

Prep Standard - Chemical Standard Summary

Order ID : Q3424

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,PP24764,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,

Extractions STANDARD PREPARATION LOG

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

FROM 4000.00000ml of E3971 + 4000.00000ml of E3972 = Final Quantity: 8000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	EP2652	10/10/2025	01/28/2026	Evelyn Huang	Extraction_SC ALE_2	None	Riteshkumar Patel
(EX-SC-2)								

FROM 4000.00000gram of E3875 = Final Quantity: 4000.000 gram

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4027	Pesticide resolution Check Mixture 8081	PP24651	06/16/2025	12/11/2025	Abdul Mirza	None	None	Yogesh Patel
								07/22/2025

FROM 1.00000ml of P13246 + 99.00000ml of E3941 = Final Quantity: 100.000 ml

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

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

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3629	20 PPM PEST stock Solution 1st source(RESTEK)	PP24738	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

FROM 1.00000ml of P13038 + 9.00000ml of E3956 = Final Quantity: 10.000 ml

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

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

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1273	20 PPM Mirex Stock (Primary Source)	PP24740	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

FROM 1.00000ml of P9053 + 9.00000ml of E3956 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3663	20 PPM MIREX Stock STD (Secondary source)	PP24741	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

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

Pest/Pcb STANDARD PREPARATION LOG

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

FROM 1.00000ml of P13788 + 9.00000ml of E3956 = Final Quantity: 10.000 ml

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

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

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

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

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

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
383	1000/100 PPB Toxaphene STD (Restek)	PP24748	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

FROM 0.10000ml of P13774 + 99.40000ml of E3956 + 0.50000ml of PP24742 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3669	1000/100 PPB TOXAPHENE STD 2nd source (RESTEK)	PP24749	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3631	75 PPB ICAL PEST STD(RESTEK)	PP24750	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

FROM 0.25000ml of E3956 + 0.75000ml of PP24744 = Final Quantity: 1.000 ml

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

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

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3633	25 PPB ICAL PEST STD(RESTEK)	PP24752	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

FROM 0.75000ml of E3956 + 0.25000ml of PP24744 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3634	5 PPB ICAL PEST STD(RESTEK)	PP24753	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

FROM 0.90000ml of E3956 + 0.10000ml of PP24751 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
528	CHLOR 750 PPB STD	PP24755	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

FROM 0.25000ml of E3956 + 0.75000ml of PP24746 = Final Quantity: 1.000 ml

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

FROM 0.50000ml of E3956 + 0.50000ml of PP24746 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
530	CHLOR 250 PPB STD	PP24757	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

FROM 0.75000ml of E3956 + 0.25000ml of PP24746 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3408	CHLOR 50 PPB STD	PP24758	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

FROM 0.90000ml of E3956 + 0.10000ml of PP24756 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
532	CHLOR 500 PPB ICV STD	PP24759	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

FROM 0.50000ml of E3956 + 0.50000ml of PP24747 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
533	TOX 750 PPB STD	PP24760	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

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

Pest/Pcb STANDARD PREPARATION LOG

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

FROM 0.50000ml of E3956 + 0.50000ml of PP24748 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
535	TOX 250 PPB STD	PP24762	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

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

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2217	TOX 100 PPB STD	PP24763	07/21/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								07/24/2025

FROM 0.90000ml of E3956 + 0.10000ml of PP24748 = Final Quantity: 1.000 ml

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

FROM 0.50000ml of PP24749 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
79	500 PPB Pesticide Spike Solution	PP24766	07/28/2025	01/21/2026	Abdul Mirza	None	None	Yogesh Patel
								08/19/2025

FROM 95.00000ml of E3955 + 2.50000ml of PP24739 + 2.50000ml of PP24741 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
758	PEM Mix w/Surr	PP24942	09/24/2025	03/24/2026	Abdul Mirza	None	None	Yogesh Patel
								10/10/2025

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	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 #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H2762008	04/18/2027	07/16/2025 / RUPESH	07/16/2025 / RUPESH	E3955

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	07/16/2025 / RUPESH	07/16/2025 / RUPESH	E3956

CHEMICAL RECEIPT LOG BOOK

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 / Received By	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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32291 / Pesticide Mix, CLP method, organochlorine Std AB#1, 200ug/mL, hexane/toluene, 1mL/ampul	A0200423	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 / Received By	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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32000 / Pesticide Mix, CLP method, Pesticide Surrogate Mix, 200ug/mL, Acetone, 1mL	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, Acetone, 1mL	A0214495	01/21/2026	07/21/2025 / Abdul	11/19/2024 / Ankita	P13788

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



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

MIRADOR 201, COL. MIRADOR
MONTERREY, N.L. MÉXICO
CP 64070
TEL +52 81 13 52 67 67
www.pqm.com.mx

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE CRYSTALS ANHYDROUS		
QUALITY :	ACS (CODE RMB3375)	FORMULA :	Na ₂ SO ₄
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 (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (as N)	Max. 5 ppm	<5 ppm
Phosphate (PO ₄)	Max. 0.001%	<0.001 %
Heavy metals (as Pb)	Max. 5 ppm	<5 ppm
Iron (Fe)	Max. 0.001%	<0.001 %
Calcium (Ca)	Max. 0.01%	0.001 %
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
Identification	Passes test	Passes test
Solubility and foreign 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 %

COMMENTS

QC: PhC Irma Belmares

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

RE-02-01, Ed. 3

E 3875

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		
Description	HEXANES - OPTIMA		
Country of Origin	United States	Suggested Retest Date	Nov/2029
Chemical Origin	Organic - non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless liquid
ASSAY (N-HEXANE)	%	>= 60	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
IDENTIFICATION	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
THIOPHENE	PASS/FAIL	= PASS TEST	PASS TEST
WATER (H2O)	%	<= 0.01	<0.01
WATER-SOLUBLE TITRABLE ACID	MEQ/G	<= 0.0003	0.0001



Recd. by RI on 6/11/25

E3941

Harout Sahagian - Quality Control Manager - Fair Lawn

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

*Based on suggested storage condition.

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

Avantor™



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 for water)	>= 99.4 %	99.8 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (μeq/g)	<= 0.3	0.2
Titration Base (μeq/g)	<= 0.6	<0.1
Water (H 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

E3944

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



Material	BDH9274-2.5KG
Material Description	BDH SAND STDD OTTAWA W+I 2.5KG
Grade	NOT APPLICABLE
Batch	25A2756718
Reassay Date	12/31/2028
CAS Number	14808-60-7
Molecular Formula	SiO ₂
Molecular Mass	60.09
Date of Manufacture	12/05/2024
Storage	Room Temperature

Characteristics	Specifications	Measured Values
Appearance	Beige granules.	Beige granules.
Moisture	<= 0.1 %	0.1 %
Particle Size 30-40 mesh	>= 80 %	99 %
CUSTOMER PART # BDH9274-2.5KG		

Received on 1/12/25.

E3951

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.

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 for water)	>= 99.4 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.0 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (µeq/g)	<= 0.3	0.2
Titration Base (µeq/g)	<= 0.6	<0.1
Water (H ₂ O)	<= 0.5 %	<0.1 %
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

Received on 7/16/25

E 3955

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA, 19087, U.S.A. Phone 610.386.1700

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

 **avantors**[™]



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) (by GC, corrected for water)	$\geq 99.5 \%$	100.0 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	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)	$\leq 0.05 \%$	$< 0.01 \%$

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

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

Received on 7/16/25

E3956



Jamie Croak
Director Quality Operations, Bioscience Production

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) (by GC, corrected for water)	$\geq 99.5 \%$	100.0 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	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)	$\leq 0.05 \%$	$< 0.01 \%$

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

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

E3971

Jamie Croak
Director Quality Operations, Bioscience Production

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™



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 for water)	>= 99.4 %	99.8 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (µeq/g)	<= 0.3	0.2
Titration Base (µeq/g)	<= 0.6	<0.1
Water (H 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

E3972

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

Cleanert Florisil

1g/6ml 30/pkg

LOT#:M07456

MFG#:G02147

CAT#FS0006



固相萃取产品

Made in China

Agela Technologies

E 3976



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

 **avantorsTM**



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)	≤ 5	1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	6
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	≤ 5	4
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	$\geq 99.5 \%$	100.0 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	100 %
Color (APHA)	≤ 10	10
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	$\leq 0.05 \%$	$< 0.01 \%$

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3978



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



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 32291

Lot No.: A0199099

Description : Organochlorine Pesticide Mix AB #1

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : June 30, 2027

Storage: 10°C or colder

Ship: Ambient

P130397 5
↓
P13043 1
✓
12-26-2023

CERTIFIED VALUES

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

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

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

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

P13039
 ↓
 P13043
 5
 1
 JAW
 12/26/23

Quality Confirmation Test

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

Carrier Gas:
 helium-constant pressure 20 psi.

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

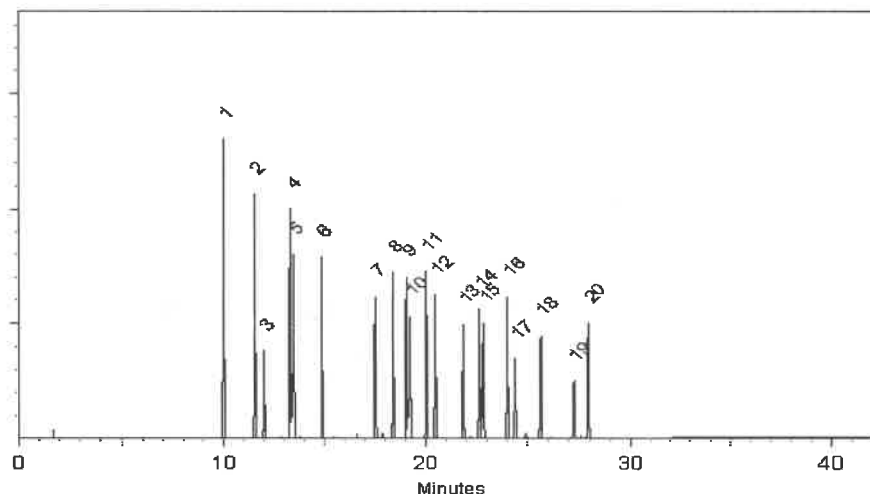
Inj. Temp:
 200°C

Det. Temp:
 300°C

Det. Type:
 ECD

Split Vent:
 Split ratio 50:1

Inj. Vol
 1µl



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

Josh McCloskey
 Josh McCloskey - Operations Technician I

Date Mixed: 19-Jun-2023

Balance Serial # 1128360905

Jennifer Pollino
 Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 23-Jun-2023

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

**CERTIFIED WEIGHT REPORT**

Part Number:	<u>79136</u>
Lot Number:	<u>042022</u>
Description:	<u>Mirex</u>

Solvent(s):	Lot#
Acetone	81025

Expiration Date: 04/20/27

Recommended Storage: Refrigerate (4 °C)

Nominal Concentration ($\mu\text{g/mL}$):

NIST Test ID#:

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

5E-05	Balance Uncertainty
0.006	Flask Uncertainty

Formulated By:	 Prashant Chauhan	042022
Reviewed By:	 Pedro L. Ramias	042022

Reviewed By:

Pedro L. Rentas

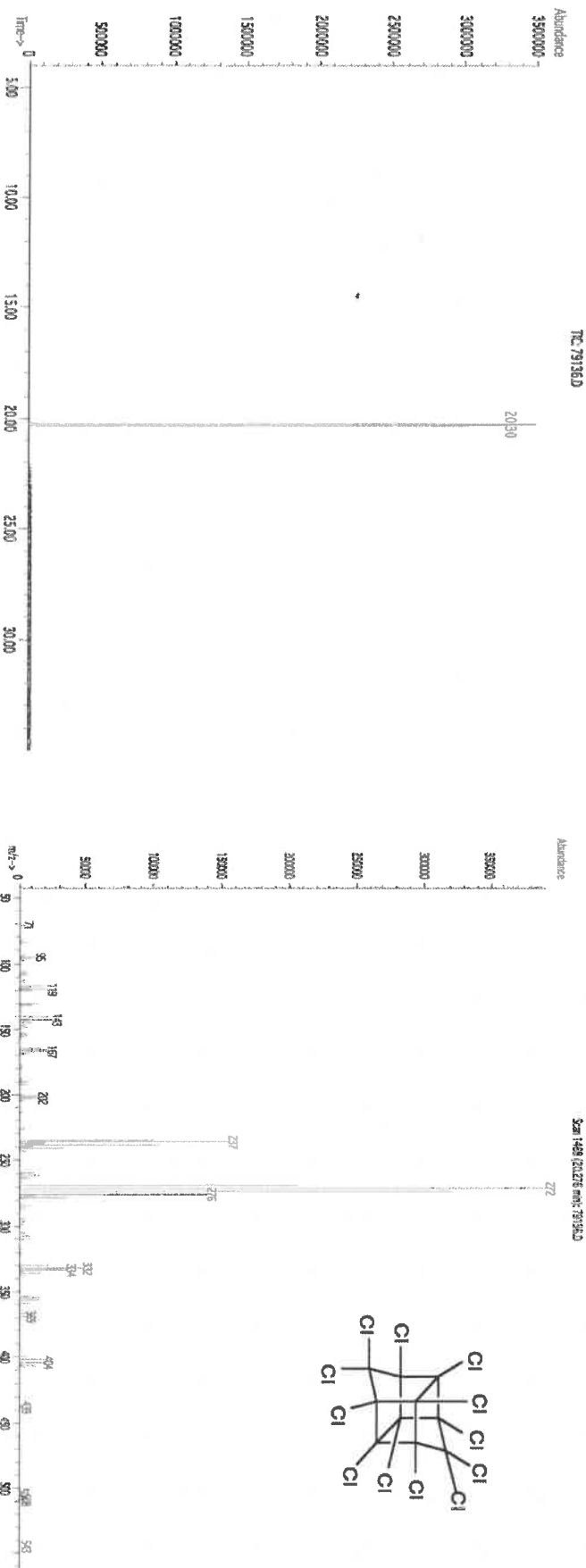
DATE _____

SDS Information

[illegible]

Mirex						Ori-fat 306mg/kg
437	9492400	1000	99.4	0.5	0.05034	0.05040
					1001.1	10.3
						2385-85.5
						N/A

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



- The certified values (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 ($\pm$) 0.5% of the stated value, unless otherwise stated.

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

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

$P_{13} | 195$
 $\downarrow$
 $P_{13} | 199$
 $\downarrow$
 (5)
 $|$

01/17/2024
JALIN

5



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

P 12603
↓
P 12605
✓ *Rauf*
7/3/2023

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

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

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

Tech Tips:

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

Quality Confirmation Test

Column:

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

Carrier Gas:

helium-constant pressure 20 psi.

Temp. Program:

200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

300°C

Det. Type:

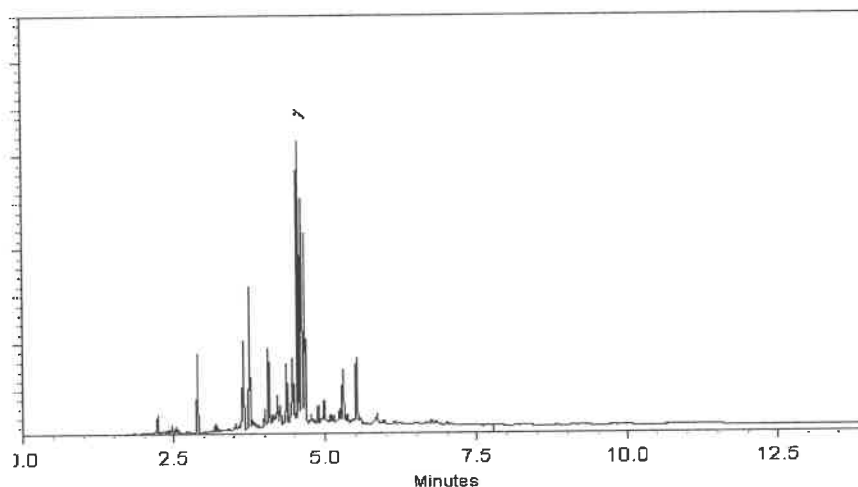
ECD

Split Vent:

300 ml/min.

Inj. Vol

0.2µl



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


Morgan Craighead - Mix Technician

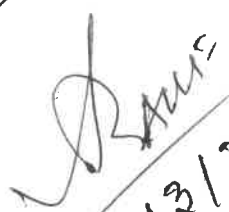
Date Mixed: 11-May-2023

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

P 12603 } (3)
↓
P 12605

7/3/2023



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

Handwritten: P 12606, P 12610, 5 Five, 7/3/2023

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:

200°C to 300°C
@ 25°C/min. { hold 10 min.}

Inj. Temp:

250°C

Det. Temp:

300°C

Det. Type:

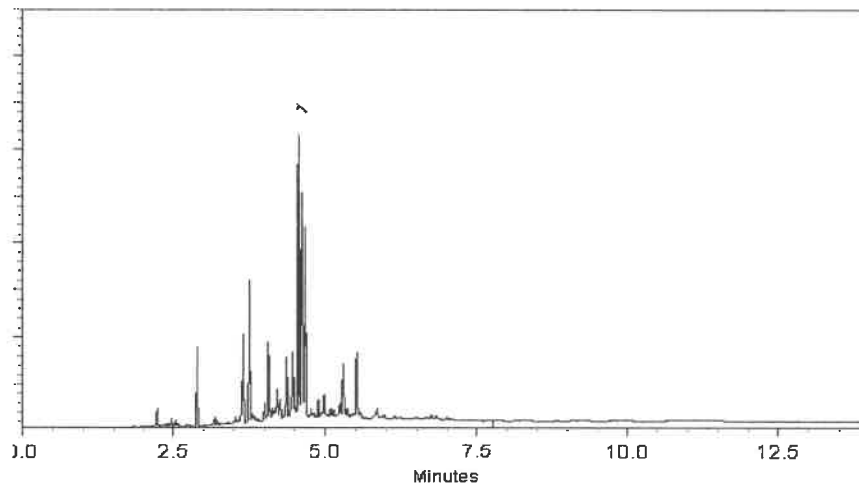
ECD

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.

Morgan Craighead - 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. : 32291 **Lot No.:** A0200423

Description : Organochlorine Pesticide Mix AB #1

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

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

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

Ship: Ambient

P 13034
↓
P 13038
12.26.2023

CERTIFIED VALUES

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

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

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

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

P13034
P13038
1
5
12/26/2023

Quality Confirmation Test

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

Carrier Gas:
helium-constant pressure 20 psi.

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

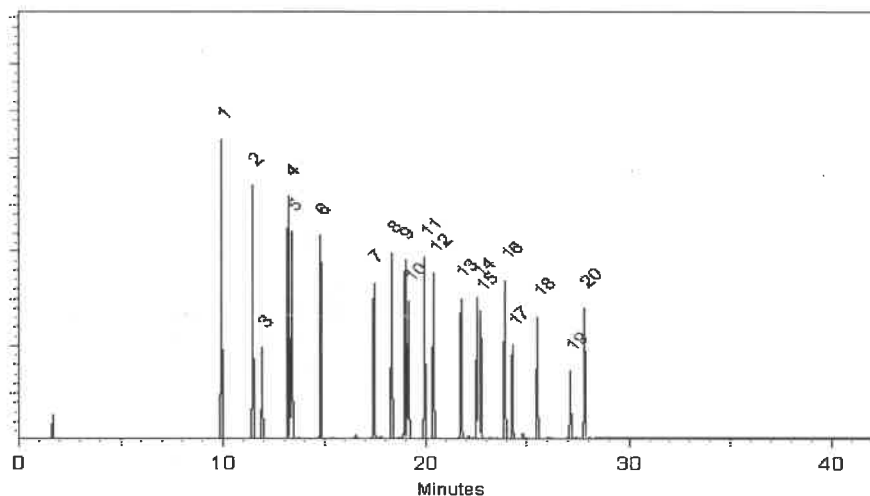
Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD

Split Vent:
Split ratio 50:1

Inj. Vol
1µl



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

Sam Moodler
Sam Moodler - Operations Tech I

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

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 03-Aug-2023

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



CERTIFIED WEIGHT REPORT

Part Number:	19161		
Lot Number:	013124		
Description:	CLP Pesticides & PCBs Resolution Check Standard		
Expiration Date:	013129	Solvent(s):	Lot#
Recommended Storage:	Refrigerate (4 °C)	Hexane	273615 (50%)
Nominal Concentration (µg/mL):	Varied	Toluene	28508 (50%)
NIST Test ID#:	6UTB	Balance Uncertainty	5E-05
Volume(s) shown below were combined and diluted to (mL):	100.0	Pipet Uncertainty	0.021

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

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (±) µg/mL	(Solvent Safety Info. On Attached pg.)	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)	or-rat 500mg/kg
2. Endosulfan I	19361	013124	0.010	1.00	0.004	101.3	1.0	0.02	959-98-8	0.1mg/m3 (skin)	or-rat 18mg/kg
3. 4,4'-DDE	19361	013124	0.010	1.00	0.004	201.6	2.0	0.03	72-55-9	N/A	or-rat 880mg/kg
4. Dieldrin	19361	013124	0.010	1.00	0.004	202.8	2.0	0.03	60-57-1	0.25mg/m3 (skin)	or-rat 36300µg/kg
5. Endosulfan sulfate	19361	013124	0.010	1.00	0.004	204.2	2.0	0.03	1031-07-8	N/A	or-rat 18mg/kg
6. Endrin ketone	19361	013124	0.010	1.00	0.004	202.6	2.0	0.03	53494-70-5	N/A	N/A
7. 4,4-Methoxychlor	19361	013124	0.010	1.00	0.004	1000.7	10.0	0.09	72-43-5	10mg/m3	or-rat 6000mg/kg
8. 2,4,5,6-Tetrachloro-m-xylene	19361	013124	0.010	1.00	0.004	202.6	2.0	0.03	877-09-8	N/A	N/A
9. Decachlorobiphenyl (209)	19361	013124	0.010	1.00	0.004	202.0	2.0	0.03	2051-24-3	N/A	N/A

P13243
P13244
(5)

P13244
P13245
P13246
P13247
P13248
P13249
P13250
P13251
P13252
P13253
P13254
P13255
P13256
P13257
P13258
P13259
P13260
P13261
P13262
P13263
P13264
P13265
P13266
P13267
P13268
P13269
P13270
P13271
P13272
P13273
P13274
P13275
P13276
P13277
P13278
P13279
P13280
P13281
P13282
P13283
P13284
P13285
P13286
P13287
P13288
P13289
P13290
P13291
P13292
P13293
P13294
P13295
P13296
P13297
P13298
P13299
P13300
P13301
P13302
P13303
P13304
P13305
P13306
P13307
P13308
P13309
P13310
P13311
P13312
P13313
P13314
P13315
P13316
P13317
P13318
P13319
P13320
P13321
P13322
P13323
P13324
P13325
P13326
P13327
P13328
P13329
P13330
P13331
P13332
P13333
P13334
P13335
P13336
P13337
P13338
P13339
P13340
P13341
P13342
P13343
P13344
P13345
P13346
P13347
P13348
P13349
P13350
P13351
P13352
P13353
P13354
P13355
P13356
P13357
P13358
P13359
P13360
P13361
P13362
P13363
P13364
P13365
P13366
P13367
P13368
P13369
P13370
P13371
P13372
P13373
P13374
P13375
P13376
P13377
P13378
P13379
P13380
P13381
P13382
P13383
P13384
P13385
P13386
P13387
P13388
P13389
P13390
P13391
P13392
P13393
P13394
P13395
P13396
P13397
P13398
P13399
P13400
P13401
P13402
P13403
P13404
P13405
P13406
P13407
P13408
P13409
P13410
P13411
P13412
P13413
P13414
P13415
P13416
P13417
P13418
P13419
P13420
P13421
P13422
P13423
P13424
P13425
P13426
P13427
P13428
P13429
P13430
P13431
P13432
P13433
P13434
P13435
P13436
P13437
P13438
P13439
P13440
P13441
P13442
P13443
P13444
P13445
P13446
P13447
P13448
P13449
P13450
P13451
P13452
P13453
P13454
P13455
P13456
P13457
P13458
P13459
P13460
P13461
P13462
P13463
P13464
P13465
P13466
P13467
P13468
P13469
P13470
P13471
P13472
P13473
P13474
P13475
P13476
P13477
P13478
P13479
P13480
P13481
P13482
P13483
P13484
P13485
P13486
P13487
P13488
P13489
P13490
P13491
P13492
P13493
P13494
P13495
P13496
P13497
P13498
P13499
P13500
P13501
P13502
P13503
P13504
P13505
P13506
P13507
P13508
P13509
P13510
P13511
P13512
P13513
P13514
P13515
P13516
P13517
P13518
P13519
P13520
P13521
P13522
P13523
P13524
P13525
P13526
P13527
P13528
P13529
P13530
P13531
P13532
P13533
P13534
P13535
P13536
P13537
P13538
P13539
P13540
P13541
P13542
P13543
P13544
P13545
P13546
P13547
P13548
P13549
P13550
P13551
P13552
P13553
P13554
P13555
P13556
P13557
P13558
P13559
P13560
P13561
P13562
P13563
P13564
P13565
P13566
P13567
P13568
P13569
P13570
P13571
P13572
P13573
P13574
P13575
P13576
P13577
P13578
P13579
P13580
P13581
P13582
P13583
P13584
P13585
P13586
P13587
P13588
P13589
P13590
P13591
P13592
P13593
P13594
P13595
P13596
P13597
P13598
P13599
P13600
P13601
P13602
P13603
P13604
P13605
P13606
P13607
P13608
P13609
P13610
P13611
P13612
P13613
P13614
P13615
P13616
P13617
P13618
P13619
P13620
P13621
P13622
P13623
P13624
P13625
P13626
P13627
P13628
P13629
P13630
P13631
P13632
P13633
P13634
P13635
P13636
P13637
P13638
P13639
P13640
P13641
P13642
P13643
P13644
P13645
P13646
P13647
P13648
P13649
P13650
P13651
P13652
P13653
P13654
P13655
P13656
P13657
P13658
P13659
P13660
P13661
P13662
P13663
P13664
P13665
P13666
P13667
P13668
P13669
P13670
P13671
P13672
P13673
P13674
P13675
P13676
P13677
P13678
P13679
P13680
P13681
P13682
P13683
P13684
P13685
P13686
P13687
P13688
P13689
P13690
P13691
P13692
P13693
P13694
P13695
P13696
P13697
P13698
P13699
P13700
P13701
P13702
P13703
P13704
P13705
P13706
P13707
P13708
P13709
P13710
P13711
P13712
P13713
P13714
P13715
P13716
P13717
P13718
P13719
P13720
P13721
P13722
P13723
P13724
P13725
P13726
P13727
P13728
P13729
P13730
P13731
P13732
P13733
P13734
P13735
P13736
P13737
P13738
P13739
P13740
P13741
P13742
P13743
P13744
P13745
P13746
P13747
P13748
P13749
P13750
P13751
P13752
P13753
P13754
P13755
P13756
P13757
P13758
P13759
P13760
P13761
P13762
P13763
P13764
P13765
P13766
P13767
P13768
P13769
P13770
P13771
P13772
P13773
P13774
P13775
P13776
P13777
P13778
P13779
P13780
P13781
P13782
P13783
P13784
P13785
P13786
P13787
P13788
P13789
P13790
P13791
P13792
P13793
P13794
P13795
P13796
P13797
P13798
P13799
P13800
P13801
P13802
P13803
P13804
P13805
P13806
P13807
P13808
P13809
P13810
P13811
P13812
P13813
P13814
P13815
P13816
P13817
P13818
P13819
P13820
P13821
P13822
P13823
P13824
P13825
P13826
P13827
P13828
P13829
P13830
P13831
P13832
P13833
P13834
P13835
P13836
P13837
P13838
P13839
P13840
P13841
P13842
P13843
P13844
P13845
P13846
P13847
P13848
P13849
P13850
P13851
P13852
P13853
P13854
P13855
P13856
P13857
P13858
P13859
P13860
P13861
P13862
P13863
P13864
P13865
P13866
P13867
P13868
P13869
P13870
P13871
P13872
P13873
P13874
P13875
P13876
P13877
P13878
P13879
P13880
P13881
P13882
P13883
P13884
P13885
P13886
P13887
P13888
P13889
P13890
P13891
P13892
P13893
P13894
P13895
P13896
P13897
P13898
P13899
P13900
P13901
P13902
P13903
P13904
P13905
P13906
P13907
P13908
P13909
P13910
P13911
P13912
P13913
P13914
P13915
P13916
P13917
P13918
P13919
P13920
P13921
P13922
P13923
P13924
P13925
P13926
P13927
P13928
P13929
P13930
P13931
P13932
P13933
P13934
P13935
P13936
P13937
P13938
P13939
P13940
P13941
P13942
P13943
P13944
P13945
P13946
P13947
P13948
P13949
P13950
P13951
P13952
P13953
P13954
P13955
P13956
P13957
P13958
P13959
P13960
P13961
P13962
P13963
P13964
P13965
P13966
P13967
P13968
P13969
P13970
P13971
P13972
P13973
P13974
P13975
P13976
P13977
P13978
P13979
P13980
P13981
P13982
P13983
P13984
P13985
P13986
P13987
P13988
P13989
P13990
P13991
P13992
P13993
P13994
P13995
P13996
P13997
P13998
P13999
P14000
P14001
P14002
P14003
P14004
P14005
P14006
P14007
P14008
P14009
P14010
P14011
P14012
P14013
P14014
P14015
P14016
P14017
P14018
P14019
P14020
P14021
P14022
P14023
P14024
P14025
P14026
P14027
P14028
P14029
P14030
P14031
P14032
P14033
P14034
P14035
P14036
P14037
P14038
P14039
P14040
P14041
P14042
P14043
P14044
P14045
P14046
P14047
P14048
P14049
P14050
P14051
P14052
P14053
P14054
P14055
P14056
P14057
P14058
P14059
P14060
P14061
P14062
P14063
P14064
P14065
P14066
P14067
P14068
P14069
P14070
P14071
P14072
P14073
P14074
P14075
P14076
P14077
P14078
P14079
P14080
P14081
P14082
P14083
P14084
P14085
P14086
P14087
P14088
P14089
P14090
P14091
P14092
P14093
P14094
P14095
P14096
P14097
P14098
P14099
P14100
P14101
P14102
P14103
P14104
P14105
P14106
P14107
P14108
P14109
P14110
P14111
P14112
P14113
P14114
P14115
P14116
P14117
P14118
P14119
P14120
P14121
P14122
P14123
P14124
P14125
P14126
P14127
P14128
P14129
P14130
P14131
P14132
P14133
P14134
P14135
P14136
P14137
P14138
P14139
P14140
P14141
P14142
P14143
P14144
P14145
P14146
P14147
P14148
P14149
P14150
P14151
P14152
P14153
P14154
P14155
P14156
P14157
P14158
P14159
P14160
P14161
P14162
P14163
P14164
P14165
P14166
P14167
P14168
P14169
P14170
P14171
P14172
P14173
P14174
P14175
P14176
P14177
P14178
P14179
P14180
P14181
P14182
P14183
P14184
P14185
P14186
P14187
P14188
P14189
P14190
P14191
P14192
P14193
P14194
P14195
P14196
P14197
P14198
P14199
P14200
P14201
P14202
P14203
P14204
P14205
P14206
P14207
P14208
P14209
P14210
P14211
P14212
P14213
P14214
P14215
P14216
P14217
P14218
P14219
P14220
P14221
P14222
P14223
P14224
P14225
P14226
P14227
P14228
P14229
P14230
P14231
P14232
P14233
P14234
P14235
P14236
P14237
P14238
P14239
P14240
P14241
P14242
P14243
P14244
P14245
P14246
P14247
P14248
P14249
P14250
P14251
P14252
P14253
P14254
P14255
P14256
P14257
P14258
P14259
P14260
P14261
P14262
P14263
P14264
P14265
P14266
P14267
P14268
P14269
P14270
P14271
P14272
P14273
P14274
P14275
P14276
P14277
P14278
P14279
P14280
P14281
P14282
P14283
P14284
P14285
P14286
P14287
P14288
P14289
P14290
P14291
P14292
P14293
P14294
P14295
P14296
P14297
P14298
P14299
P14300
P14301
P14302
P14303
P14304
P14305
P14306
P14307
P14308
P14309
P14310
P14311
P14312
P14313
P14314
P14315
P14316
P14317
P14318
P14319
P14320
P14321
P14322
P14323
P14324
P14325
P14326
P14327
P14328
P14329
P14330
P14331
P14332
P14333
P14334
P14335
P14336
P14337
P14338
P14339
P14340
P14341
P14342
P14343
P14344
P14345
P14346
P14347
P14348
P14349
P14350
P14351
P14352
P14353
P14354
P14355
P14356
P14357
P14358
P14359
P14360
P14361
P14362
P14363
P14364
P14365
P14366
P14367
P14368
P14369
P14370
P14371
P14372
P14373
P14374
P14375
P14376
P14377
P14378
P14379
P14380
P14381
P14382
P14383
P14384
P14385
P14386
P14387
P14388
P14389
P14390
P14391
P14392
P14393
P14394
P14395
P14396
P14397
P14398
P14399
P14400
P14401
P14402
P14403
P14404
P14405
P14406
P14407
P14408
P14409
P14410
P14411
P14412
P14413
P14414
P14415
P14416
P14417
P14418
P14419
P14420
P14421
P14422
P14423
P14424
P14425
P14426
P14427
P14428
P14429
P14430
P14431
P14432
P14433
P14434
P14435
P14436
P14437
P14438
P14439
P14440
P14441
P14442
P14443
P14444
P14445
P14446
P14447
P14448
P14449
P14450
P14451
P14452
P14453
P14454
P14455
P14456
P14457
P14458
P14459
P14460
P14461
P14462
P14463
P14464
P14465
P14466
P14467
P14468
P14469
P14470
P14471
P14472
P14473
P14474
P14475
P14476
P14477
P14478
P14479
P14480
P14481
P14482
P14483
P14484
P14485
P14486
P14487
P14488
P1448

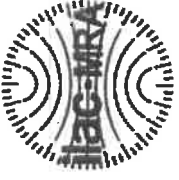


110 Benner Circle
Belleville, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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

Description : Toxaphene Standard

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

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

Ship: Ambient

CERTIFIED VALUES

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

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

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

Handwritten notes and signatures:

- Signature: *[Signature]*
- Date: *11/19/24*
- Text: *P13779*
- Text: *P13773*

Quality Confirmation Test

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

Carrier Gas:
helium-constant pressure 20 psi.

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

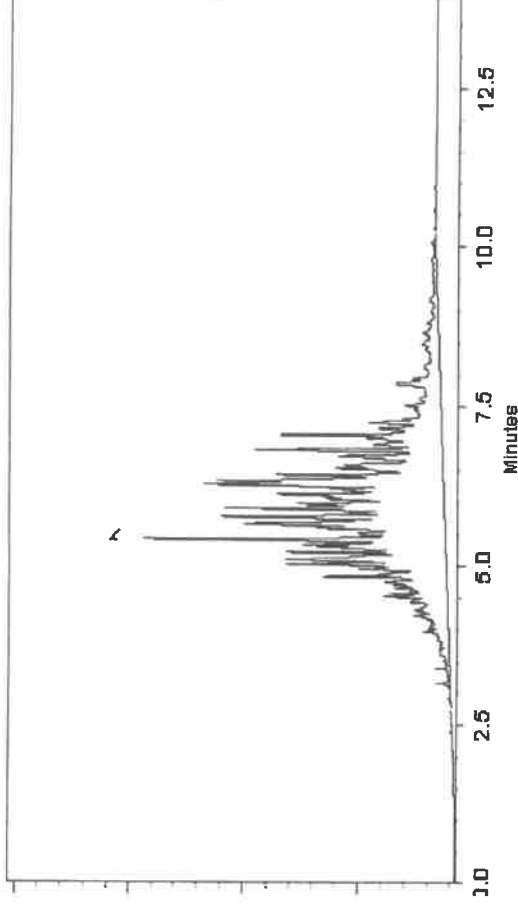
Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD

Split Vent:
300 ml/min.

Inj. Vol
0.2µl



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

J.P.

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 #FW 80397

(P)
P13773
P19779
A7
11/19/24
10-50



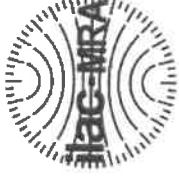
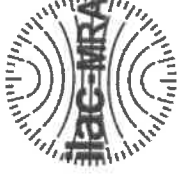
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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.: 32074 **Lot No.:** A0213999

Description: Pesticide Performance Eval Mix w/Surrogate

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

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

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

918780 AJ
11/19/24

918784

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%	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	231103JLM	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 .2µm
Rtx-CLP II (cat.# 111323)

Carrier Gas:

helium-constant pressure 20 psi.

Temp. Program:

150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

300°C

Det. Type:

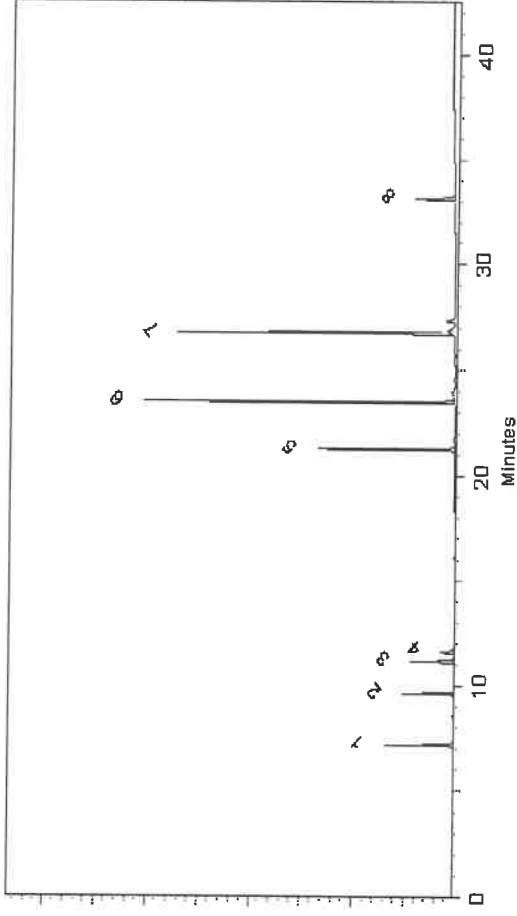
ECD

Split Vent:

Split ratio 50:1

Inj. Vol

1µl



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

Malina Homan

Malina Homan - Operations Technician I

Date Mixed: 17-Jul-2024

Balance Serial # 1128353505

Jennifer Pollino

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 31-Jul-2024

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



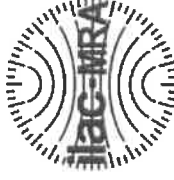
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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. : 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 **Storage:** 10°C or colder

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

P19785
AJ
11/19/24
P19789

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%	200.2 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.

Quality Confirmation Test

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

Carrier Gas:
helium-constant pressure 20 psi.

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

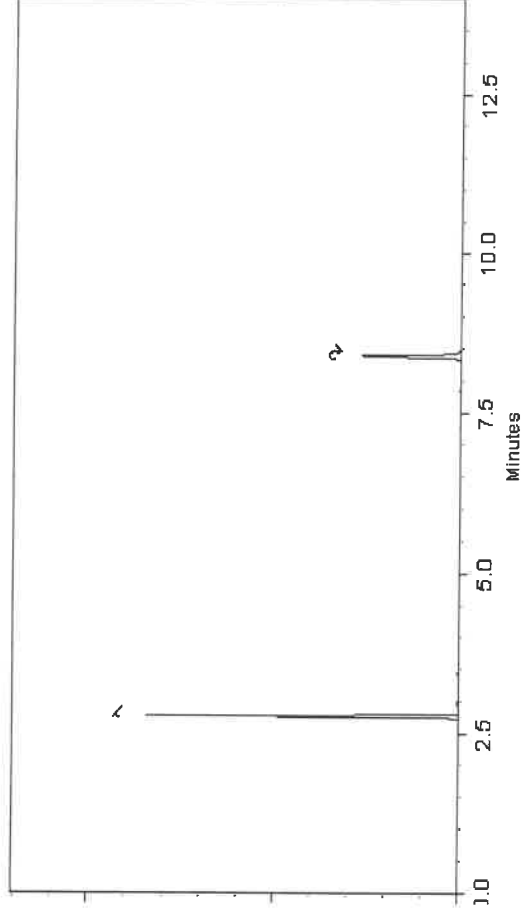
Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD

Split Vent:
10 ml/min.

Inj. Vol
1µl



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

A. O. P.
Aaron Enyart - Operations Tech I

Date Mixed: 29-Jul-2024 Balance Serial # B345965662

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 01-Aug-2024

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



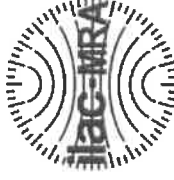
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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. : 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 **Storage:** 10°C or colder

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

P19785
AJ
11/19/24
P19789

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%	200.2 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.

Quality Confirmation Test

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

Carrier Gas:
helium-constant pressure 20 psi.

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

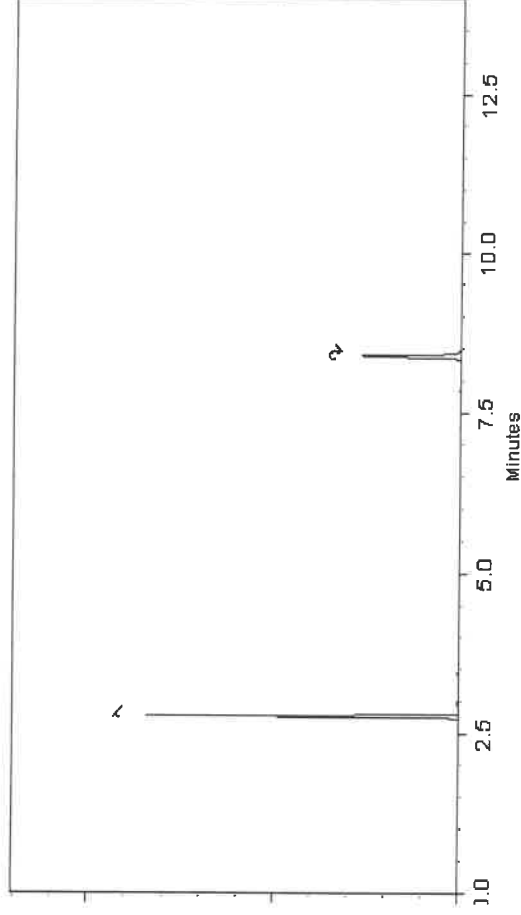
Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD

Split Vent:
10 ml/min.

Inj. Vol
1µl



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

A. O. P.
Aaron Enyart - Operations Tech I

Date Mixed: 29-Jul-2024 Balance Serial # B345965662

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 01-Aug-2024

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. : 32005 **Lot No.:** A0210240

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

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

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%

P13861
P13862

12/9/2024

Quality Confirmation Test

Column:

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

Carrier Gas:

helium-constant pressure 20 psi.

Temp. Program:

200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

300°C

Det. Type:

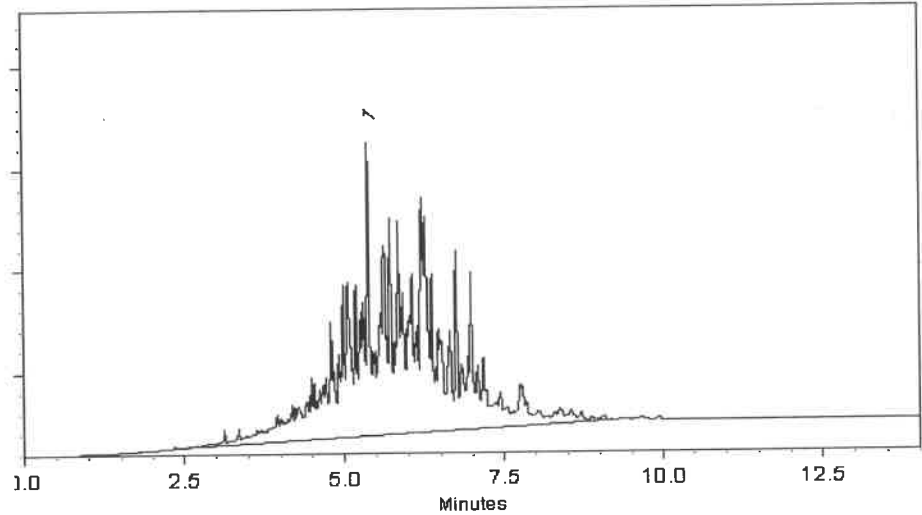
ECD

Split Vent:

300 ml/min.

Inj. Vol

0.2µl



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


Amanda Miller - Operations Tech III - ARM QC

Date Mixed: 11-Apr-2024

Balance Serial # B442140311

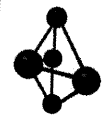

Christie Mills - Operations Lead Tech - ARM QC

Date Passed: 26-Apr-2024

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

P13861 } ②
P13862 }


12/9/2024



CERTIFIED WEIGHT REPORT

Part Number: **72072**
Lot Number: **112018**
Description: **n-Tetracosane-d50**

Expiration Date: **112028**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **2684186**

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

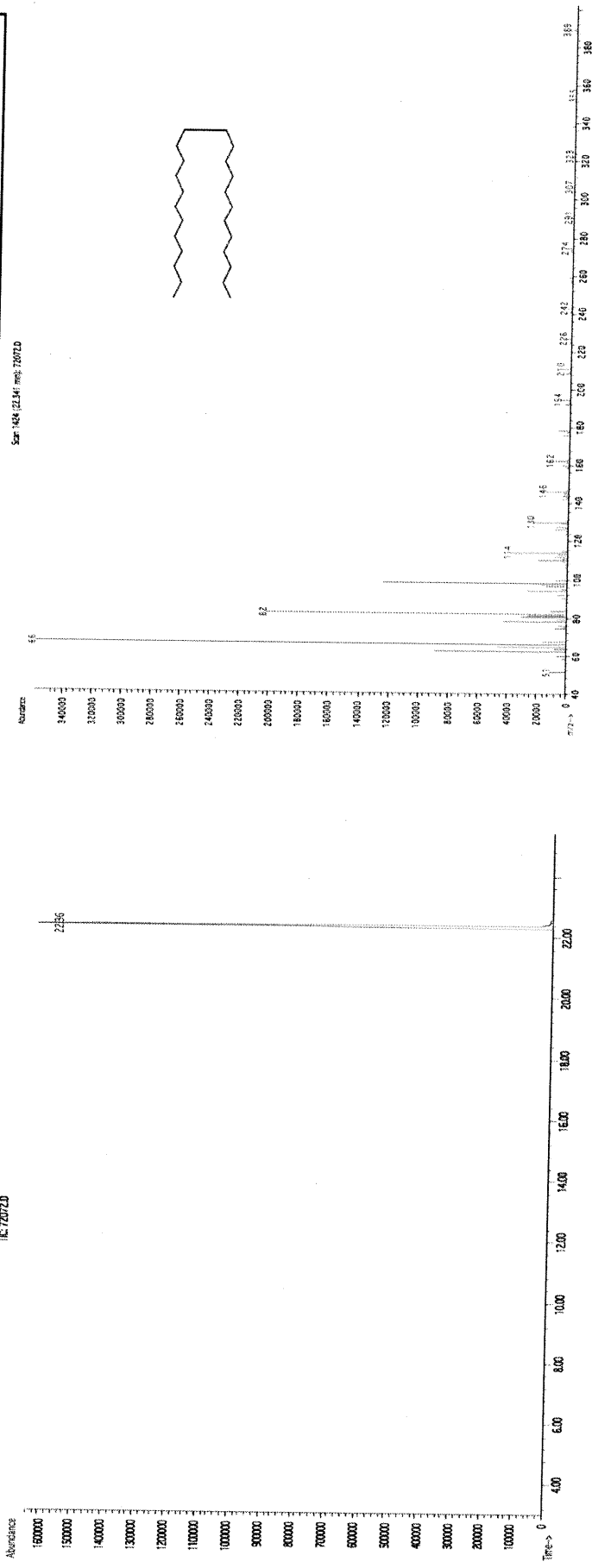
Solvent(s): **Methylene chloride**
Lot# **102669**

Received by
SG on 11/11/19
p9044-p9053
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

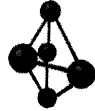
<i>Prashant Chauhan</i>	
Formulated By:	Prashant Chauhan
DATE	112018
<i>Pedro Rentas</i>	
Reviewed By:	Pedro Rentas
DATE	112018

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty	Target Weight (g)	Actual Weight (g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)
1. n-Tetracosane-d50	2072	PR-17753/09216TC1	1000	98	0.2	0.20411	0.20415	1000.2	4.2	18416-32-3 N/A
Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm 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.										

TC 720720



• 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).
• 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 1.5µm 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 = eDAQ Channel 1.

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

