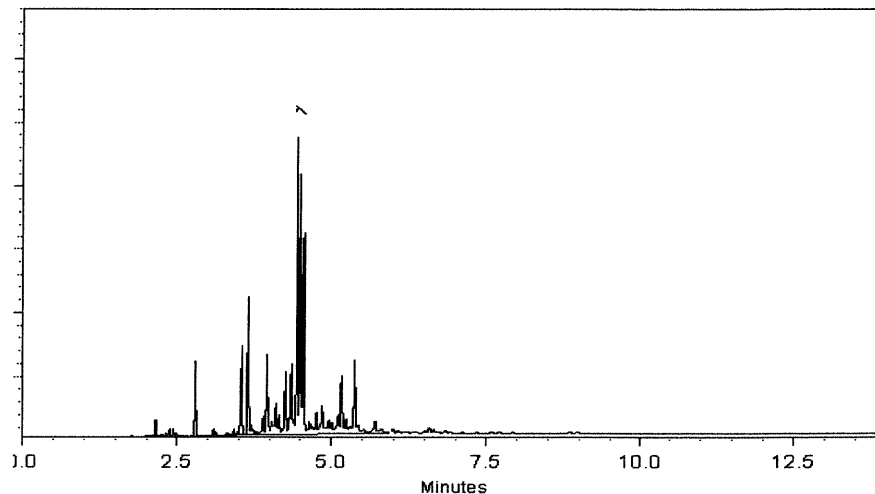
**Carrier Gas:**  
helium-constant pressure 20 psi.

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

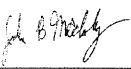
**Inj. Temp:**  
250°C

**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

  
Marlene 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



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



### 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. : 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

P130397 5  
↓  
P13043 1  
✓  
12-26-2023

### 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  
 ↓  
 P13043  
 5  
 1  
 JAW  
 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.)

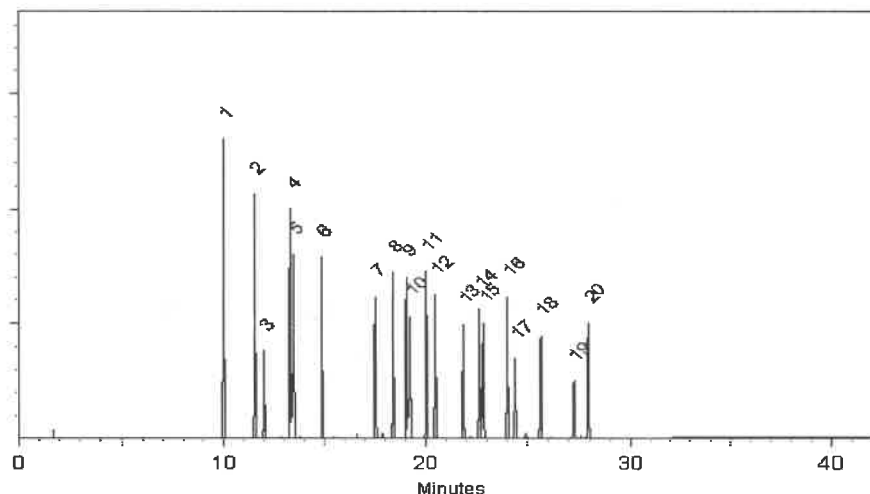
**Inj. Temp:**  
 200°C

**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*  
 Josh McCloskey - Operations Technician I

**Date Mixed:** 19-Jun-2023

**Balance Serial #** 1128360905

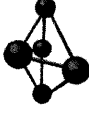
*Jennifer Pollino*  
 Jennifer Pollino - Operations Tech III - ARM QC

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

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



**Certified Reference Material CRM**



**CERTIFIED WEIGHT REPORT**

**Part Number:**  
**Lot Number:**  
**Description:**

**79136**  
**102821**  
**Mirex**

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

**Expiration Date:**  
**Recommended Storage:**  
**Nominal Concentration (µg/mL):**  
**NIST Test ID#:**

**102826**  
**Refrigerate (4 °C)**  
**1000**  
**6UTB**

**5E-05** **Balance Uncertainty**  
**0.006** **Flask Uncertainty**

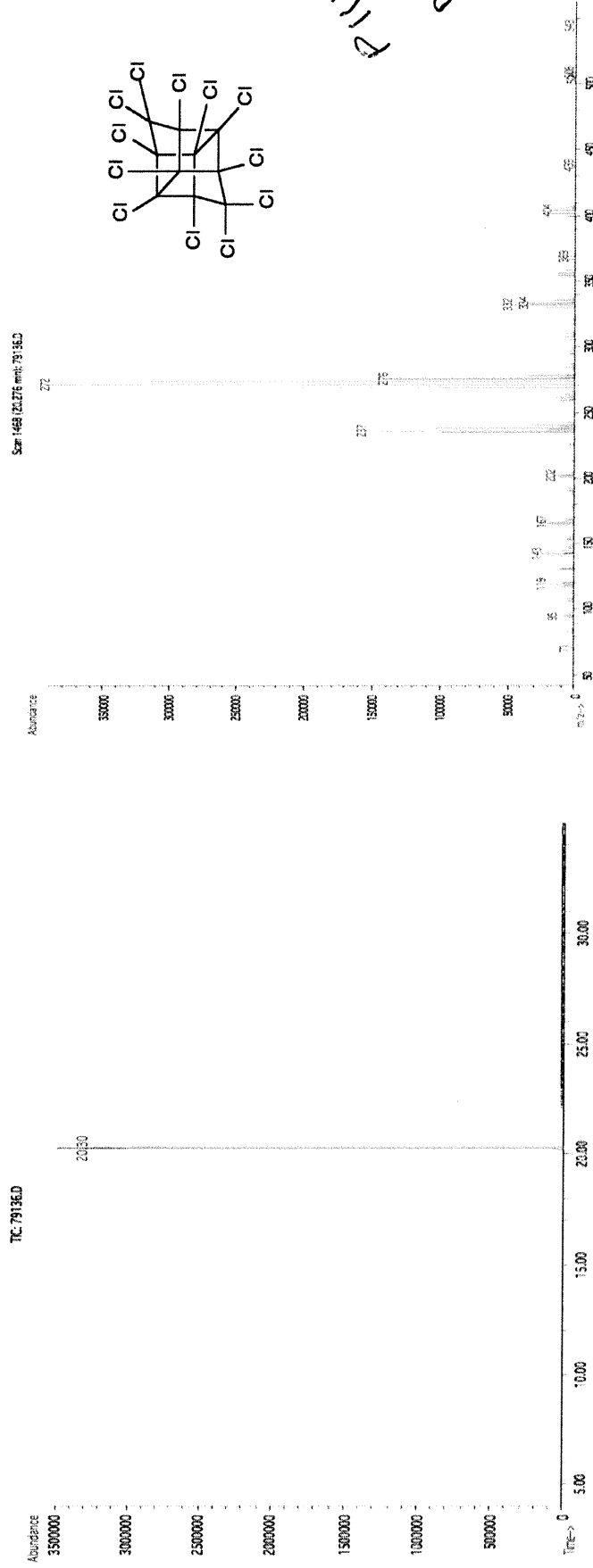
**Weight(s) shown below were combined and diluted to (mL):**

**50.0**

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty	Target Weight (g)	Actual Weight (g)	Actual Conc (µg/mL)	Expanded SDS Information		
									Uncertainty (+/-) (µg/mL)	(Solvent Safety Info. On Attached pg.)	(SMA 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.



- 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).



**Certified Reference Material CRM**



# CERTIFIED WEIGHT REPORT

Part Number:	Lot Number:	Description:

79136  
102821  
Mirex



<b>Solvent(s):</b>	<b>Lot#</b>
Acetone	81025

Expiration Date:	102826
Recommended Storage:	Refrigerate (4 °C)

Nominal Concentration ( $\mu\text{g/mL}$ ):  
NIST Test ID#:

5E-05	Balance Uncertainty
0.006	Flask Uncertainty

**Weight(s) shown below were combined and diluted to (mL):**

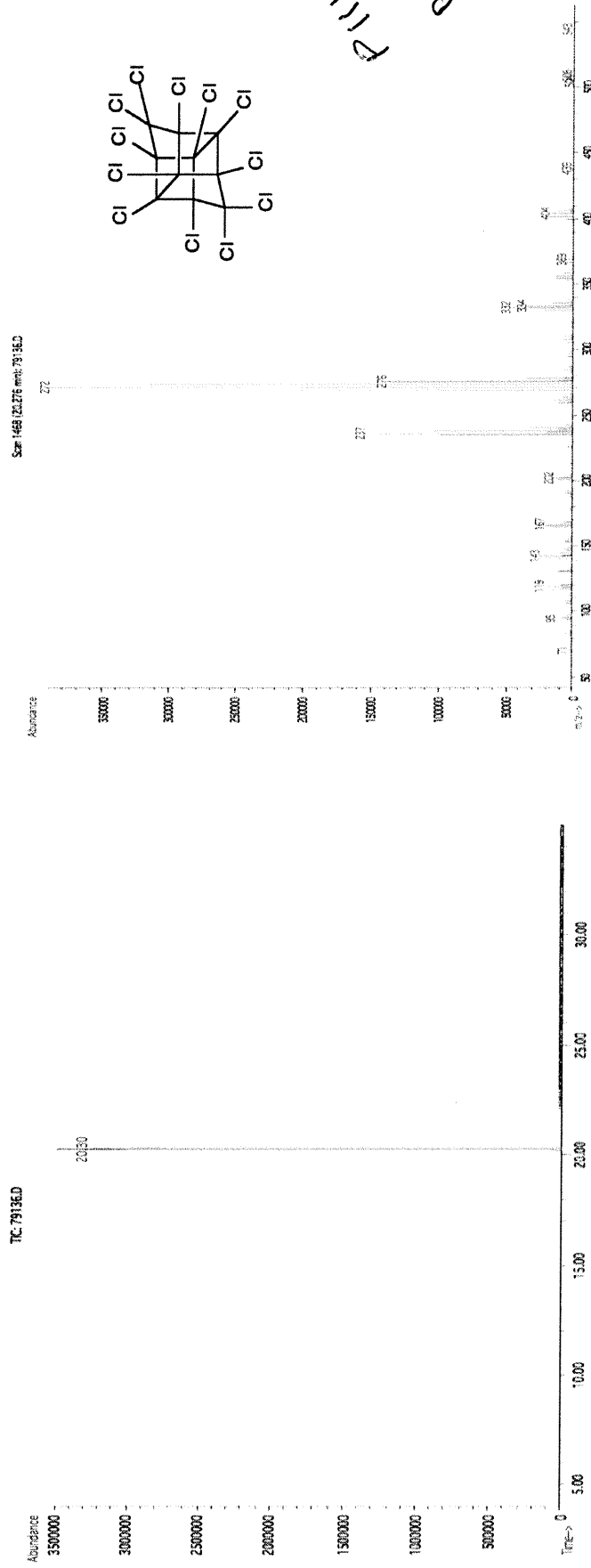
	102821
Formulated By: <u>Eli Allaga</u>	DATE
	102821
Reviewed By: <u>Pedro L. Rentas</u>	DATE

## SDS Information

Compound	RM#	Lot Number	Purity		Target Weight (g)	Actual		(Solvent Safety Info. On Attached pg.)	
			Nominal Conc (µg/mL)	(%)		Conc(µg/mL)	Weight (g)	Uncertainty	Uncertainty (+/-) (µg/mL)
									LD50 OSHA PEL (TWA) CAS#

[illegible]

**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.



• 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
- 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).



110 Benner Circle  
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Fax: 1-814-353-1309

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## CERTIFIED REFERENCE MATERIAL

# 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. :** 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

P 13034  
↓  
P 13038  
12.26.2023

### 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  
P13038  
1  
5  
12/26/2023

## Quality Confirmation Test

**Column:**  
30m x .25mm x .2µm  
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.)

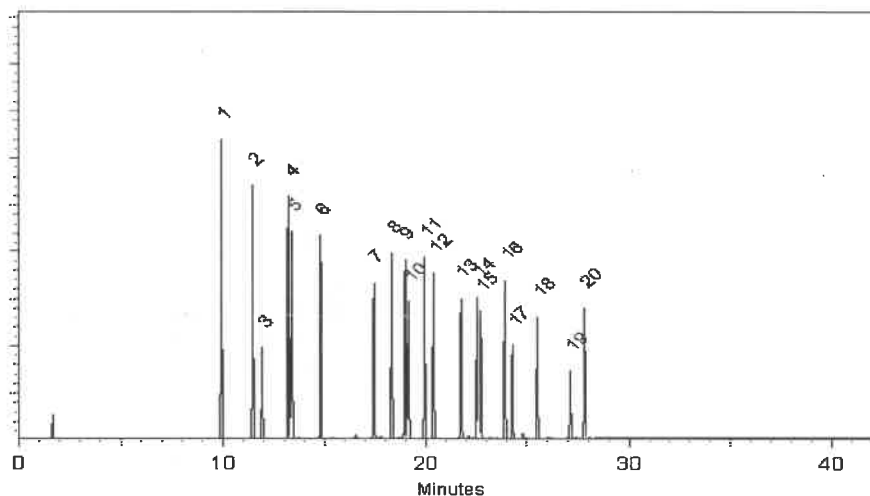
**Inj. Temp:**  
200°C

**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*  
Sam Moodler - Operations Tech I

**Date Mixed:** 31-Jul-2023

**Balance Serial #** B442140311

*Jennifer Pollino*  
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



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



### 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. :** 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

P 13034  
↓  
P 13038  
✓  
12.26.2023

### 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  
P13038  
1  
5  
12/26/2023

## Quality Confirmation Test

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30m x .25mm x .2µm  
Rtx-CLP II (cat.# 11323)

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@ 4°C/min. ( hold 5 min.)

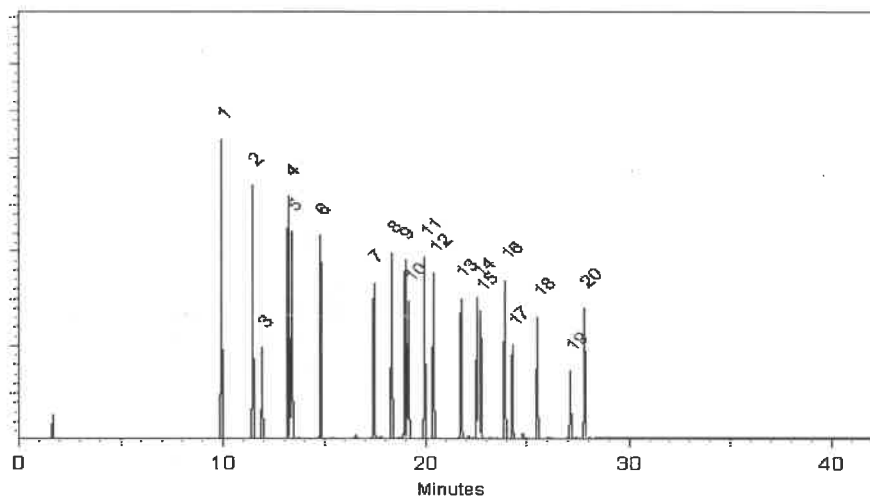
**Inj. Temp:**  
200°C

**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*  
Sam Moodler - Operations Tech I

**Date Mixed:** 31-Jul-2023

**Balance Serial #** B442140311

*Jennifer Pollino*  
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



**CERTIFIED WEIGHT REPORT**

Part Number:  
Lot Number:  
Description:

**19161**  
**013124**  
**CLP Pesticides & PCBs Resolution Check Standard**

9 components

Solvent(s):

Lot#

Formulated By: Lawrence Barry DATE 013124

Expiration Date:

013129

Hexane

273615 (50%)

Recommended Storage:

Refrigerate (4 °C)

Toluene

28508 (50%)

Nominal Concentration (µg/mL):

Varied

Balance Uncertainty

Pipette Uncertainty

NIST Test ID#:

6UTB

5E-05

Peak Uncertainty

Volume(s) shown below were combined and diluted to (mL):

100.0

0.021

Reviewed By:	Pedro L. Rentes	DATE	013124
--------------	-----------------	------	--------

**Compound**

Part Number

Lot Number

Dil. Factor

Initial Vol. (mL)

Uncertainty Pipette (mL)

Initial Conc. (µg/mL)

Final Conc. (µg/mL)

Expanded Uncertainty (±) µg/mL

CAS#

OSHA PEL (TWA)

LD50

**SDS Information**

(Solvent Safety Info. On Attached pg.)

1. trans-Chlordane	19361	013124	0.010	1.00	0.004	101.3	1.0	0.02	5103-74-2	0.5mg/m3 (skin)	or-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)	or-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	or-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)	or-rat 36300µg/kg
5. Endosulfan sulfate	19361	013124	0.010	1.00	0.004	204.2	2.0	0.03	1031-07-8	N/A	or-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	or-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

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## CERTIFIED REFERENCE MATERIAL

# 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. :** 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

P13348  
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DAUF  
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:**

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:**

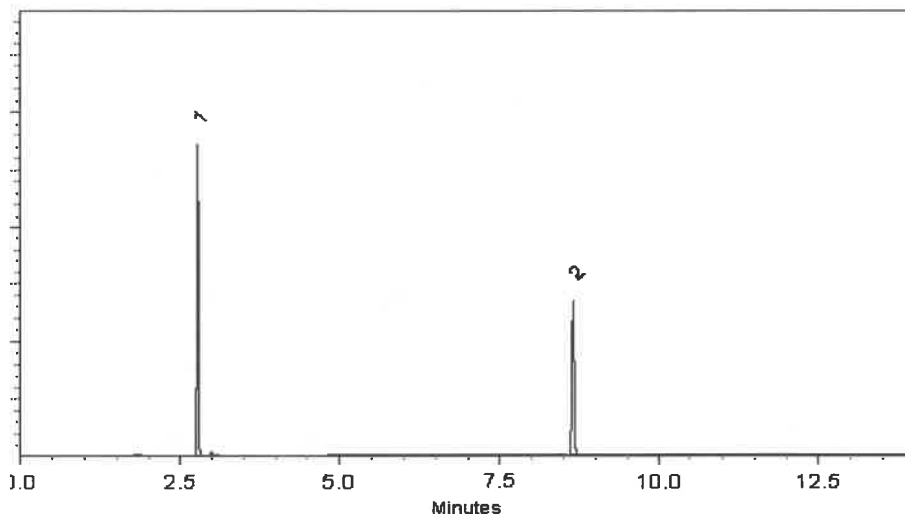
ECD

**Split Vent:**

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

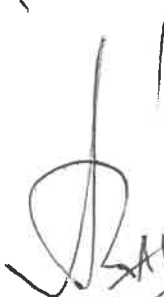
Balance Serial # 1128360905

  
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

P 13348  
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SAUF  
04/25/2025



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## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

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

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**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

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P13357  
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DAUF  
04/25/2024

### CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
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**Solvent:** Acetone  
**CAS #** 67-64-1  
**Purity** 99%

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## 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:**

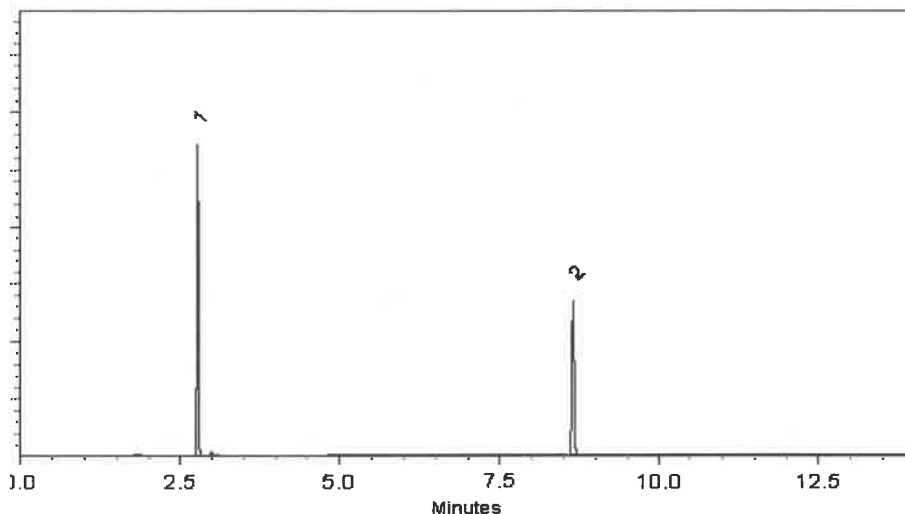
ECD

**Split Vent:**

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

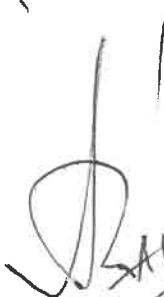
Balance Serial # 1128360905

  
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

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04/25/2025



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## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

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**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

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DAUF  
04/25/2024

### CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
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\* 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.

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## 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:**

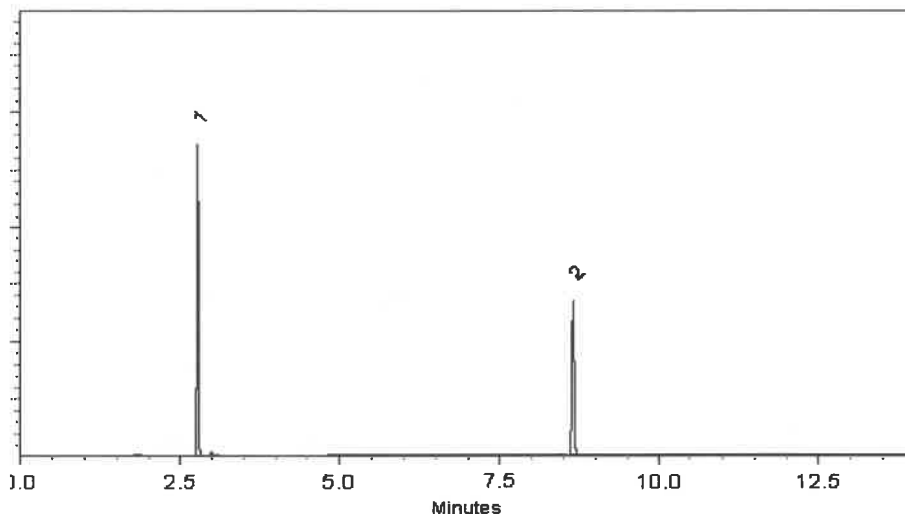
ECD

**Split Vent:**

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

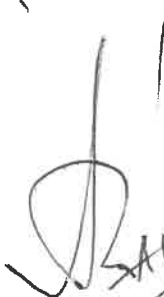
Balance Serial # 1128360905

  
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

P 13348  
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SAUF  
04/25/2025



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CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

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## 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%

P 13358  
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P 13369  
(12)

*[Signature]*  
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:**

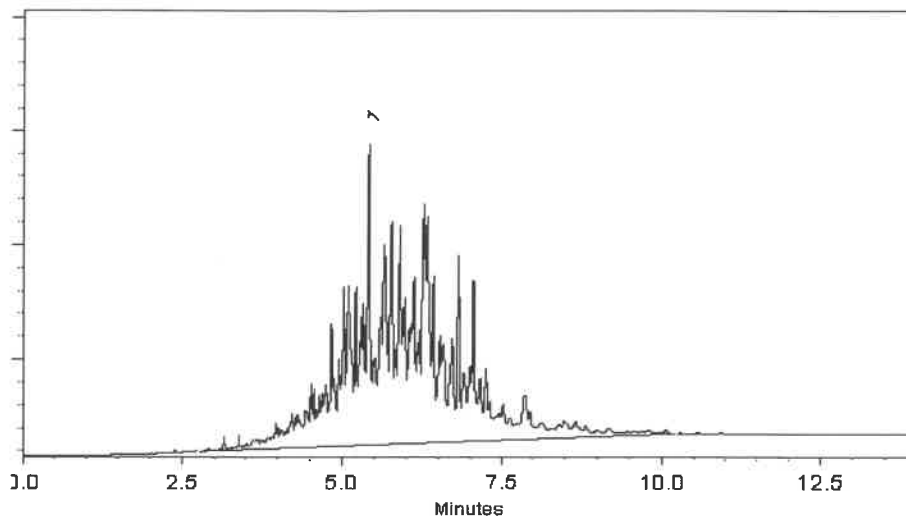
ECD

**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  
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P13369  
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(12)

  
05-06-2024





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## CERTIFIED REFERENCE MATERIAL

# 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

P13402  
P13406  
5/22/2024

### 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:**

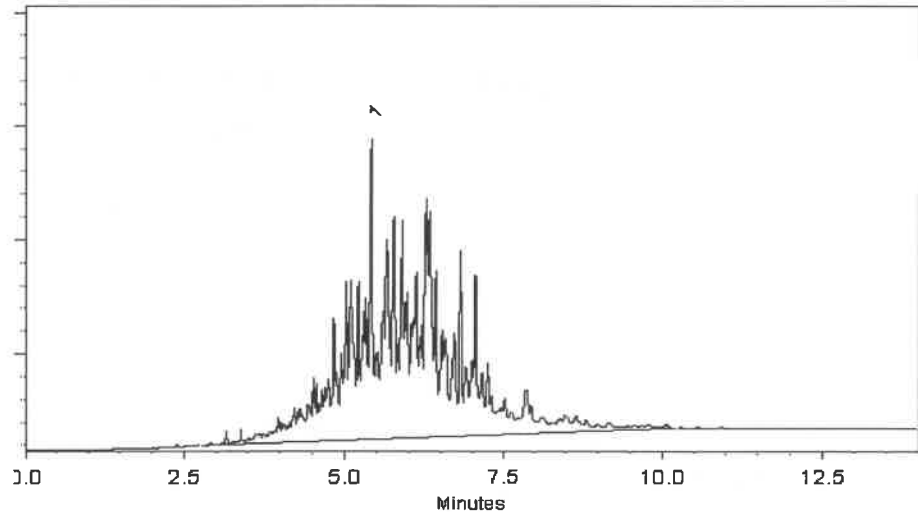
ECD

**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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5/22/2024