

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

8900, Fax: 908 789 8922

Prep Standard - Chemical Standard Summary

Order ID: P4578

Test: TCLP Pesticide

Prepbatch ID: PB164445,

Sequence ID/Qc Batch ID: PL102924,

Standard ID:

EP2551,PP23474,PP23476,PP23638,PP23638,PP23673,PP23674,PP23675,PP23676,PP23677,PP23678,PP23679,PP23680,PP23681,PP23682,PP23683,PP23686,PP23687,PP23690,PP23693,PP23695,PP23698,PP23733,PP23793,PP23858,

Chemical ID:

E3551,E3762,E3770,E3788,E3792,E3805,E3815,E3819,E3822,P11145,P11146,P11896,P13035,P13036,P13039,P13244,P13349,P13350,P13359,P13402,





Extractions STANDARD PREPARATION LOG

Recipe				Expiration	<u>Prepared</u>			Supervised By
<u>ID</u>	NAME	<u>NO.</u>	Prep Date	<u>Date</u>	<u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	RUPESHKUMAR
3923	Baked Sodium Sulfate	EP2551	10/18/2024	01/03/2025	Rajesh Parikh	Extraction_SC	None	SHAH
						ALE_2		10/18/2024
						(EX-SC-2)		

FROM 4000.0000gram of E3551	= Final Quantity: 4000.000	gram
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Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Ankita Jodhani
1472	20 PPM Pest Stock Solution 2nd Source	<u>PP23474</u>	06/20/2024	12/18/2024	Abdul Mirza	None	None	06/21/2024

FROM 1.00000ml of P13035 + 9.00000ml of E3762 = Final Quantity: 10.000 ml





Pest/Pcb STANDARD PREPARATION LOG

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

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

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



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Pest/Pcb STANDARD PREPARATION LOG

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

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

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





Pest/Pcb STANDARD PREPARATION LOG

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

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

ID NA	AME	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Ankita Jodhani
	0 PPM Mirex Stock (Primary ource)	PP23676	09/21/2024	03/11/2025	Abdul Mirza	None	None	10/01/2024

FROM	0.20000ml of P11146 + 9.80000ml of E3792 = Final Quantity: 10.000 ml
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Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Ankita Jodhani
3663	20 PPM MIREX Stock STD (Secondary source)	PP23677	09/21/2024	03/11/2025	Abdul Mirza	None	None	10/01/2024

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





Pest/Pcb STANDARD PREPARATION LOG

3630	<u>R</u>	ecipe ID	<u>NAME</u>	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Ankita Jodhani
	;	3630		PP23678	09/21/2024	03/11/2025	Abdul Mirza	None	None	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	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Ankita Jodhani
80	100/100 PPB Pesticide Working Solution 2nd Source	PP23679	09/21/2024	03/11/2025	Abdul Mirza	None	None	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

ID N	NAME	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Ankita Jodhani
	000/100 PPB Chlordane STD Restek)	PP23680	09/21/2024	03/11/2025	Abdul Mirza	None	None	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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Recipe ID	<u>NAME</u>	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Ankita Jodhani
3746	1000/100 ppb Chlordane STD-RESTEK 2ND SOURCE	PP23681	09/21/2024	03/11/2025	Abdul Mirza	None	None	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

ID N	NAME	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Ankita Jodhani
1	1000/100 PPB Toxaphene STD (Restek)	PP23682	09/21/2024	03/11/2025	Abdul Mirza	None	None	10/01/2024

FROM	0.10000ml of P13359 +	· 99.40000ml of E3792 ·	+ 0.50000ml of PP23673 :	= Final Quantity: 100.000 ml
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Recipe ID	<u>NAME</u>	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Ankita Jodhani
3669	1000/100 PPB TOXAPHENE STD 2nd source (RESTEK)	PP23683	09/21/2024	03/11/2025	Abdul Mirza	None	None	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

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

FROM	0.50000ml of E3792 + 0.50000ml of PP23678	= Final Quantity: 1.000 ml
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Recipe				Expiration	Prepared			Supervised By
<u>ID</u>	NAME.	<u>NO.</u>	Prep Date	<u>Date</u>	<u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Ankita Jodhani
3988	50 PPB PEST ICV STD(RESTEK)	PP23687	09/21/2024	03/11/2025	Abdul Mirza	None	None	
								10/01/2024

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





Pest/Pcb STANDARD PREPARATION LOG

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

FROM	0.50000ml of E3792 + 0.50000ml of PP23680	= Final Quantity: 1.000 ml
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Recipe				Expiration	<u>Prepared</u>			Supervised By
<u>ID</u> 532	NAME CHLOR 500 PPB ICV STD	NO. PP23693	Prep Date 09/21/2024	<u>Date</u> 03/11/2025	<u>By</u> Abdul Mirza	<u>ScaleID</u> None	PipetteID 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

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

FROM	0.50000ml of E3792 + 0.50000ml of PP23682 = Final Quantity: 1.000 ml
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Recipe				Expiration	<u>Prepared</u>	0	D: ((ID	Supervised By
<u>ID</u> 3670	NAME TOX 500 PPB ICV std (RESTEK)	NO. PP23698	Prep Date 09/21/2024	<u>Date</u> 03/11/2025	<u>By</u> Abdul Mirza	<u>ScaleID</u> None	PipetteID 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

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

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

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





Pest/Pcb STANDARD PREPARATION LOG

Recipe ID 465	NAME 200 PPB Pest/PCB Surrogate Spike	NO. PP23858	Prep Date 10/14/2024	Expiration Date 04/04/2025	Prepared By Abdul Mirza	<u>ScaleID</u> None	PipetteID None	Supervised By Ankita Jodhani 10/14/2024
FROM	1.00000ml of P13351 + 999.00000m	l of E3815 :	= Final Quanti	ty: 1000.000 n	nl			



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	04/15/2025	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 #
				Openea 23		
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	23H1462005	04/23/2025	08/13/2024 / Rajesh	08/13/2024 / Rajesh	E3788
Seidler Chemical Supplier	*	23H1462005		08/13/2024 /	08/13/2024 /	
	Ultra Resi (cs/4x4L)		04/23/2025 Expiration	08/13/2024 / Rajesh Date Opened /	08/13/2024 / Rajesh	E3788
Supplier	Ultra Resi (cs/4x4L) ItemCode / ItemName BA-9262-03 / Hexane,	Lot #	04/23/2025 Expiration Date	08/13/2024 / Rajesh Date Opened / Opened By 09/12/2024 /	08/13/2024 / Rajesh Received Date / Received By 09/11/2024 /	E3788 Chemtech Lot #



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-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24G1962003	04/15/2025	10/15/2024 / Rajesh	10/09/2024 / Rajesh	E3819
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)	2412662006	04/23/2025	10/24/2024 / Rajesh	10/24/2024 / Rajesh	E3822
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	79136 / Mirex, 1000 ug/ml	102821	03/21/2025	09/21/2024 /	10/29/2021 / Abdul	P11146
Standards, Inc.				Abdul	Abdul	
	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date /	Chemtech Lot #



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 /	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 #
		1	04/03/2025	10/03/2024 /	04/22/2024 /	



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



MIRADOR 201, COL. MIRADOR MONTERREY, N.L. MEXICO CP 64070 TEL +62 81 13 52 57 57 www.pqm.com,mx

CERTIFICATE OF ANALYSIS

PRODUCT:

SODIUM SULFATE CRYSTALS ANHYDROUS

QUALITY:

ACS (CODE RMB3375)

FORMULA:

Na₂SO₄

SPECIFICATION NUMBER: 6399

RELEASE DATE:

ABR/21/2023

LOT NUMBER:

313201

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na ₂ SO 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)	Wax. 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%	25%
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 Ri on 7/4/3 E 3551

RE-02-01, Del

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





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	<]
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 Calsomers) (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 H2SO4	Passes Test	Passes Test
Nater (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 G114124

E 3762

Schoak

Jamie Croak
Director Quality Operations, Bioscience Production





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 ₃) ₂ 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
Titrable Acid (μeq/g)	≤ 0.3	0.1
Titrable Base (μeq/g)	≤ 0.6	< 0.1
Water (H₂O)	≤ 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

Reed. by RP on 7/2124

E 3769

Ken Koehnlein

Sr. Manager, Quality Assurance





Material No.: 9254-03

Batch No.: 23H1462005

Manufactured Date: 2023-07-26

Expiration Date: 2026-07-25

Revision No.: 0

Certificate of Analysis

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

Sr. Manager, Quality Assuran

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





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 Collsomers) (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 H2SO4	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

Hoak

Jamie Croak
Director Quality Operations, Bioscience Production

Hexanes (95% n-hexane)

BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis





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 H₂SO₄	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

PO: PO2-329 PRODUCT CODE: SHIP DATE: 9/30/2024

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 ₃) ₂ CO) (by GC, corrected forwater)	>= 99.4 %	99.8 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 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 ₂ 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

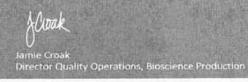
For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E3815



For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700 Avantor Performance Materials, LLC

PO: PO2-329 PRODUCT CODE: SHIP DATE: 9/30/2024

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

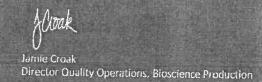
Test	Specification	
FID For the control of the control o	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	3
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	_	5
ECD-Sensitive Impurities (as Ethylene Dibromide) Single Impurity	≤ 10	1
	≤ 5	1
Assay (Total Saturated C6 Isomers) (by GC, corrected for water)	≥ 99.5 %	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	≥ 95 %	
Color (APHA)	2 93 %	98 %
•	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.1 ppm
Substances Darkened by H2SO4		
Nater (by KF, coulometric)	Passes Test	Passes Test
rate: (by Kr., 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 10/09/24

E 3819



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



Material No.: 9266-A4

Batch No.: 2412662006

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)	<= 5	2
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	3
Assay (CH_2CI_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	99.9 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Titrable Acid (µeq/g)	<= 0.3	<0.1
Chloride (CI)	<= 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 3811





CERTIFIED REFERENCE MATERIAL



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

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.

Ambient

 Catalog No. :
 32021
 Lot No.:
 Δ0181737

 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

CERTIFIED VALUES

Elution Order	Compound	Grav. ((weight/\		Expanded Ur (95% C.L.; K=	•	
1	Chlordane CAS # 57-74-9 (Lo Purity%	1,006.0 t 978545)	μg/mL +/- +/- +/-	5.9753 31.8975 41.6615	μg/mL μg/mL μg/mL	Gravimetric Unstressed Stressed

Ship:

Solvent: Hexane

CAS # 110-54-3
Purity 99%

<u>Tech Tips:</u>
CAS #57-74-9 nomenclature is based on EPA method 8081B.

P11896

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:

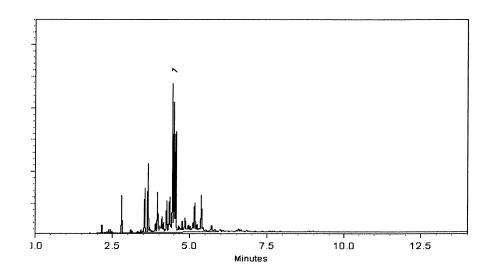
250°C

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 man

Date Passed: 24-Feb-2022

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

P 11892 /



110 Benner Circle Bellefonte, PA 16823-8812

> Tel: 1-814-353-1300 Fax: 1-814-353-1309

CERTIFIED REFERENCE MATERIAL

chromatographic plus

Certificate of Analysis









www.restek.com

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 : Expiration Date : 2 mL

Pkg Amt: > 1 mL

June 30, 2027

Storage: 10°C or colder

Ship: Ambient

P13039 3

RAUF 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 5

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

200 0

Det. Temp:

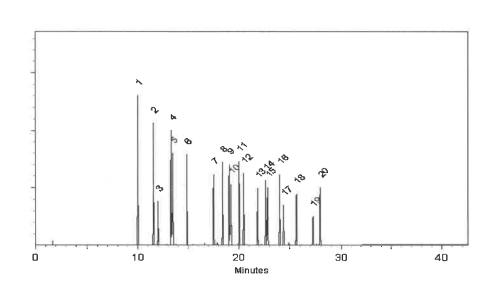
Det. Type:

Split Vent:

Split ratio 50:1

Inj. Vol

1μΙ



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.

lock McClockey - Operations Technician

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

Certified Reference Material CRM



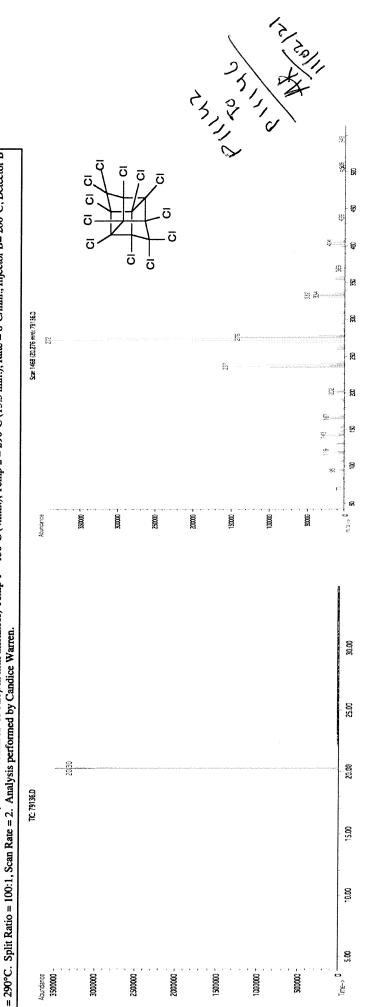
Absolute Standards, Inc. www.absolutestandards.com

800-368-1131

CERTIFIED WEIGHT REPORT

(0.4 81025 Lot# Solvent(s):
Acetone 79136 102821 Mirex Lot Number: Part Number: Description Weight

Describion:		Mirex								3	12 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -	102821
									Formulated By:	d By:	Eli Aliaga	DATE
Expiration Date:		102826								,	7	
Recommended Storage:		Refrigerate (4 °C)	(4°C)							Ì	A	
Nominal Concentration (µg/mL):		1000								N. S.	Hento	102821
NIST Test ID#:		6UTB		5E-05	5E-05 Balance Uncertainty	щу		_	Reviewed By:	34:	Pedro L. Rentas	DATE
Weight(s) shown below were combined and diluted to (mL):	and dilut	ed to (mL):	20.0	0.006	0.006 Flask Uncertainty							
									Expanded		SDS Information	
		፭	Nominal	Punty	Purity Uncertainty Target	Target	Actual	Actual	Actual Uncertainty		(Solvent Safety Info. On Attached pg.)	hed pg.)
Compound	RM#	Number	Number Conc (µg/ml.)	(%)	Purity	Weight (g)	Weight (g)	Weight (g) Conc(µg/mL) (+/-) (µg/mL)	(+/-) (ng/ml_)	CAS#	OSHA PEL (TWA)	LD50
;												
. Mirex	437	437 9492400	1000	99.4	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= 200°C,	-608 (30)	n X 0.25mm	ID X 0.25µm 1	film thic	kness) Temp	1 = 150°C (4	min.), Temp 2	2 = 290°C (1.	3.5 min.), Ra	te = 8°C/mir	, Injector B= 200°C, D	etector B



- 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 (+1/) 0.5% of the stated value, unless otherwise stated.
 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



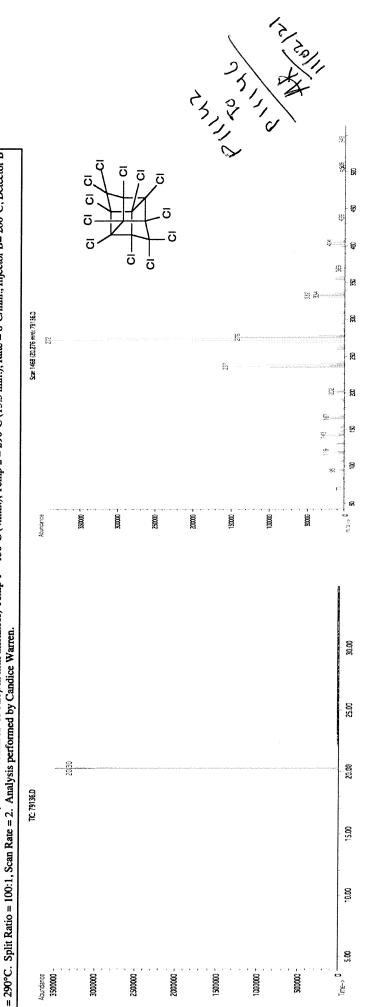
Absolute Standards, Inc. www.absolutestandards.com

800-368-1131

CERTIFIED WEIGHT REPORT

(0.4 81025 Lot# Solvent(s):
Acetone 79136 102821 Mirex Lot Number: Part Number: Description Weight

Describion:		Mirex								3	12 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -	102821
									Formulated By:	d By:	Eli Aliaga	DATE
Expiration Date:		102826								,	7	
Recommended Storage:		Refrigerate (4 °C)	(4°C)							Ì	A	
Nominal Concentration (µg/mL):		1000								N. S.	Hento	102821
NIST Test ID#:		6UTB		5E-05	5E-05 Balance Uncertainty	щу		_	Reviewed By:	34:	Pedro L. Rentas	DATE
Weight(s) shown below were combined and diluted to (mL):	and dilut	ed to (mL):	20.0	0.006	0.006 Flask Uncertainty							
									Expanded		SDS Information	
		፭	Nominal	Punty	Purity Uncertainty Target	Target	Actual	Actual	Actual Uncertainty		(Solvent Safety Info. On Attached pg.)	hed pg.)
Compound	RM#	Number	Number Conc (µg/ml.)	(%)	Purity	Weight (g)	Weight (g)	Weight (g) Conc(µg/mL) (+/-) (µg/mL)	(+/-) (ng/ml_)	CAS#	OSHA PEL (TWA)	LD50
;												
. Mirex	437	437 9492400	1000	99.4	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= 200°C,	-608 (30)	n X 0.25mm	ID X 0.25µm 1	film thic	kness) Temp	1 = 150°C (4	min.), Temp 2	2 = 290°C (1.	3.5 min.), Ra	te = 8°C/mir	, Injector B= 200°C, D	etector B



- 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 (+1/) 0.5% of the stated value, unless otherwise stated.
 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









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

www.restek.com

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

July 31, 2027

Container Size: Expiration Date: 2 mL

Pkg Amt: > 1 mL

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	230410ЛLМА	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)

110-54-3/108-88-3

Purity

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

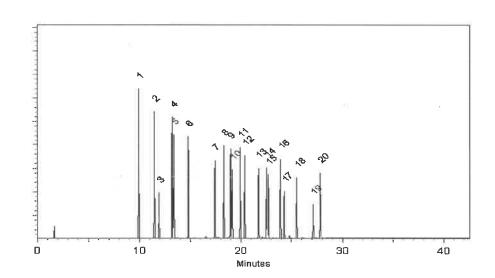
Det. Type:

Split Vent:

Split ratio 50:1

Inj. Vol

1μІ



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.

Soumuel Moodler m 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





CERTIFIED REFERENCE MATERIAL









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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.:

32291

Lot No.: A0200423

Description:

Organochlorine Pesticide Mix AB #1

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

1mL/ampul

July 31, 2027

Container Size: Expiration Date: 2 mL

Pkg Amt: > 1 mL

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	230410ЛLМА	98%	201.9 μg/mL	+/- 9.0575

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

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

Solvent:

Hexane/Toluene (50:50)

110-54-3/108-88-3

Purity

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

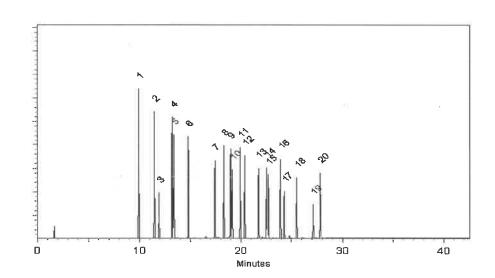
Det. Type:

Split Vent:

Split ratio 50:1

Inj. Vol

1μІ



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.

Soumuel Moodler m 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



800-368-1131 Absolute Standards, Inc.

www.absolutestandards.com



Certified Reference Material CRM



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

CERTIFIED WEIGHT REPORT

NIST Test ID#:	Nominal Concentration (µg/mL):	Recommended Storage:	Expiration Date:		Description:	Lot Number:	Part Number:
6UTB	Varied	Refrigerate (4 °C)	013129	9 components	CLP Pesticides & PCB's	013124	19161
5E-05 Balance Uncertainty		Toluene	Hexane	Solvent(s):	Resolution Check Stand		
		28508	273615	Lot	ard		

DAT	Pedro L. Rentas	Reviewed By:
013124	les there	M
DAT	Lawrence Barry	Formulated By:
013124	home bry	1

								Expanded		SDS Information	
	Part	Lot	Dil	Initial	Initial Uncertainty	Initial	Initial Final Uncertainty	Uncertainty		(Solvent Safety Info. On Attached pg.)	ached pg.)
npound	Nimber	Nismhor	Fantar		Dinatta (m)						
pound	MURUM	Number	Factor	Vol. (ml.)	Pipette (mL)	Conc.(ug/ml.)	Conc.(ug/mL)	(+/-) µg/mL	CAS#	OSHA PEL (TWA)	LD50
s-Chlordane	19361	19361 013124	0.010	1.00	0.004	101.3	1.0	0.02	5103-74-2	0.5ma/m3 (skin)	orl-rat 500n

5E-05

Balance Uncertainty

7. 4,4'-Methoxychlor

19361 19361

013124 013124

> 0.010 0.010 0.010

0.010

1.8

0.004 0.004

1000.7 204.2 202.6

2.0 2.0

202.6

0.03 0.09

> 877-09-8 72-43-5

10mg/m3 ₹ ¥

orl-rat 6000mg/kg

NA

Š S

0.004

1,00

19361

Decachlorobiphenyl (209) 2,4,5,6-Tetrachloro-m-xylene 2. Endosulfan I

4. Dieldrin

White Co.							-				
volume(s) snown below were combined and diluted to (mL):	and diluted	to (mL):	100.0	0.021	Flask Uncertainty						
								Expanded		SDS information	
	Part	Lot	Dil	Initial	Uncertainty	Initial	Final	Uncertainty	(Solvent :	(Solvent Safety Info. On Attached pg.)	ched pg.)
Compound	Number	Number	Factor	Val. (ml.)	Pipette (mL)	Conc.(ug/mL)	Conc.(ug/ml.) Conc.(ug/ml.)	-(+/-) μg/mL	CAS#	OSHA PEL (TWA)	LDS0
trans-Chlordane	19361	013124	0.010	1.00	0.004	101.3	1.0	0.02	5103-74-2	0.5ma/m3 (skin)	orl-rat 500mo/ko
Endosulfan I	19361	013124	0.010	<u>1</u> .00	0.004	101.3	1.0	0.02	959-98-8	0.1mg/m3 (skin)	ori-rat 18ma/ko
4,4'-DDE	19361	013124	0.010	1.00	0.004	201.6	2.0	0.03	72-55-9	NA	orl-rat 880mo/kg
Dieldrin	19361	013124	0.010	1.00	0,004	202.8	2.0	0.03	60-57-1	0.25mg/m3 (skin)	ori-rat 38300ug/kg
Endosulfan sulfate	19361	013124	0.010	1.00	0.004	204.2	2.0	0.03	1031-07-8	N/A	ori-rat 18mg/kg
Endrin ketone	19361	013124	0.010	1.00	0.004	202.6	2.0	0.03	53494-70-5	N/A	N/A
A AT NA											

Sold Sold Sold Sold Sold Sold Sold Sold	se stated.		\sim	
1,5	Jana 2024	- 13	0	

The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise sta
 Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
 Standards are certified (4/-) 0.5% of the stated value, unless otherwise stated.

All Standards, after opening ampute, 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, D.C., (1994).











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

www.restek.com

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. P133401

Catalog No.:

32000

Lot No.: A0206810

Description:

Pesticide Surrogate Mix

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

Container Size:

Pkg Amt:

> 1 mL

Expiration Date:

April 30, 2030

Storage:

10°C or colder

Handling:

Contains PCBs - sonicate prior to

Ship:

Ambient

use.

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 99%

Purity

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

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.

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:

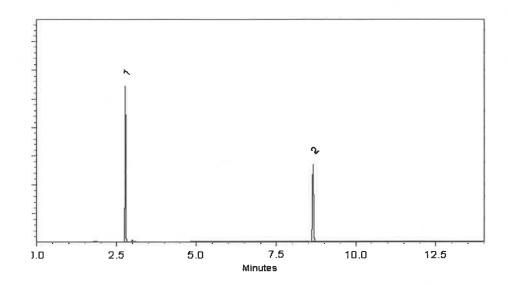
FCD

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

Gunga J Address

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

P13357
P13357
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. P133401

Catalog No.:

32000

Lot No.: A0206810

Description:

Pesticide Surrogate Mix

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

Container Size:

Pkg Amt:

> 1 mL

Expiration Date:

April 30, 2030

Storage:

10°C or colder

Handling:

Contains PCBs - sonicate prior to

Ship:

Ambient

use.

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 99%

Purity

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

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.

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:

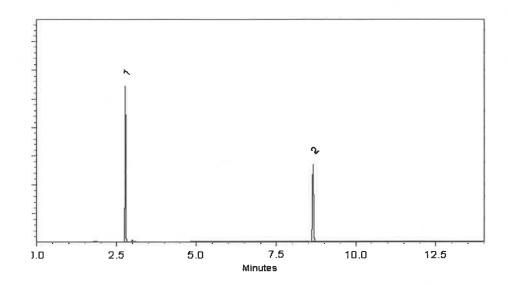
FCD

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

Gunga J Address

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

P13357
P13357
P13357
04/25/2025











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www.restek.com

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. P133401

Catalog No.:

32000

Lot No.: A0206810

Description:

Pesticide Surrogate Mix

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

Container Size:

Pkg Amt:

> 1 mL

Expiration Date:

April 30, 2030

Storage:

10°C or colder

Handling:

Contains PCBs - sonicate prior to

Ship:

Ambient

use.

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 99%

Purity

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

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.

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:

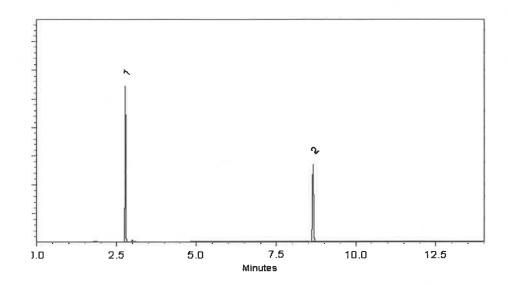
FCD

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

Gunga J Address

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

P13357
P13357
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: Expiration Date: 2 mL

January 31, 2028

Pkg Amt:

> 1 mL

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%

05-06-2024

`,	

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

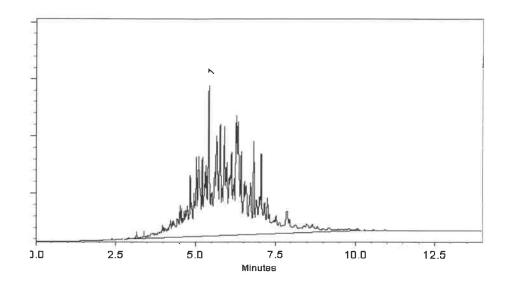
Det. Type:

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 #

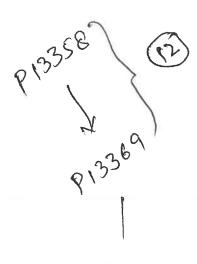
1128353505

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



05-06-2029













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Fax: 1-814-353-1309

www.restek.com

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

January 31, 2028

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

Container Size: Expiration Date: 2 mL

Pkg Amt: > 1 mL

10°C or colder

Ship:

Storage:

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%

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

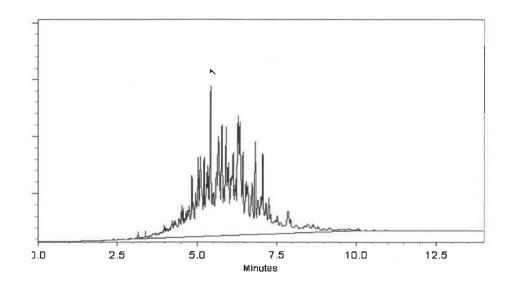
Det. Type:

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

P 13402 (5)
P 13406)
P 13406)
P 13406)