

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

8900, Fax: 908 789 8922

Prep Standard - Chemical Standard Summary

Order ID: Q3395

Test: Pesticide-TCL

Prepbatch ID: PB170213,

Sequence ID/Qc Batch ID: Pd102325,

Standard ID:

EP2643,EP2652,PP24651,PP24663,PP24738,PP24739,PP24740,PP24741,PP24742,PP24744,PP24746,PP24747,PP24748,PP24749,PP24750,PP24751,PP24752,PP24753,PP24755,PP24756,PP24757,PP24758,PP24759,PP24760,PP24761,PP24762,PP24763,PP24766,PP24766,PP24942,

Chemical ID:

E3875,E3941,E3944,E3951,E3955,E3956,E3971,E3972,E3976,E3978,P12604,P12610,P13038,P13041,P13196,P13246,P13774,P13780,P13786,P13788,P13862,P24754,P9053,



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Extractions STANDARD PREPARATION LOG

Recipe ID	NAME.	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Riteshkumar Patel
230	1:1ACETONE/HEXANE	EP2643	09/16/2025	03/16/2026	Evelyn Huang	None	None	
								09/16/2025

FROM	4000.00000ml of E3971 + 4000.00000ml of E3972 = Final Quantity: 8000.000 ml
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Recipe	NAME	NO	Bran Data	Expiration Date	<u>Prepared</u>	SeelelD	DinettelD	Supervised By
_	<u>NAME</u>	NO.	Prep Date	<u>Date</u>	<u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Riteshkumar Patel
3923	Baked Sodium Sulfate	EP2652	10/10/2025	01/28/2026	Evelyn Huang	Extraction_SC	None	
						ALE_2		10/10/2025

FROM 4000.0000gram of E3875 = Final Quantity: 4000.000 gram



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Pest/Pcb STANDARD PREPARATION LOG

4027 Pesticide resolution Check Mixture PP24651 06/16/2025 12/11/2025 Abdul Mirza None None 07/22/2	Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Yogesh Patel
I I I I I I I I I I I I I I I I I I I	4027		PP24651	06/16/2025	12/11/2025	Abdul Mirza	None	None	07/22/2025

Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Yogesh Patel
465	200 PPB Pest/PCB Surrogate Spike	PP24663	06/24/2025	12/24/2025	Abdul Mirza	None	None	07/21/2025

FROM 1.00000ml of P13786 + 999.00000ml of E3944 = Final Quantity: 1000.000 ml





Pest/Pcb STANDARD PREPARATION LOG

ID NA	AME	NO.	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Yogesh Patel
	0 PPM PEST stock Solution 1st ource(RESTEK)	PP24738	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Yogesh Patel
1472	20 PPM Pest Stock Solution 2nd Source	PP24739	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

FROM 1.00000ml of P13041 + 9.00000ml of E3956 = Final Quantity: 10.000 ml



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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
1273	20 PPM Mirex Stock (Primary Source)	<u>PP24740</u>	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

FROM	1.00000ml of P9053 + 9.00000ml of E3956 = 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 Yogesh Patel
3663	20 PPM MIREX Stock STD (Secondary source)	PP24741	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

FROM 1.00000ml of P13196 + 9.00000ml of E3956 = Final Quantity: 10.000 ml



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Pest/Pcb STANDARD PREPARATION LOG

84 Pest/PCB Surrogate Stock 20 PPM 07/21/2025 01/21/2026 Abdul Mirza None None 07/24/2025	cipe ID	<u>NAME</u>	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Yogesh Patel
	84	S S	PP24742	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

Recipe ID	<u>NAME</u>	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Yogesh Patel
3630	100/100 PPB PEST Working std.1st Source(RESTEK)	PP24744	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

FROM 98.50000ml of E3956 + 0.50000ml of PP24738 + 0.50000ml of PP24740 + 0.50000ml of PP24742 = Final Quantity: 100.000 ml





Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Yogesh Patel
386	1000/100 PPB Chlordane STD (Restek)	<u>PP24746</u>	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

FROM	0.10000ml of P12604 + 99.40000ml of E3956 + 0.50000ml of PP24742 =	Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Yogesh Patel
3746	1000/100 ppb Chlordane STD-RESTEK 2ND SOURCE	<u>PP24747</u>	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

FROM 0.10000ml of P12610 + 99.40000ml of E3956 + 0.50000ml of PP24742 = Final Quantity: 100.000 ml



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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 Yogesh Patel
383	1000/100 PPB Toxaphene STD (Restek)	PP24748	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

FROM 0.10000ml of P13774 + 99.40000ml of E3956 + 0.50000ml of PP24742 = 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 Yogesh Patel
3669	1000/100 PPB TOXAPHENE STD 2nd source (RESTEK)	PP24749	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

FROM 0.10000ml of P13862 + 99.40000ml of E3956 + 0.50000ml of PP24742 = Final Quantity: 100.000 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
3631	75 PPB ICAL PEST STD(RESTEK)	PP24750	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

Recipe ID	NAME.	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Yogesh Patel
3632	50 PPB ICAL PEST STD(RESTEK)	PP24751	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

FROM 0.50000ml of E3956 + 0.50000ml of PP24744 = Final Quantity: 1.000 ml





Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	<u>NAME</u>	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Yogesh Patel
	25 PPB ICAL PEST STD(RESTEK)	PP24752	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025

Recipe				<u>Expiration</u>	<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
3634	5 PPB ICAL PEST STD(RESTEK)	PP24753	07/21/2025	01/21/2026	Abdul Mirza	None	None	
								07/24/2025

FROM 0.90000ml of E3956 + 0.10000ml of PP24751 = 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 Yogesh Patel
528	CHLOR 750 PPB STD	PP24755	07/21/2025	01/21/2026	Abdul Mirza	None	None	3
								07/24/2025

Recipe				Expiration	<u>Prepared</u>			Supervised By
<u>ID</u>	NAME	NO.	Prep Date	<u>Date</u>	<u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Yogesh Patel
529	CHLOR 500 PPB STD	PP24756	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025
								0172-72020

FROM 0.50000ml of E3956 + 0.50000ml of PP24746 = 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
530	CHLOR 250 PPB STD	PP24757	07/21/2025	01/21/2026	Abdul Mirza	None	None	· ·
								07/24/2025

FROM	0.75000ml of E3956 + 0.25000ml of PP24746 = Final Quantity: 1.000 ml
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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
3408	CHLOR 50 PPB STD	PP24758	07/21/2025	01/21/2026	Abdul Mirza	None	None	Ü
								07/24/2025

FROM 0.90000ml of E3956 + 0.10000ml of PP24756 = 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 Yogesh Patel
532	CHLOR 500 PPB ICV STD	PP24759	07/21/2025	01/21/2026	Abdul Mirza	None	None	07/24/2025
								07/24/2025

FROM	0.50000ml of E3956 + 0.50000ml of PP24747	= Final Quantity: 1.000 ml
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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
533	TOX 750 PPB STD	PP24760	07/21/2025	01/21/2026	Abdul Mirza	None	None	3
								07/24/2025

FROM 0.25000ml of E3956 + 0.75000ml of PP24748 = Final Quantity: 1.000 ml





Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Yogesh Patel
534	TOX 500 PPB STD	PP24761	07/21/2025	01/21/2026	Abdul Mirza	None	None	regeen rate.
								07/24/2025

Recipe				Expiration	Prepared			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
535	TOX 250 PPB STD	PP24762	07/21/2025	01/21/2026	Abdul Mirza	None	None	3311
								07/24/2025

FROM 0.75000ml of E3956 + 0.25000ml of PP24748 = 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 Yogesh Patel
2217	TOX 100 PPB STD	PP24763	07/21/2025	01/21/2026	Abdul Mirza	None	None	rogoon r dioi
								07/24/2025

Recipe				<u>Expiration</u>	<u>Prepared</u>			Supervised By
<u>ID</u>	NAME	NO.	Prep Date	<u>Date</u>	<u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Yogesh Patel
3670	TOX 500 PPB ICV std (RESTEK)	PP24764	07/21/2025	01/21/2026	Abdul Mirza	None	None	
								07/24/2025

FROM 0.50000ml of PP24749 = 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 Yogesh Patel
79	500 PPB Pesticide Spike Solution	PP24766	07/28/2025	01/21/2026	Abdul Mirza	None	None	3
								08/19/2025

FROM	95.00000ml of E3955	+ 2.50000ml of PP24739 + 2.50000ml of PP24741	= Final Quantity: 100.000 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>	Yogesh Patel
758	PEM Mix w/Surr	PP24942	09/24/2025	03/24/2026	Abdul Mirza	None	None	
								10/10/2025

FROM 1.00000ml of P13780 + 99.00000ml of E3971 = Final Quantity: 100.000 ml



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	417203	01/28/2026	07/28/2025 / RUPESH	01/29/2025 / Rajesh	E3875
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)	243570	12/11/2025	06/11/2025 / Rajesh	06/04/2025 / Rajesh	E3941
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	05/24/2027	06/20/2025 / RUPESH	05/14/2025 / RUPESH	E3944
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3382-05 / Sand, Purified (cs/4x2.5kg)	25A2756718	12/31/2028	07/09/2025 / RUPESH	04/28/2020 / RUPESH	E3951
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Supplier Seidler Chemical	ItemCode / ItemName BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	Lot # 24H2762008		-		
	BA-9254-03 / Acetone,		Date	Opened By 07/16/2025 /	Received By 07/16/2025 /	Lot #



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)	25C0362005	04/30/2026	09/15/2025 / Evelyn	09/04/2025 / Riteshkumar	E3971
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	05/24/2027	09/16/2025 / Evelyn	09/04/2025 / Riteshkumar	E3972
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agela Technologies Inc.	FS0006 / Cleanert Florisil cartridge	M07456	04/03/2026	10/03/2025 / Evelyn	10/03/2025 / Evelyn	E3976
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date /	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	25C0362006	04/13/2026	10/13/2025 / RUPESH	10/08/2025 / Riteshkumar	E3978
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32021 / Chlordane Std.	A0197993	01/21/2026	07/21/2025 / Abdul	07/03/2023 / Abdul	P12604
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32021 / Chlordane Std.	A0197993	01/21/2026	07/21/2025 / Abdul	07/03/2023 / Abdul	P12610



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	01/21/2026	07/21/2025 / Abdul	12/26/2023 / Abdul	P13038
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	07/21/2026	07/21/2025 / Abdul	12/26/2023 / Abdul	P13041
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	79136 / Mirex, 1000 ug/ml	042022	01/21/2026	07/21/2025 / Abdul	01/17/2024 / Abdul	P13196
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date /	Chemtech Lot #
Absolute Standards, Inc.	19161 / 8081 pesticide resolution check mixture	013124	12/17/2025	06/17/2025 / Abdul	02/09/2024 / Abdul	P13246
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32005 / Toxaphene Standard	A0203038	01/21/2026	07/21/2025 / Abdul	05/03/2024 / Ankita	P13774
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32074 / Pesticide Performance Evaluation Mix w/Surrogate	A0213999	03/24/2026	09/24/2025 / Abdul	11/19/2024 / Ankita	P13780



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	A0214495	12/24/2025	06/24/2025 / Abdul	11/19/2024 / Ankita	P13786

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,	A0214495	01/21/2026	07/21/2025 / Abdul	11/19/2024 / Ankita	P13788
	Acetone, 1mL					

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32005 / Toxaphene Standard	A0210240	01/21/2026	07/21/2025 / Abdul	12/09/2024 / Abdul	P13862

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	79136 / Mirex, 1000 ug/ml	112018	01/21/2026	07/21/2025 / Abdul	11/01/2019 / Stephen	P9053



Mirador 201, Col. Mirador Monterrey, N.L. México CP 64070 TEL +52 81 13 52 57 57 www.pqm.com.mx

CERTIFICATE OF ANALYSIS

PRODUCT:

SODIUM SULFATE CRYSTALS ANHYDROUS

QUALITY:

ACS (CODE RMB3375)

FORMULA:

Na₂SO₄

MEMPERS A

SPECIFICATION NUMBER: 6399

RELEASE DATE:

MAY/23/2024

LOT NUMBER:

417203

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na ₂ SO ₄)	Min. 99.0%	99.8 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.2
insoluble matter	Max. 0.01%	0.001 %
Loss on ignition	Max. 0.5%	0.1 %
Chloride (CI)	Max. 0.001%	<0.001 %
Nitrogen compounds (as N)	Max. 5 ppm	<5 ppm
Phosphate (PO ₄)	Max. 0.001%	<0.001 %
Heavy metals (as Pb)	Max. 5 ppm	<5 ppm
Iron (Fe)	Max. 0.001%	<0.001 %
Calcium (Ca)	Max. 0.01%	0.001 %
Magnesium (Mg)	Max. 0.005%	0.001 %
Potassium (K)	Max. 0.008%	0.001 %
Extraction-concentration suitability	Passes test	Passes test
Appearance	Passes test	Passes test
dentification	Passes test	Passes test
Solubility and foreing matter	Passes test	Passes test
Retained on US Standard No. 10 sieve	Max. 1%	0.2 %
Retained on US Standard No. 60 sieve	Min. 94%	96.2 %
Through US Standard No. 60 sieve	Max. 5%	3.5 %
Through US Standard No. 100 sieve	Max. 10%	0.1 %

QC: PhC Irma Belmares

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



Certificate of Analysis

1 Reagent Lane Fair Lawn, NJ 07410 201.796.7100 tel

201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System

Standard ISO9001:2015 by SAI Global Certificate Number CERT - 0120633

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

Catalog Number	H303	Quality Test / Release Date	11/07/2024
Lot Number	243570	and the second s	1770112024
Description	HEXANES - OPTIMA		
Country of Origin	United States	Suggested Retest Date	Nov/2029
Chemical Origin	Organic - non animal	33 - 11 - 11 - 11 - 11 - 11 - 11 - 11 -	1107/2020
BSE/TSE Comment	No animal products are used as processing aids, or any other ma	starting raw material ingredients, or used aterial that might migrate to the finished pr	in processing, including lubricants, roduct.

N/A	A POLICE OF THE PARTY OF THE PA	THE RESERVENCE	- 4-17, 1169
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless liquid
ASSAY (N-HEXANE)	%	>= 60	69
ASSAY (SUM C6 HYDROCARBONS)	%	>= 99.9	>99.9
COLOR	APHA	<= 5	<5
DENSITY AT 25 DEGREES C	GM/ML	Inclusive Between 0.653 - 0.673	0.669
EVAPORATION RESIDUE	ppm	<= 1	<1
FLUORESCENCE BACKGROUND	ppb	<= 1	<1
DENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
OPTICAL ABS AT 195 NM	ABS. UNITS	<= 1	0.74
OPTICAL ABS AT 210 NM	ABS. UNITS	<= 0.25	0.17
OPTICAL ABS AT 220 NM	ABS. UNITS	<= 0.07	0.05
OPTICAL ABS AT 254 NM	ABS. UNITS	<= 0.005	0.001
PESTICIDE RESIDUE ANALYSIS	NG/L	<= 10	<10
REFRACTIVE INDEX @ 25 DEG C		Inclusive Between 1.375 - 1.385	1.379
SUITABILITY FOR GC/MS		= PASS TEST	PASS TEST
SULFUR COMPOUNDS	%	<= 0.005	<0.005
HIOPHENE	PASS/FAIL	= PASS TEST	PASS TEST
VATER (H2O)	%	<= 0.01	<0.01
WATER-SOLUBLE TITRABLE ACID	MEQ/G	<= 0.0003	0.0001

Kub Salyu

Red by R1 on 6/11/25

Harout Sahagian - Quality Control Manager - Fair Lawn

E 3941

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

*Based on suggested storage condition.

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 %	
Color (APHA)	<= 10	99.8 %
Residue after Evaporation	<= 1.0 ppm	5
Substances Reducing Permanganate	Passes Test	0.2 ppm
Titrable Acid (µeq/g)		Passes Test
Titrable Base (μeq/g)	<= 0.3	0.2
Water (H2O)	<= 0.6	<0.1
ID–Sensitive Impurities (as 2–Octanol)Single Impurity Peak	<= 0.5 %	0.2 %
ng/mL)	<= 5	<1
CD Sensitive Impurities (as HeptachlorEpoxide) Single Peak	<= 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



Jamie Croak
Director Quality Operations, Bioscience Production



Certificate of Analysis

Material

Material Description

Grade

BDH9274-2.5KG

BDH SAND STDD OTTAWA W+I 2.5KG

NOT APPLICABLE

Batch

Reassay Date

CAS Number

Molecular Formula Molecular Mass

Date of Manufacture

Storage

25A2756718 12/31/2028

14808-60-7

SiO2 60.09

12/05/2024

Room Temperature

Characteristics

Specifications

Measured Values

Appearance

Moisture

Particle Size 30-40 mesh

CUSTOMER PART # BDH9274-2.5KG

Beige granules.

<= 0.1 %

Beige granules.

0.1 %

99 %

Received on A19125.

Internal ID #: 793

Signature

Additional Information

We certify that this batch conforms to the specifications listed above.

This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC.

28600 Fountain Parkway, Solon OH 44139 USA

Analysis may have been rounded to significant digits in specification limits

Product meets analytical specifications of the grades listed.

PO: PO2-2575 PRODUCT CODE: SHIP DATE: 6/20/25

Acetone

BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis



Material No.: 9254-03

Batch No.: 24H2762008

Manufactured Date: 2024-04-18

Expiration Date:2027-04-18

Revision No.: 0

Certificate of Analysis

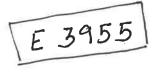
Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected forwater)	>= 99.4 %	100.0%
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.0 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titrable Acid (µeq/g)	<= 0.3	0.2
Titrable Base (µeq/g)	<= 0.6	<0.1
Water (H ₂ O)	<= 0.5 %	<0.1 %
FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	1

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

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

Recieved on 7/16/25



ACCOAR 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.: 25C0362005

Manufactured Date: 2025-01-29

Expiration Date:2026-04-30

Revision No.: 0

Certificate of Analysis

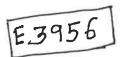
Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	6
ECD-Sensitive Impurities (as EthyleneDibromide) - Single Impurity Peak (ng/mL)	<= 5	5
Assay (Total Saturated C ₆ Isomers) (byGC, corrected for water)	>= 99.5 %	100.0 %
Assay (as n-Hexane) (by GC, correctedfor water)	>= 95 %	100 %
Color (APHA)	<= 10	10
Residue after Evaporation	<= 1.0 ppm	0.1 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	<= 0.05 %	<0.01 %

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

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

Recieved on 7/16/25



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



Material No.: 9262-03

Batch No.: 25C0362005

Manufactured Date: 2025-01-29

Expiration Date:2026-04-30

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 HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	6
ECD-Sensitive Impurities (as EthyleneDibromide) – Single Impurity Peak (ng/mL)	<= 5	5
Assay (Total Saturated Co Isomers) (byGC, corrected for water)	>= 99.5 %	100.0 %
Assay (as n-Hexane) (by GC, correctedfor water)	>= 95 %	100 %
Color (APHA)	<= 10	10
Residue after Evaporation	<= 1.0 ppm	0.1 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: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E3971

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 ((CH3)2CO) (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 HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	1	

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

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E3972

Arminen Bankananan Kansantala 117

Cleanert Florisil

1g/6ml 30/pkg

固相萃取产品

MFG#:G02147

CAT#FS0006

LOT#:M07456



Made in China



E 3976





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



Material No.: 9262-03

Batch No.: 25C0362006

Manufactured Date: 2025-01-29

Expiration Date:2026-04-30

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL)		1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	6
ECD-Sensitive Impurities (as EthyleneDibromide) – Single Impurity Peak (ng/mL)	<= 5	4
Assay (Total Saturated Co Isomers) (byGC, corrected for water)	>= 99.5 %	100.0 %
Assay (as n-Hexane) (by GC, correctedfor water)	>= 95 %	100 %
Color (APHA)	<= 10	10
Residue after Evaporation	<= 1.0 ppm	0.2 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: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3978





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:

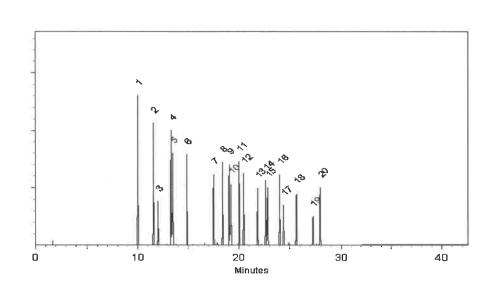
Det. Type:

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

Absolute Standards, Inc.

800-368-1131 www.absolutestandards.com



Certified Reference Material CRM

Lot#

81025



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

DATE

CERTIFIED WEIGHT REPORT

Part Number: Lot Number:

79136 042022

Solvent(s): Acetone

Description:

Mirex

Expiration Date: 042027

Recommended Storage:

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

Refrigerate (4 °C)

Nominal Concentration (µg/mL): NIST Test ID#:

1000

6UTB

5E-05 Balance Uncertainty

50.0

0.006 Flask Uncertainty

042022 Formulated By: **Prashant Chauhan** DATE 042022

Pedro L. Rentas

Expanded

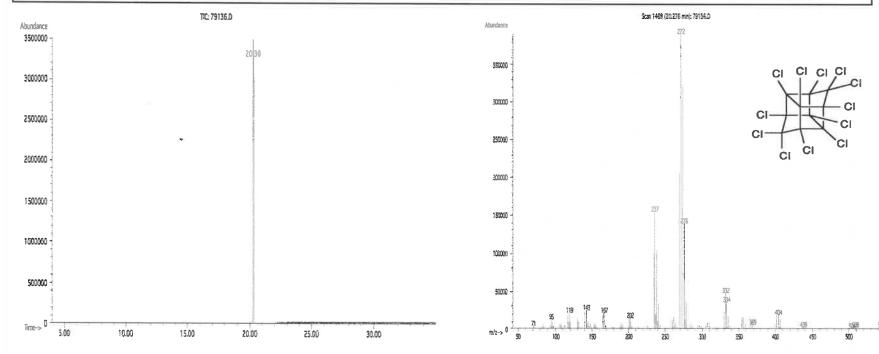
Reviewed By:

SDS Information

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

1. Mirex 437 9492400 1000 99.4 0.05034 0.05040 0.5 1001.1 10.3 2385-85-5 N/A orl-rat 306mg/kg

Method GC7MSD-1.M: Column: SPB-608 (30m X 0.25mm ID X 0.25mm 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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.

· All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.

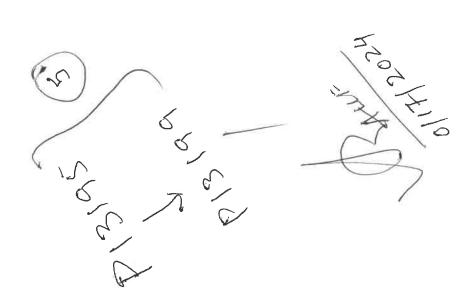
· Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

1 of 1

Part # 79136

Lot # 042022

Printed: 1/16/2024, 3:48:44 PM







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.:

32021

Lot No.: A0197993

Description:

Chlordane Standard

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

Container Size:

2 mL

Pkg Amt:

> 1 mL

Expiration Date:

August 31, 2029

Storage:

10°C or colder

Ship:

Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS#	Lot#	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Chlordane 10% trans-Chlordane; 9% cis-Chlordane; 81% other isomers	57-74-9	978545	%	1,005.0 μg/mL	+/- 55.7700

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

Solvent: Hexane

> CAS# 110-54-3 Purity 99%

Tech Tips:

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



Quality Confirmation Test

Column:

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

Carrier Gas:

helium-constant pressure 20 psi.

Temp. Program:

@ 25°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

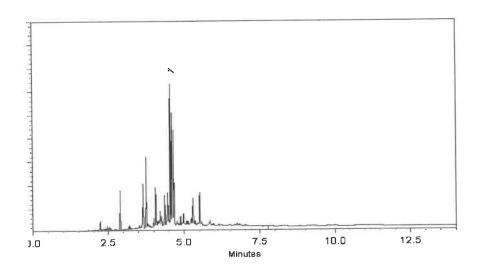
Split Vent:

300 ml/min.

Inj. Vol

Det. Type:

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.

Morgan Creighead - Mix Technician

Date Mixed:

11-May-2023

Balance Serial #

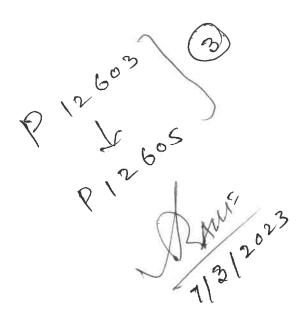
1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed:

16-May-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.:

32021

Lot No.: A0197993

Description:

Chlordane Standard

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

Container Size :

2 mL

Pkg Amt:

> 1 mL

Expiration Date :

August 31, 2029

rkg Amt: 2 | III

Storage: 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS#	Lot#	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Chlordane	57-74-9	978545	%	1,005.0 μg/mL	+/- 55.7700
	10% trans-Chlordane; 9% cis-Chlordane; 81% other					
	isomers					

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

Solvent:

Hexane

CAS # 110-54-3

Purity

99% _

Tech Tips:

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

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

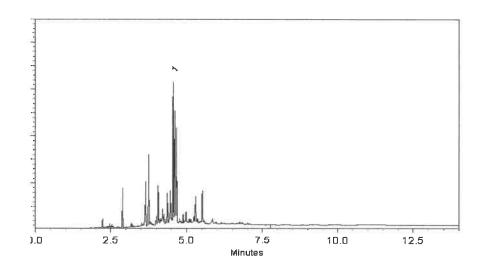
Det. Type: ECD

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.

Morray Craighead - Mix Technician

Date Mixed:

11-May-2023

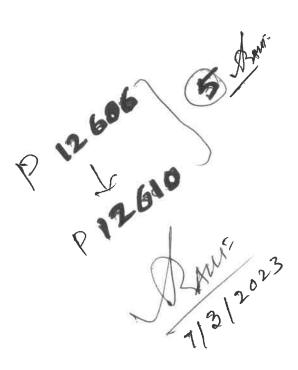
Balance Serial #

1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed:

16-May-2023













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

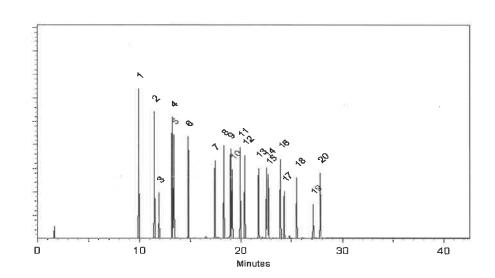
Det. Type:

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



Absolute Standards, Inc.

800-368-1131 www.absolutestandards.com



Certified Reference Material CRM



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

CERTIFIED WEIGHT REPORT

Part Number: 19161 Lot Number: 013124

Description: CLP Pesticides & PCB's Resolution Check Standard

100.0

9 components Solvent(s):

Expiration Date: Recommended Storage: 013129

Hexane Refrigerate (4 °C) Toluene

Lot# 273615 (50%)28508 (50%)

Nominal Concentration (µg/mL): Varied

NIST Test ID#:

6UTB Volume(s) shown below were combined and diluted to (mL): 5E-05 Balance Uncertainty 0.021 Flask Uncertainty

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

6135727 6135727

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

• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.

• Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above). · Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated,

All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.

· Uncertainty Reference: Taylor, B.N. and Kuyai, 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).

Part # 19161

Lot # 013124

1 of 1











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.:

32005

Lot No.: A0203038

Description:

Toxaphene Standard

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

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 Gray. Conc.

Solvent: Hexane

> CAS# 110-54-3 99% **Purity**

Column:

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

Carrier Gas:

helium-constant pressure 20 psl.

Temp. Program:

200°C to 300°C

@ 25°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

300°C

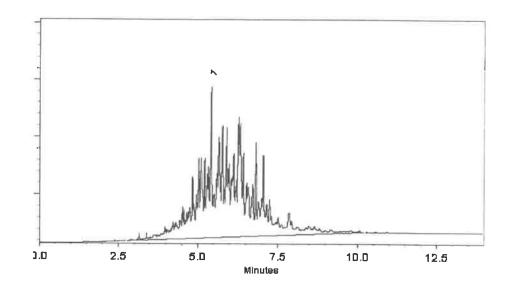
Det. Type:

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.

Date Mixed:

10-Oct-2023

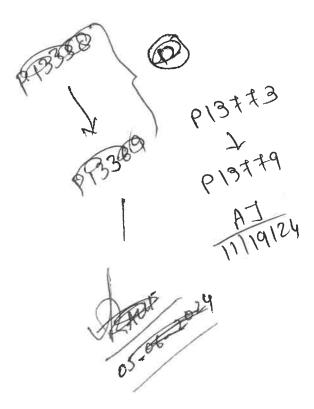
Balance Serial #

1128353505

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed:

16-Oct-2023















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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.:

32074

Lot No.: A0213999

Description:

Handling:

Pesticide Performance Eval Mix w/Surrogate

Performance Evaluation Std. 3/90 SOW w/surrogates 1-25µg/mL,

Hexane, 1mL/ampul

Container Size: **Expiration Date:**

2 mL

July 31, 2028

Contains PCBs - sonicate prior to

Pkg Amt: > 1 mL

Storage: 10°C or colder

> Ship: **Ambient**

> > CERTIFIED VALUES

P13760 AJ 11119124 P13784

			10			_	
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%	2.0 μg/mL	+/- 0.1506	
2	alpha-BHC	319-84-6	15279000	99%	1.0 μg/mL	+/- 0.0749	
3	gamma-BHC (Lindane)	58-89-9	14931300	97%	1.0 μg/mL	+/- 0.0756	
4	beta-BHC	319-85-7	BCCC6425	99%	1.0 μg/mL	+/- 0.0749	
5	Endrin	72-20-8	15076100	98%	5.0 μg/mL	+/- 0.3769	
6	4,4'-DDT	50-29-3	231103ЛLМ	97%	10.0 μg/mL	+/- 0.7512	
7	Methoxychlor	72-43-5	14979500	98%	24.8 μg/mL	+/- 1.8543	
8	Decachlorobiphenyl (BZ# 209)	2051-24-3	30638	99%	2.0 μg/mL	+/- 0.1513	

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

Solvent:

Hexane

CAS# 110-54-3

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:

150°C to 300°C

@ 4°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

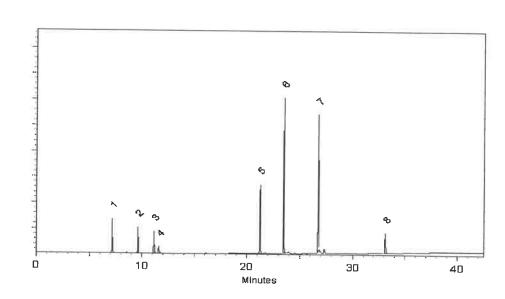
Det. Type:

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.

Million Horrin

Malina Homan - Operations Technician I

Date Mixed:

17-Jul-2024

Balance Serial #

1128353505

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed:

31-Jul-2024



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Fax: 1-814-353-1309

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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.:

32000

Lot No.: A0214495

Description:

Pesticide Surrogate Mix

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

Container Size:

2 mL

Pkg Amt:

> 1 mL

Expiration Date:

October 31, 2030

10°C or colder Storage:

Handling:

Contains PCBs - sonicate prior to

Ship: **Ambient**

CERTIFIED VALUES

P13785

1 AJ

P13789 11119124

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%	200.2 μg/mL	+/- 11.1087	
2	Decachlorobiphenyl (BZ# 209)	2051-24-3	30679	99%	201.4 μg/mL	+/- 11.1753	

* 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.

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:

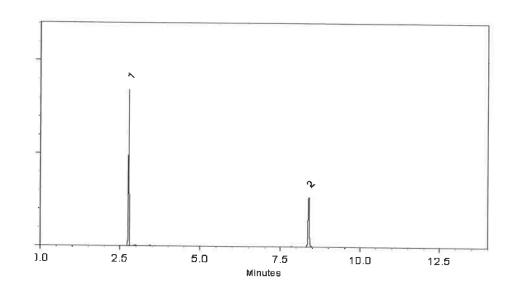
ECD

Split Vent:

10 ml/min.

Inj. Vol

1η. ν 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.

Aaron Enyart - Operations Tech I

Date Mixed:

29-Jul-2024

Balance Serial #

B345965662

George & Polker

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed:

01-Aug-2024



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Fax: 1-814-353-1309

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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.:

32000

Lot No.: A0214495

Description:

Pesticide Surrogate Mix

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

Container Size:

2 mL

Pkg Amt:

> 1 mL

Expiration Date:

October 31, 2030

10°C or colder Storage:

Handling:

Contains PCBs - sonicate prior to

Ship: **Ambient**

CERTIFIED VALUES

P13785

1 AJ

P13789 11119124

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%	200.2 μg/mL	+/- 11.1087	
2	Decachlorobiphenyl (BZ# 209)	2051-24-3	30679	99%	201.4 μg/mL	+/- 11.1753	

* 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.

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:

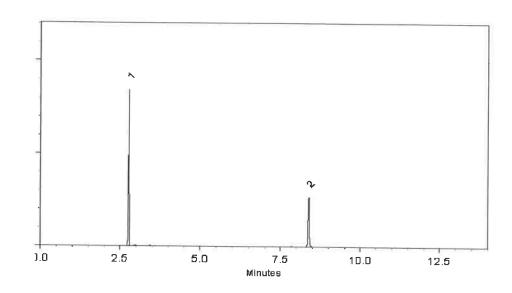
ECD

Split Vent:

10 ml/min.

Inj. Vol

1η. ν 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.

Aaron Enyart - Operations Tech I

Date Mixed:

29-Jul-2024

Balance Serial #

B345965662

George & Polker

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed:

01-Aug-2024



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Fax: 1-814-353-1309

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.: A0210240

Description: Toxaphene Standard

Container Size:

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

2 mL > 1 mL Pkg Amt: **Expiration Date:** July 31, 2028 Storage: 10°C or colder

> Ship: **Ambient**

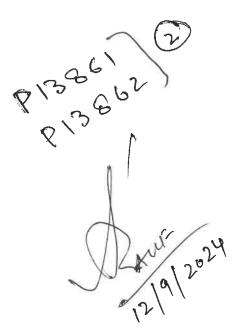
CERTIFIED VALUES

Elution Order	Compound	CAS#	Lot#	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Toxaphene	8001-35-2	1051817	%	1,009.3 μg/mL	+/- 56.0105

* 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

300 C

Det. Type:

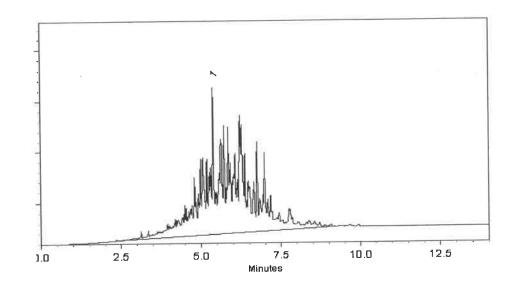
ECD

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.

Amanda Miller - Operations Tech III - ARM QC

Date Mixed:

11-Apr-2024

Balance Serial #

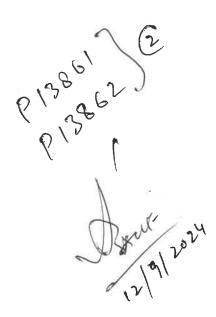
B442140311

Mist talk

Christie Mills - Operations Lead Tech - ARM QC

Date Passed:

26-Apr-2024



Absolute Standards, Inc.

800-368-1131 www.absolutestandards.com



Certified Reference Material CRM



ISO 17034 Accredited Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number:

72072

112018

Solvent(s):

Lot#

Lot Number: Description:

n-Tetracosane-d50

Methylene chloride

102669

Expiration Date:

112028

Received by SG on 11/1/19

Recommended Storage: Nominal Concentration (µg/mL):

Ambient (20 °C) 1000

P9044- P9053

NIST Test ID#:

2684186

5E-05 Balance Uncertainty

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

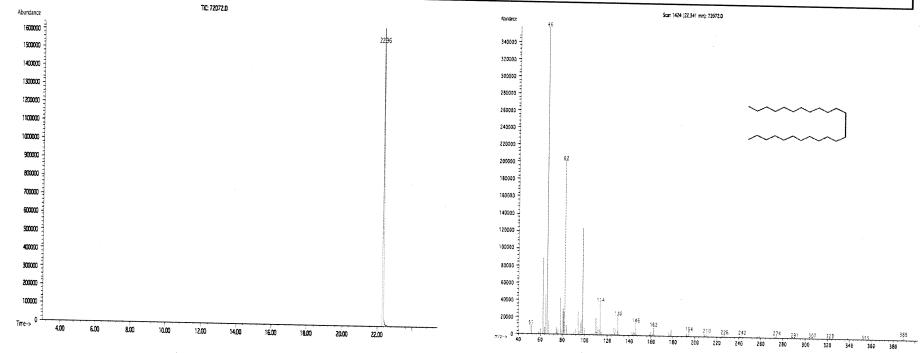
0.058 Flask Uncertainty

200.0

112018 Formulated By Prashant Chauhan DATE 112018 Reviewed By: Pedro Rentas DATE

		Lot	Nominal	Purity	11	_			Expanded		SDS Information	
Compound	RM#	Number			Uncertainty	Target	Actual	Actual	Uncertainty	(Solvent S	afety Info. On Attac	ched pa.)
	14-17	Number	Conc (µg/mL)	(%)	Purity	Weight(g)	Weight(g)	Conc (µg/mL)	(+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. n-Tetracosane-d50												
. In tellacosalie-upo	2072	PR-17753/09216TC1	1000	98	0.2	0.20411	0.20415	1000.2	4.0	10440.00.0		

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25mm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.

All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.

• Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).





Run 40, "P72072 L112018 [1000µg/mL in MeCl2]

Run Length: 35.00 min, 20999 points at 10 points/second.

Created: Thu, Nov 22, 2018 at 7:23:18 AM.

Sampled: Sequence "112018-GC4M1", Method "GC4-M1".

Analyzed using Method "GC4-M1".

Comments

GC4-M1 Analysis by Melissa Stonier

Column ID SPB5 L#60062-01A: 30 meter x 0.53mm x 1.5um Film Thickness

Flow rates; Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL, Hydrogen (detector) = 30 mL,

Air (detector) =360 mL

Oven Temp 1 = 50°C (1 min), Rate = 10°C/min, Oven Temp 2 = 300°C (9 min), Total Run Time = 35 Minutes.

Injector Temp = 200°C, FID Temp = 300°C, FID Signal = eDag Channel 1.

Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 uL, Range = 3

