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Prep Standard - Chemical Standard Summary

Order ID : Q2150

Test : Pesticide-TCL

Prepbatch ID : PB168209,

Sequence ID/Qc Batch ID: pl053025,

Standard ID :

EP2613,EP2614,PP24095,PP24255,PP24256,PP24257,PP24258,PP24259,PP24260,PP24261,PP24262,PP24266,PP24267,PP24268,PP24269,PP24270,PP24271,PP24272,PP24273,PP24274,PP24275,PP24277,PP24278,PP24279,PP24280,PP24281,PP24282,PP24283,PP24284,PP24285,PP24329,PP24433,PP24597,

Chemical ID :

E2865,E3551,E3847,E3876,E3877,E3914,E3927,E3932,E3933,E3938,P12603,P 12611,P13037,P13040,P13195,P13245,P13356,P13357,P13405,P13785,P13861,P9052,W3177,

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Extractions STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
230	1:1ACETONE/HEXANE	EP2613	05/09/2025	11/05/2025	RUPESHKUMAR SHAH	None	None	Riteshkumar Patel 05/09/2025

FROM 4000.00000ml of E3932 + 4000.00000ml of E3933 = Final Quantity: 8000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3923	Baked Sodium Sulfate	EP2614	05/19/2025	07/01/2025	RUPESHKUMAR SHAH	Extraction_SCALE_2 (EX-SC-2)	None	Riteshkumar Patel 05/19/2025

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

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Pest/Pcb STANDARD PREPARATION LOG

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

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
84	Pest/PCB Surrogate Stock 20 PPM	PP24255	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 1.00000ml of P13785 + 9.00000ml of E3877 = Final Quantity: 10.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3629	20 PPM PEST stock Solution 1st source(RESTEK)	PP24256	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 1.00000ml of P13040 + 9.00000ml of E3877 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1472	20 PPM Pest Stock Solution 2nd Source	PP24257	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 1.00000ml of P13037 + 9.00000ml of E3877 = Final Quantity: 10.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1273	20 PPM Mirex Stock (Primary Source)	PP24258	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.20000ml of P9052 + 9.80000ml of E3877 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3663	20 PPM MIREX Stock STD (Secondary source)	PP24259	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.20000ml of P13195 + 9.80000ml of E3877 = Final Quantity: 10.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3630	100/100 PPB PEST Working std.1st Source(RESTEK)	PP24260	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 98.50000ml of E3877 + 0.50000ml of PP24255 + 0.50000ml of PP24256 + 0.50000ml of PP24258 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
80	100/100 PPB Pesticide Working Solution 2nd Source	PP24261	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 98.50000ml of E3877 + 0.50000ml of PP24255 + 0.50000ml of PP24257 + 0.50000ml of PP24259 = Final Quantity: 100.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
386	1000/100 PPB Chlordane STD (Restek)	PP24262	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.10000ml of P12603 + 99.40000ml of E3877 + 0.50000ml of PP24255 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3746	1000/100 ppb Chlordane STD-RESTEK 2ND SOURCE	PP24266	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.10000ml of P12611 + 99.40000ml of E3877 + 0.50000ml of PP24255 = Final Quantity: 100.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
383	1000/100 PPB Toxaphene STD (Restek)	PP24267	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.10000ml of P13405 + 99.40000ml of E3877 + 0.50000ml of PP24255 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3669	1000/100 PPB TOXAPHENE STD 2nd source (RESTEK)	PP24268	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.10000ml of P13861 + 99.40000ml of E3877 + 0.50000ml of PP24255 = Final Quantity: 100.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3631	75 PPB ICAL PEST STD(RESTEK)	PP24269	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.75000ml of E3877 + 0.25000ml of PP24260 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3632	50 PPB ICAL PEST STD(RESTEK)	PP24270	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.50000ml of E3877 + 0.50000ml of PP24260 = Final Quantity: 1.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3633	25 PPB ICAL PEST STD(RESTEK)	PP24271	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.75000ml of E3877 + 0.25000ml of PP24260 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3634	5 PPB ICAL PEST STD(RESTEK)	PP24272	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.90000ml of E3877 + 0.10000ml of PP24270 = Final Quantity: 1.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3988	50 PPB PEST ICV STD(RESTEK)	PP24273	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.50000ml of E3877 + 0.50000ml of PP24261 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
528	CHLOR 750 PPB STD	PP24274	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.25000ml of E3877 + 0.75000ml of PP24262 = Final Quantity: 1.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
529	CHLOR 500 PPB STD	PP24275	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.50000ml of E3877 + 0.50000ml of PP24262 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
530	CHLOR 250 PPB STD	PP24277	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.75000ml of E3877 + 0.25000ml of PP24262 = Final Quantity: 1.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3408	CHLOR 50 PPB STD	PP24278	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.90000ml of E3877 + 0.10000ml of PP24275 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
532	CHLOR 500 PPB ICV STD	PP24279	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.50000ml of E3877 + 0.50000ml of PP24266 = Final Quantity: 1.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
533	TOX 750 PPB STD	PP24280	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.25000ml of E3877 + 0.75000ml of PP24267 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
534	TOX 500 PPB STD	PP24281	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.50000ml of E3877 + 0.50000ml of PP24267 = Final Quantity: 1.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
535	TOX 250 PPB STD	PP24282	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.75000ml of E3877 + 0.25000ml of PP24267 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2217	TOX 100 PPB STD	PP24283	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.90000ml of E3877 + 0.10000ml of PP24267 = Final Quantity: 1.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3670	TOX 500 PPB ICV std (RESTEK)	PP24284	03/11/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 0.50000ml of E3877 + 0.50000ml of PP24268 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
79	500 PPB Pesticide Spike Solution	PP24285	03/12/2025	08/12/2025	Abdul Mirza	None	None	Ankita Jodhani 03/12/2025

FROM 95.00000ml of E3876 + 2.50000ml of PP24257 + 2.50000ml of PP24259 = Final Quantity: 100.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
84	Pest/PCB Surrogate Stock 20 PPM	PP24329	03/18/2025	08/22/2025	Yogesh Patel	None	None	Abdul Mirza 04/03/2025

FROM 1.00000ml of P13356 + 9.00000ml of W3177 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
518	Pest/PCB I.BLK 20 PPB	PP24433	03/31/2025	08/22/2025	Abdul Mirza	None	None	Yogesh Patel 04/02/2025

FROM 99.90000ml of E3914 + 0.10000ml of PP24329 = Final Quantity: 100.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
465	200 PPB Pest/PCB Surrogate Spike	PP24597	05/20/2025	11/05/2025	Abdul Mirza	None	None	Yogesh Patel 05/22/2025

FROM 1.00000ml of P13357 + 999.00000ml of E3932 = Final Quantity: 1000.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3382-05 / Sand, Purified (cs/4x2.5kg)	0000243821	06/30/2025	04/30/2020 / RAJESH	04/28/2020 / RAJESH	E2865

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

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

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	08/25/2025	02/25/2025 /	02/12/2025 / Rajesh	E3876

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	08/12/2025	02/12/2025 / Rajesh	02/12/2025 / Rajesh	E3877

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	243570	09/19/2025	03/19/2025 / RUPESH	03/13/2025 / RUPESH	E3914

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
phenomenex	FS0006 / Cleanert SPE Silica, 1000 mg/6ml	Z0830QB1	04/18/2026	05/30/2025 / RUPESH	03/13/2025 / RUPESH	E3927

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	11/05/2025	05/05/2025 / RUPESH	04/23/2025 / RUPESH	E3932

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	11/05/2025	05/05/2025 / RUPESH	04/23/2025 / RUPESH	E3933

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	/	05/14/2025 / RUPESH	E3938

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32021 / Chlordane Std.	A0197993	09/11/2025	03/10/2025 / Abdul	07/03/2023 / Abdul	P12603

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32021 / Chlordane Std.	A0193299	09/09/2025	03/10/2025 / Abdul	07/03/2023 / Abdul	P12611

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32291 / Pesticide Mix, CLP method, organochlorine Std AB#1, 200ug/mL, hexane/toluene, 1mL/ampul	A0200423	09/10/2025	03/10/2025 / Abdul	12/26/2023 / Abdul	P13037

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	09/10/2025	03/10/2025 / Abdul	12/26/2023 / Abdul	P13040

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	09/10/2025	03/10/2025 / Abdul	01/17/2024 / Abdul	P13195

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32000 / Pesticide Mix, CLP method, Pesticide Surrogate Mix, 200ug/mL, Acetone, 1mL	A0206810	09/18/2025	03/18/2025 / yogesh	04/22/2024 / Abdul	P13356

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32000 / Pesticide Mix, CLP method, Pesticide Surrogate Mix, 200ug/mL, Acetone, 1mL	A0206810	11/20/2025	05/20/2025 / Abdul	04/22/2024 / Abdul	P13357

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32005 / Toxaphene Standard	A0203038	09/09/2025	03/10/2025 / Abdul	05/15/2024 / Abdul	P13405

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	09/10/2025	03/10/2025 / Abdul	11/19/2024 / Ankita	P13785

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32005 / Toxaphene Standard	A0210240	09/10/2025	03/10/2025 / Abdul	12/09/2024 / Abdul	P13861

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	09/10/2025	03/10/2025 / Abdul	11/01/2019 / Stephen	P9052

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24G1962003	08/22/2025	02/03/2025 / jignesh	01/31/2025 / jignesh	W3177

Sand
Purified
Washed and Ignited

avantor™ | J.T.Baker®

Material No.: 3382-05
Batch No.: 0000243821
Manufactured Date: 2018/04/09
Retest Date: 2025/04/07
Revision No: 1

Certificate of Analysis

Test	Specification	Result
Substances Soluble in HCl	<= 0.16 %	0.01

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

E 2865

James T Ethier

Jamie Ethier
Vice President Global Quality

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

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MONTERREY, N.L. MEXICO
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CERTIFICATE OF ANALYSIS

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

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

COMMENTS

QC: PhC Irma Belmares

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

Recd. by RB on 7/24/23 E3551

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

avantor™ | J.T.Baker®

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

Certificate of Analysis

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

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

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

Recd. by RP on 12/13/24

E3847

J Croak

Jamie Croak
Director Quality Operations, Bioscience Production

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 RP on 2/12/25

E3877

Harout Sahagian - Quality Control Manager - Fair Lawn

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

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

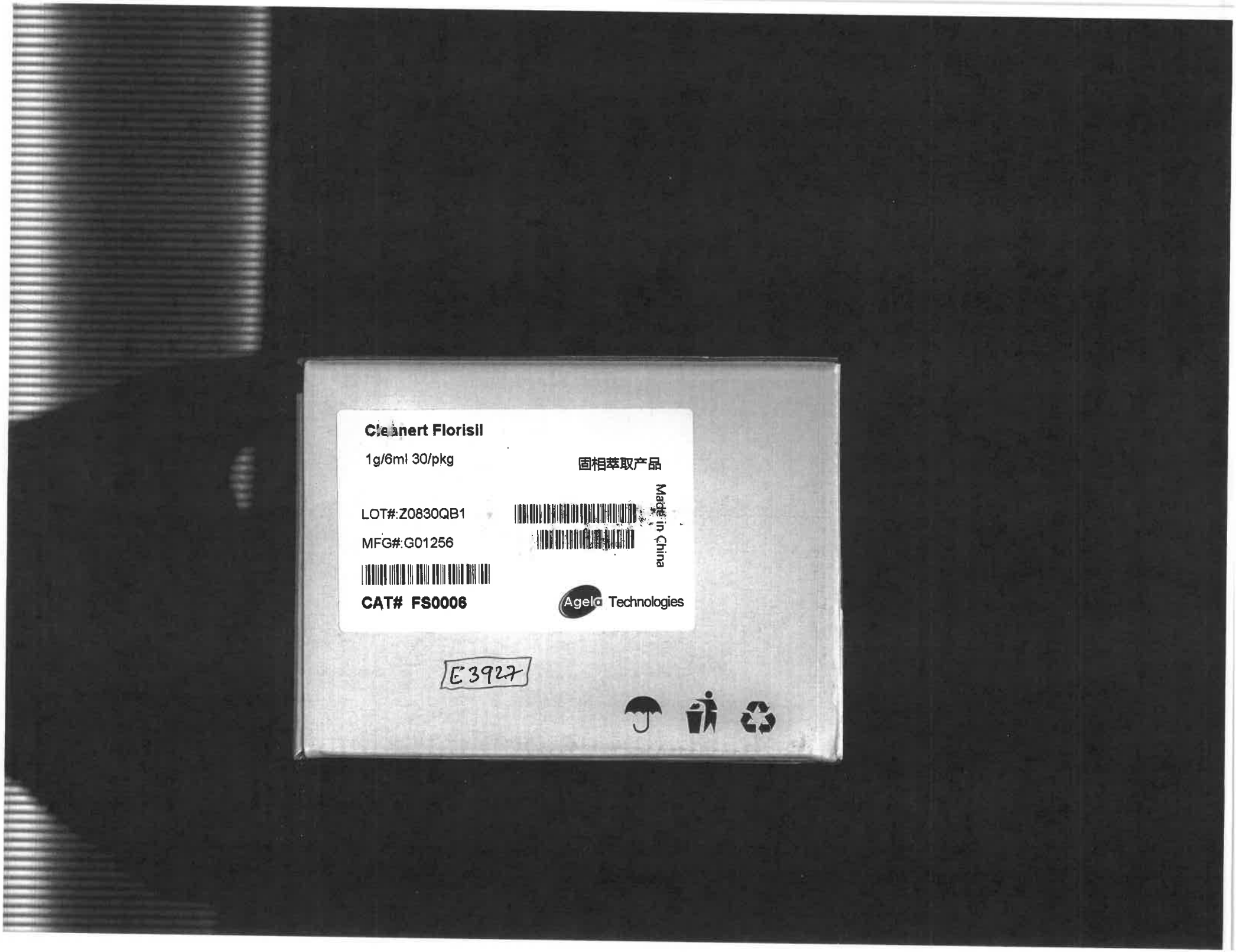
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless liquid
ASSAY (N-HEXANE)	%	>= 60	69
ASSAY (SUM C6 HYDROCARBONS)	%	>= 99.9	>99.9
COLOR	APHA	<= 5	<5
DENSITY AT 25 DEGREES C	GM/ML	Inclusive Between 0.653 - 0.673	0.669
EVAPORATION RESIDUE	ppm	<= 1	<1
FLUORESCENCE BACKGROUND	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 RS on 3/14/25

E3914

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.


Cleanert Florisil
1g/6ml 30/pkg
固相萃取产品
LOT#:Z0830QB1
MFG#:G01256
Made in China
CAT# FS0006
Agela Technologies
E3927

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™ | J.T.Baker

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 ($(CH_3)_2CO$) (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_2O)	<= 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 RS

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

E 3932

JCroak
Jamie Croak
Director Quality Operations, Bioscience Production

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

avantor™ | J.T.Baker

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_2SO_4	Passes Test	Passes Test
Water (by KF, coulometric)	<= 0.05 %	<0.01 %

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

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

E3933

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

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

avantor | J.T.Baker

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_2SO_4	Passes Test	Passes Test
Water (by KF, coulometric)	<= 0.05 %	<0.01 %

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

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

E3938

JCroak
Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

P12614 V P12615 Five

7/3/2023

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

Description : Chlordane Standard

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

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

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

Ship: Ambient

CERTIFIED VALUES

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

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

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

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

Quality Confirmation Test

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

Carrier Gas:
helium-constant pressure 20 psi.

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

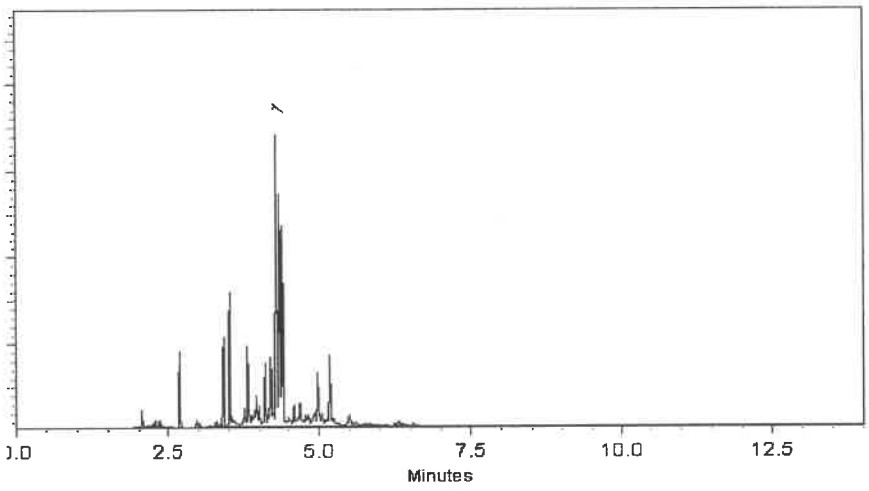
Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD

Split Vent:
300 ml/min.

Inj. Vol
0.2µl



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

Bryan Snyder - Operations Tech I

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

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 09-Jan-2023

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

P12691 ↓ P12695

7/3/2023

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

P130397 } 5
↓
P130431

12.26.2023

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

Description : Organochlorine Pesticide Mix AB #1

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

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

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

Ship: Ambient

CERTIFIED VALUES

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

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

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

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

P13039 5
↓
P13043 1
12/26/23

Quality Confirmation Test

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

Carrier Gas:
helium-constant pressure 20 psi.

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

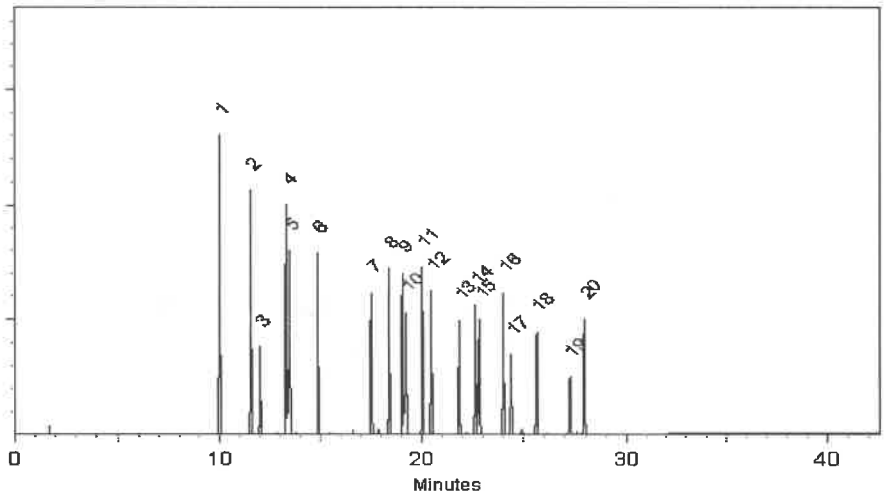
Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD

Split Vent:
Split ratio 50:1

Inj. Vol
1µl



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

Josh McCloskey - Operations Technician I

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

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 23-Jun-2023

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

Part Number: 79136
Lot Number: 042022
Description: Mirex

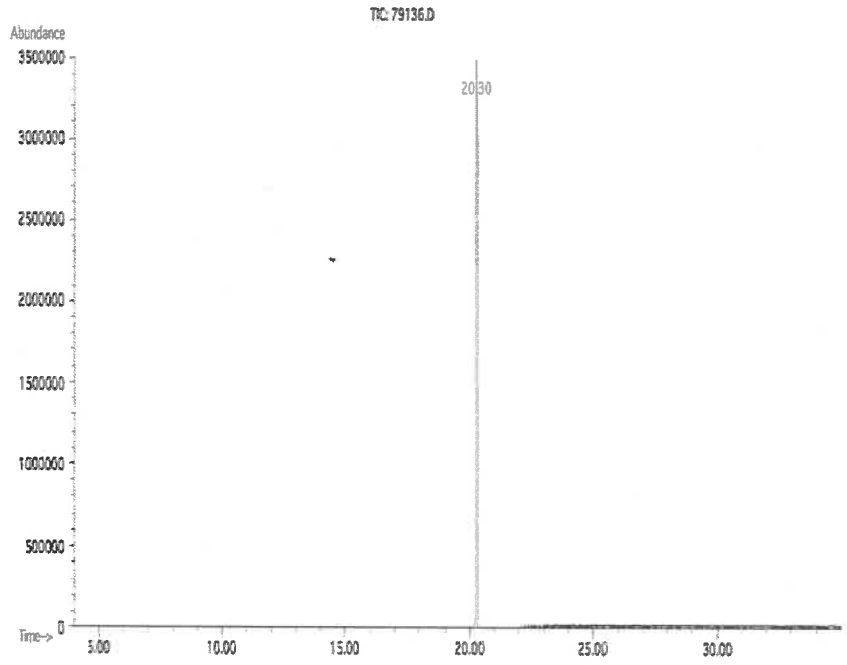
Solvent(s): Acetone **Lot#** 81025

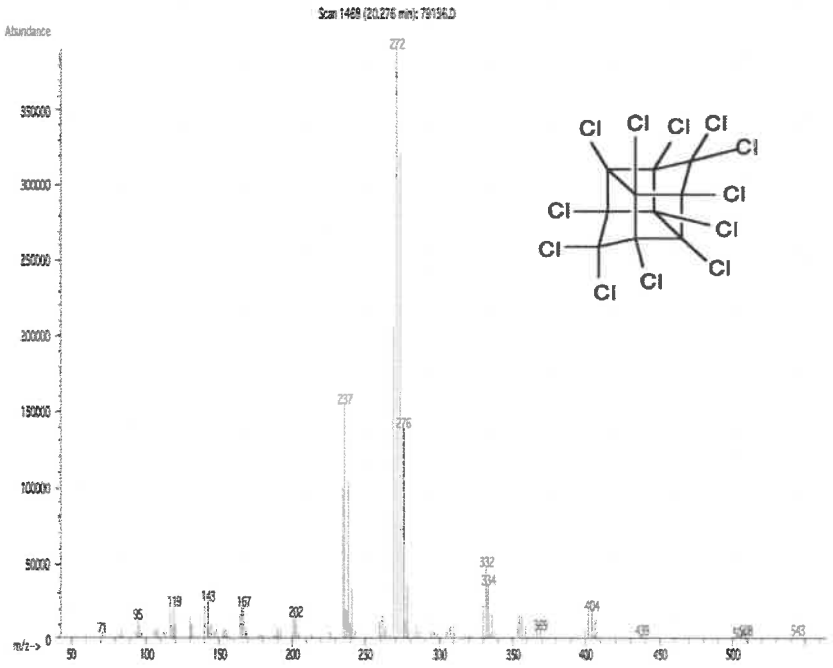
Expiration Date: 042027
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB 5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.006 Flask Uncertainty

Prashant Chauhan	042022	
Formulated By:	Prashant Chauhan	DATE
Pedro L. Rentas	042022	
Reviewed By:	Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Mirex	437	9492400	1000	99.4	0.5	0.05034	0.05040	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 0.25µm 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.





P13195
↓
P13199
↓
(5)
|

01/17/2024

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

P13195

↓

P13199

5

01/17/2024

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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

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

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

P12603 (3)
↓
P12605

7/3/2023

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

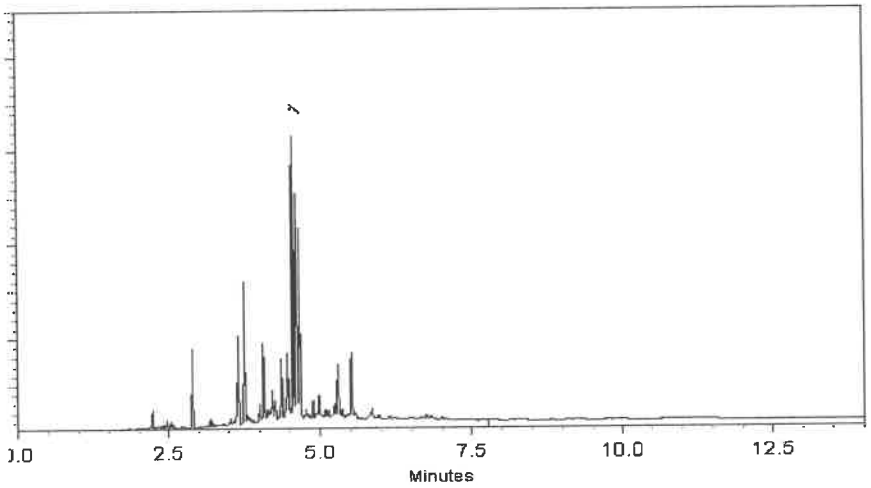
Inj. Temp:
250°C

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

P12603 & P12605 (3)

7/3/2023

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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

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

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

P 13034 } 5
↓
P 13038

12.26.2023

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

Description : Organochlorine Pesticide Mix AB #1

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

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

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

Ship: Ambient

CERTIFIED VALUES

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

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

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

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

P13034) 5
↓
P13038 1

12/26/2023

Quality Confirmation Test

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

Carrier Gas:
helium-constant pressure 20 psi.

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

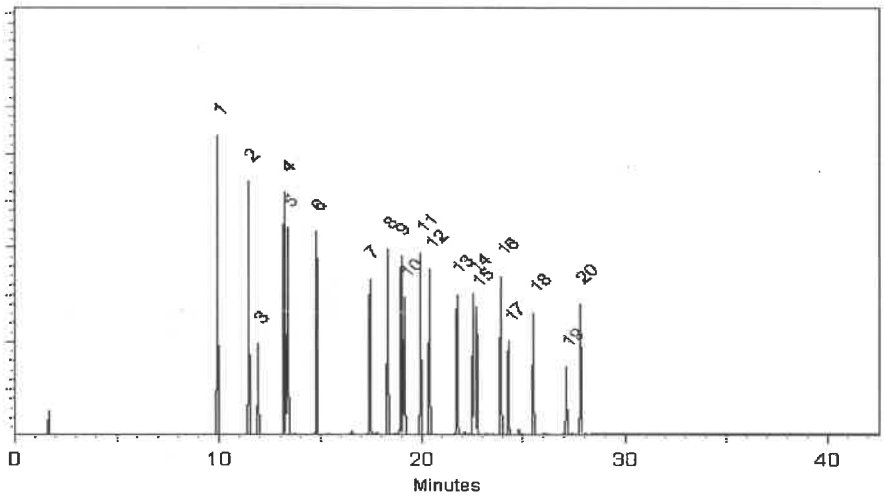
Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD

Split Vent:
Split ratio 50:1

Inj. Vol
1µl



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

Sam Moodler - Operations Tech I

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

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 03-Aug-2023

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

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

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

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

5E-05 Balance Uncertainty

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

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

P13243 } (5)
thru
P13247

02/9/2024

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

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

P13348 → P13357 (10)

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

Description : Pesticide Surrogate Mix

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

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

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

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

04/25/2024

CERTIFIED VALUES

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

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

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

Tech Tips:

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

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

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

Quality Confirmation Test

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

Carrier Gas:
hellum-constant pressure 20 psi.

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

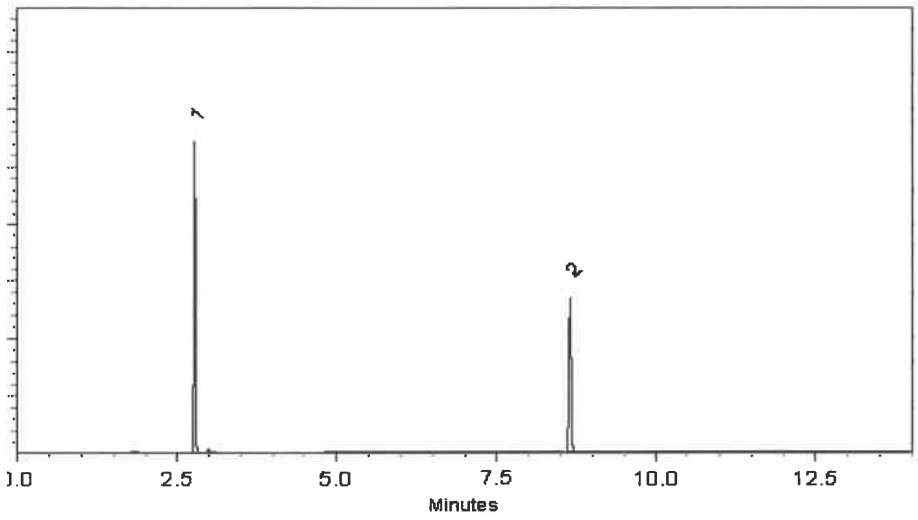
Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD

Split Vent:
10 ml/min.

Inj. Vol
1µl



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

Laith Clemente - Operations Technician I

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

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Jan-2024

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

P13348 (10)

↓

P13357

04/25/2025

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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.

P13348 → P13357 (10)

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

Description : Pesticide Surrogate Mix

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

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

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

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

04/25/2024

CERTIFIED VALUES

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

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

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

Tech Tips:

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

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

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

Quality Confirmation Test

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

Carrier Gas:
hellum-constant pressure 20 psi.

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

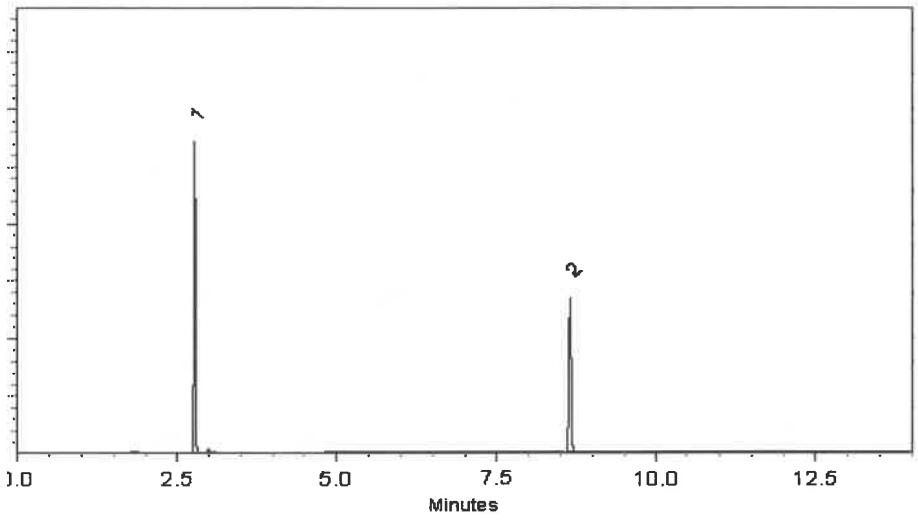
Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD

Split Vent:
10 ml/min.

Inj. Vol
1µl



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

Laith Clemente - Operations Technician I

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

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Jan-2024

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

P13348 (10)

↓

P13357

04/25/2025

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Certificate #3222.02

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P13402 & P13406 (5)

5/22/2024

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

Description : Toxaphene Standard

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

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

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

Ship: Ambient

CERTIFIED VALUES

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

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

Solvent: Hexane

CAS # 110-54-3

Purity 99%

Quality Confirmation Test

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

Carrier Gas:
helium-constant pressure 20 psi.

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

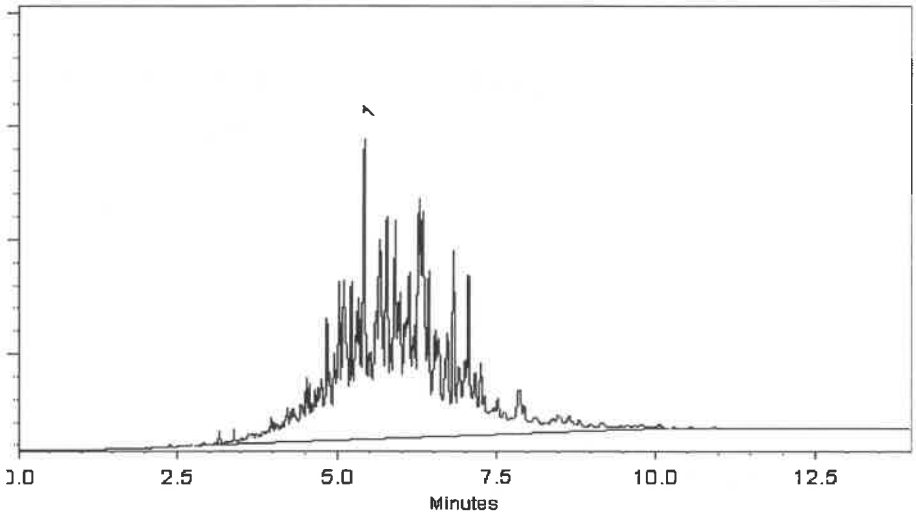
Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD

Split Vent:
300 ml/min.

Inj. Vol
0.2µl



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

Dakota Parson - Operations Technician I

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

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 16-Oct-2023

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

P13402
↓
P13406
5

5/22/2024

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ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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 ↓ P19789 AJ 11/19/24

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.)

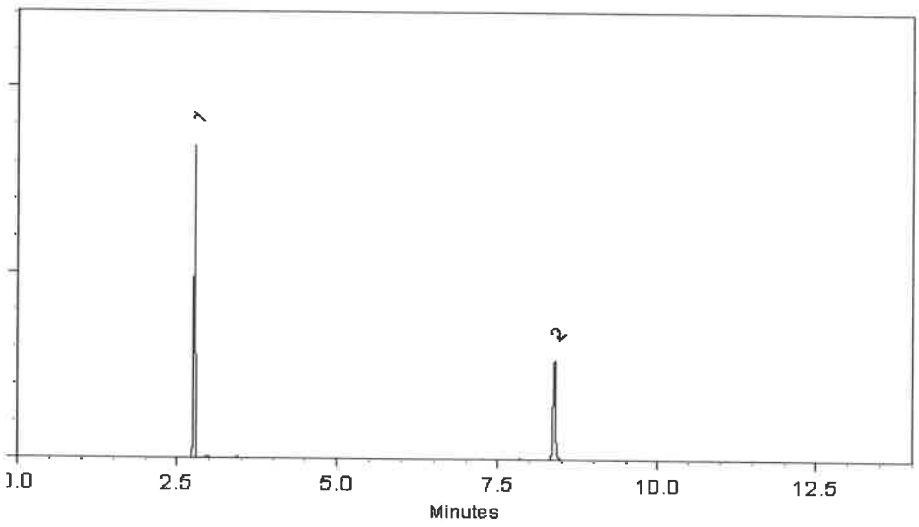
Inj. Temp:
250°C

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.

Aaron Enyart - Operations Tech I

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

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

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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 (2)

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.)

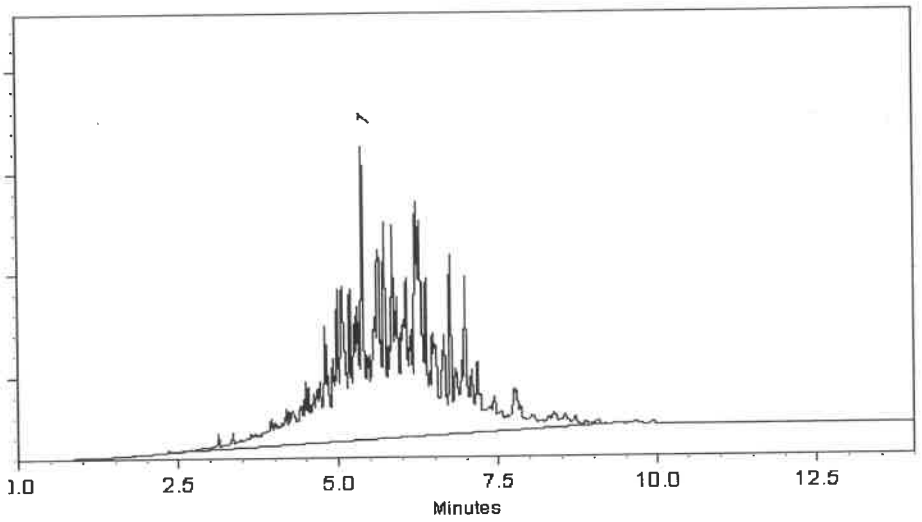
Inj. Temp:
250°C

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

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
Lot Number: 112018
Description: n-Tetracosane-d50

Received by SG on 11/1/19
P9044 - P9053

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

Solvent(s):	Lot#
Methylene chloride	102669

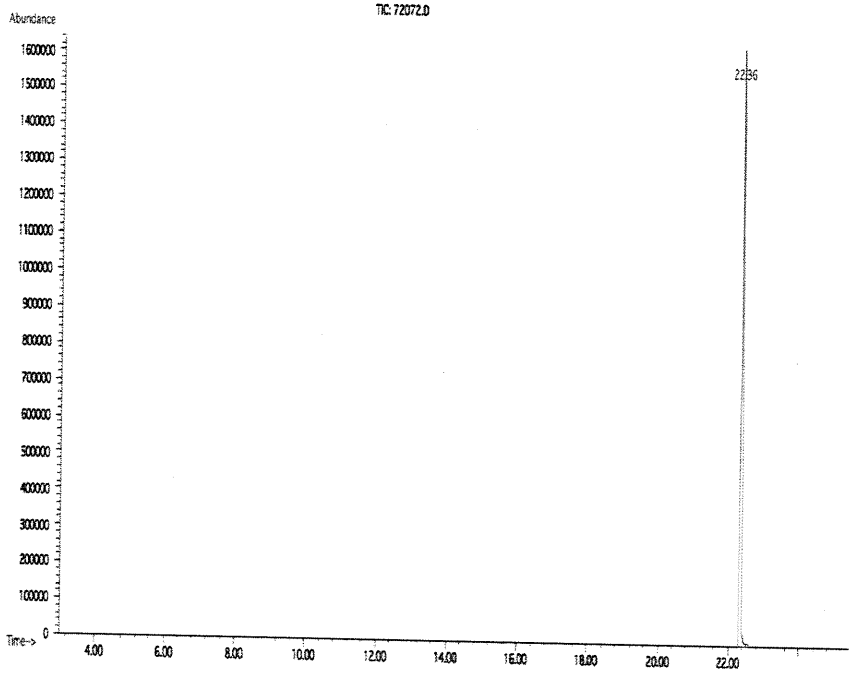
5E-05 Balance Uncertainty

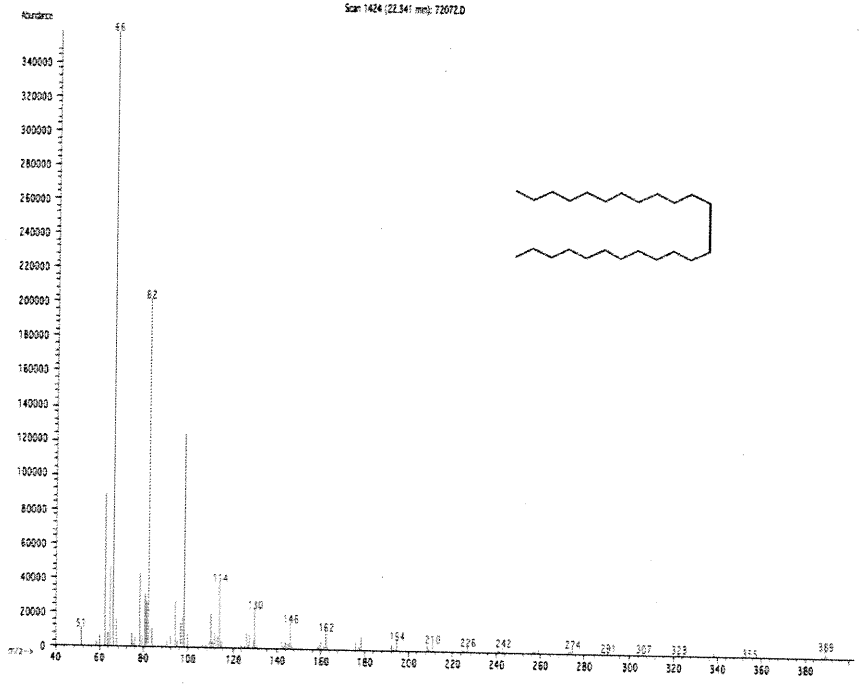
Weight(s) shown below were combined and diluted to (mL): 200.0 0.058 Flask Uncertainty

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

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. n-Tetracosane-d50	2072	PR-17753/09216TC1	1000	98	0.2	0.20411	0.20415	1000.2	4.2	16416-32-3	N/A	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.





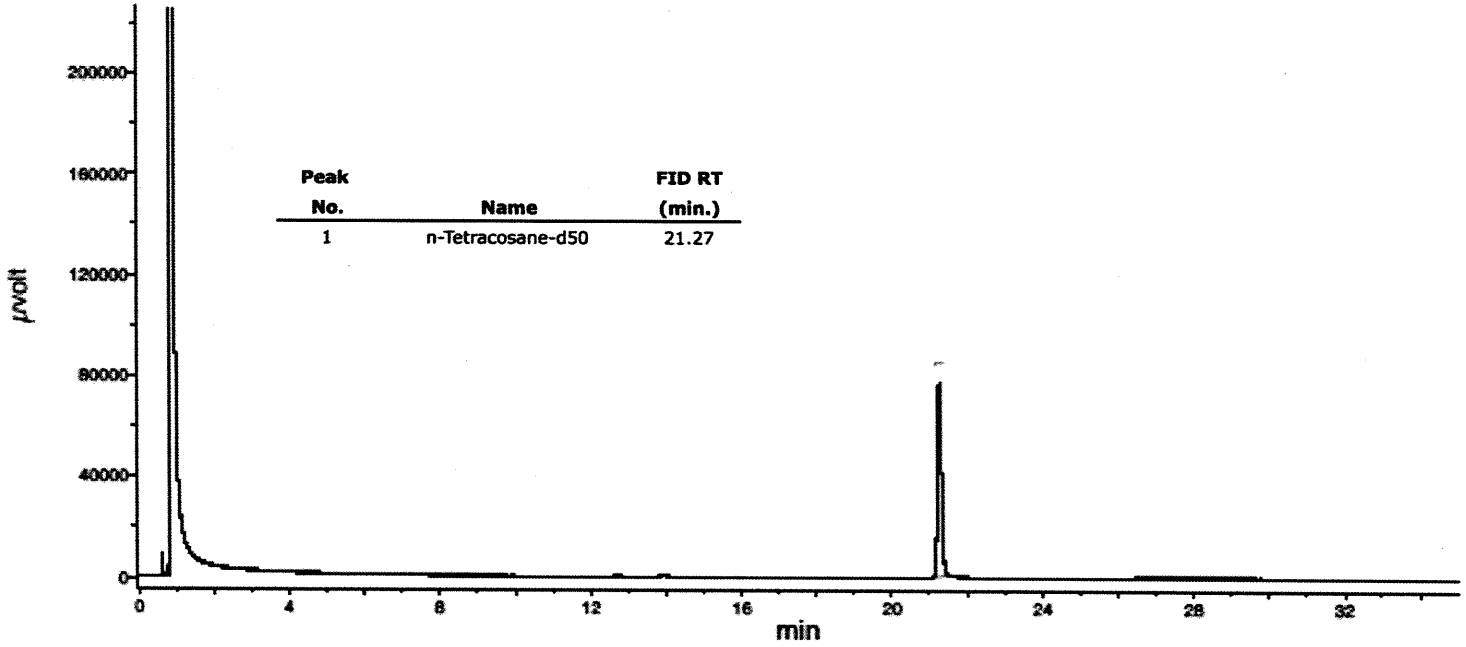
- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, 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 = eDaq Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 uL, Range = 3



Peak No.	Name	FID RT (min.)
1	n-Tetracosane-d50	21.27

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

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W3147

W3147 update. 02/03/2025 JP

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

Certificate of Analysis

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

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

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

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production