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Prep Standard - Chemical Standard Summary

Order ID : Q1502

Test : PCB

Prepbatch ID : PB167066,

Sequence ID/Qc Batch ID: PO031125,pp031125,

Standard ID :

EP2565,EP2593,PP23733,PP23735,PP23736,PP23737,PP23738,PP23739,PP23740,PP23741,PP23742,PP23743,PP23744,PP23745,PP23747,PP23748,PP23749,PP23750,PP23751,PP23752,PP23753,PP23754,PP23755,PP23756,PP23757,PP23758,PP23759,PP23760,PP23761,PP23762,PP23763,PP23764,PP23765,PP23766,PP23767,PP23768,PP23769,PP23770,PP23771,PP23772,PP23773,PP23774,PP23775,PP23776,PP23777,PP23778,PP23779,PP23780,PP23781,PP23782,PP23783,PP23784,PP23785,PP23786,PP23787,PP23788,PP23789,PP23790,PP23946,PP23947,PP24209,PP24217,

Chemical ID :

E3551,E3804,E3805,E3825,E3876,E3877,E3878,M5173,P10483,P10500,P11507,P11512,P11521,P11581,P11587,P11590,P11597,P12698,P12929,P12934,P12947,P12948,P12957,P13033,P13350,P13354,P13372,W3112,

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Extractions STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
314	1.1 H2SO4 SOLN	EP2565	11/20/2024	05/20/2025	Rajesh Parikh	None	None	RUPESHKUMAR SHAH 11/20/2024

FROM 1000.00000ml of M5173 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3923	Baked Sodium Sulfate	EP2593	03/07/2025	07/01/2025	RUPESHKUMAR SHAH	Extraction_SCALE_2 (EX-SC-2)	None	Riteshkumar Patel 03/07/2025

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
84	Pest/PCB Surrogate Stock 20 PPM	PP23733	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 1.00000ml of P13350 + 9.00000ml of E3805 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
202	AR1660 1000/100 ppb working solution 1st source	PP23735	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.10000ml of P10483 + 99.40000ml of E3805 + 0.50000ml of PP23733 = 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
203	AR1660 750 PPB STD	PP23736	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.25000ml of E3805 + 0.75000ml of PP23735 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
204	AR1660 500 PPB STD	PP23737	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23735 = 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
205	AR1660 250 PPB STD	PP23738	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.75000ml of E3805 + 0.25000ml of PP23735 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
206	AR1660 50 PPB STD	PP23739	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.90000ml of E3805 + 0.10000ml of PP23737 = 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
213	AR1221 1000 PPB WORKING SOLUTION	PP23740	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.10000ml of P11581 + 99.40000ml of E3805 + 0.50000ml of PP23733 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1079	AR1221 750 PPB STD	PP23741	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.25000ml of E3805 + 0.75000ml of PP23740 = 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
222	AR1221 500 PPB STD	PP23742	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23740 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1080	AR1221 250 PPB STD	PP23743	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.75000ml of E3805 + 0.25000ml of PP23740 = 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
1081	AR1221 50 PPB STD	PP23744	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.90000ml of E3805 + 0.10000ml of PP23742 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
214	AR1232 1000 PPB WORKING SOLUTION	PP23745	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.10000ml of P11587 + 99.40000ml of E3805 + 0.50000ml of PP23733 = 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
1063	AR1232 750 PPB STD	PP23747	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.25000ml of E3805 + 0.75000ml of PP23745 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
223	AR1232 500 PPB STD	PP23748	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23745 = 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
1064	AR1232 250 PPB STD	PP23749	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.75000ml of E3805 + 0.25000ml of PP23745 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1065	AR1232 50 PPB STD	PP23750	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.90000ml of E3805 + 0.10000ml of PP23748 = 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
215	AR1242 1000 PPB WORKING STD	PP23751	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.10000ml of P12929 + 99.40000ml of E3805 + 0.50000ml of PP23733 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1067	AR1242 750 PPB STD	PP23752	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.25000ml of E3805 + 0.75000ml of PP23751 = 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
224	AR1242 500 PPB STD	PP23753	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23751 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1068	AR1242 250 PPB STD	PP23754	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.75000ml of E3805 + 0.25000ml of PP23751 = 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
1069	AR1242 50 PPB STD	PP23755	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.90000ml of E3805 + 0.10000ml of PP23753 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
216	AR1248 1000 PPB WORKING STD	PP23756	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.10000ml of P12934 + 99.40000ml of E3805 + 0.50000ml of PP23733 = 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
1075	AR1248 750 PPB STD	PP23757	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.25000ml of E3805 + 0.75000ml of PP23756 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
225	AR1248 500 PPB STD	PP23758	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23756 = 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
1076	AR1248 250 PPB STD	PP23759	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.75000ml of E3805 + 0.25000ml of PP23756 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1077	AR1248 50 PPB STD	PP23760	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.90000ml of E3805 + 0.10000ml of PP23758 = 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
217	AR1254 1000 PPB WORKING STD	PP23761	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.10000ml of P11590 + 99.40000ml of E3805 + 0.50000ml of PP23733 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1071	AR1254 750 PPB STD	PP23762	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.25000ml of E3805 + 0.75000ml of PP23761 = 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
226	AR1254 500 PPB STD	PP23763	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23761 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1072	AR1254 250 PPB STD	PP23764	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.75000ml of E3805 + 0.25000ml of PP23761 = 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
1073	AR1254 50 PPB STD	PP23765	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.90000ml of E3805 + 0.10000ml of PP23763 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1529	AR1262 1000 PPB Working Solution	PP23766	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.10000ml of P10500 + 99.40000ml of E3805 + 0.50000ml of PP23733 = 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
3753	AR1262 750 PPB STD	PP23767	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.25000ml of E3805 + 0.75000ml of PP23766 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1530	AR1262 500 PPB STD	PP23768	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23766 = 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
3754	AR1262 250 PPB STD	PP23769	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.75000ml of E3805 + 0.25000ml of PP23766 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3755	AR1262 50 PPB STD	PP23770	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.90000ml of E3805 + 0.10000ml of PP23768 = 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
1532	AR1268 1000 PPB Working Solution	PP23771	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.10000ml of P11597 + 99.40000ml of E3805 + 0.50000ml of PP23733 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3820	AR1268 750 PPB STD	PP23772	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.25000ml of E3805 + 0.75000ml of PP23771 = 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
1533	AR1268 500 PPB STD	PP23773	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23771 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3821	AR1268 250 PPB STD	PP23774	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.75000ml of E3805 + 0.25000ml of PP23771 = 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
3822	AR1268 50 PPB STD	PP23775	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.90000ml of E3805 + 0.10000ml of PP23773 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
404	AR1660 100 PPM Stock Solution 2nd Source	PP23776	10/03/2024	04/01/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 1.00000ml of P12947 + 9.00000ml of E3804 = 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
405	AR1660 1000/100 PPB ICV STD	PP23777	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 98.50000ml of E3805 + 0.50000ml of PP23733 + 1.00000ml of PP23776 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
406	AR1660 500 PPB ICV	PP23778	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23777 = 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
3789	AR1221 1000 PPB WORKING SOL.2ND SOURCE(AGILENT)	PP23779	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 1.00000ml of P13372 + 98.50000ml of E3805 + 0.50000ml of PP23733 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3790	AR1221 500 PPB ICV(AGILENT)	PP23780	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23779 = 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
1887	AR1232 1000 PPB Working Sol. 2nd Source	PP23781	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 1.00000ml of P12698 + 98.50000ml of E3805 + 0.50000ml of PP23733 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1889	AR1242 1000 PPB Working Sol. 2nd Source	PP23782	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 1.00000ml of P11507 + 98.50000ml of E3805 + 0.50000ml of PP23733 = 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
1888	AR1232 500 PPB ICV	PP23783	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23781 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1891	AR1242 500 PPB ICV	PP23784	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23782 = 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
1890	AR1248 1000 PPB Working Sol. 2nd Source	PP23785	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.10000ml of P11512 + 98.50000ml of E3805 + 0.50000ml of PP23733 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1892	AR1248 500 PPB ICV	PP23786	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23785 = Final Quantity: 1.000 ml

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Fax : 908 789 8922

Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1893	AR1254 1000 PPB Working Sol. 2nd Source	PP23787	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 1.00000ml of P12957 + 98.50000ml of E3805 + 0.50000ml of PP23733 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1894	AR1254 500 PPB ICV	PP23788	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23787 = Final Quantity: 1.000 ml

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Fax : 908 789 8922

Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3757	AR1262 1000 PPB Working Solution second source	PP23789	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.10000ml of P13033 + 99.40000ml of E3805 + 0.50000ml of PP23733 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3758	AR1262 500 PPB STD ICV	PP23790	10/03/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024

FROM 0.50000ml of E3805 + 0.50000ml of PP23789 = Final Quantity: 1.000 ml

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Fax : 908 789 8922

Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3817	AR1268 1000 ppb Working Soln. 2nd source	PP23946	11/07/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 11/13/2024

FROM 1.00000ml of P11521 + 98.50000ml of E3825 + 0.50000ml of PP23733 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3823	AR1268 500 PPB STD ICV	PP23947	11/07/2024	03/30/2025	Ankita Jodhani	None	None	Yogesh Patel 11/13/2024

FROM 0.50000ml of E3825 + 0.50000ml of PP23946 = Final Quantity: 1.000 ml

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Fax : 908 789 8922

Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3857	5000 PPB PCB SPIKE SOLUTION 2ND SOURCE	PP24209	02/27/2025	08/27/2025	Ankita Jodhani	None	None	Yogesh Patel 03/06/2025

FROM 0.50000ml of P12948 + 99.50000ml of E3876 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
465	200 PPB Pest/PCB Surrogate Spike	PP24217	03/05/2025	08/25/2025	Abdul Mirza	None	None	Yogesh Patel 03/06/2025

FROM 1.00000ml of P13354 + 999.00000ml of E3876 = Final Quantity: 1000.000 ml

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Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	313201	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	9005-05 / Acetone Ultra (cs/4x4L)	24E0761004	11/05/2025	10/01/2024 / Rajesh	09/25/2024 / Rajesh	E3804

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24C1862008	03/30/2025	09/30/2024 / Rajesh	09/25/2024 / Rajesh	E3805

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24G1962003	11/06/2025	11/06/2024 / Rajesh	11/01/2024 / Rajesh	E3825

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

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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-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	24K1762005	08/14/2025	02/14/2025 / Rajesh	12/27/2024 / Rajesh	E3878

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	0000281827	06/02/2025	06/01/2022 /	04/05/2022 / william	M5173

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32039 / PCB Mix, Aroclor 1016/1260, 1000ug/mL, hexane, 1mL/ampul	A0163157	04/03/2025	10/03/2024 / Ankita	03/19/2021 / Abdul	P10483

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32409 / PCB Stock Solution, Aroclor 1262 Std, 1mL, Hexane	A0167722	04/03/2025	10/03/2024 / Ankita	03/19/2021 / Ankita	P10500

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	PP-312-1 / Aroclor 1242	0006665550	04/03/2025	10/03/2024 / Ankita	02/21/2022 / Ankita	P11507

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	PP-342-1 / Aroclor 1248	0006626997	04/03/2025	10/03/2024 / Ankita	02/21/2022 / Ankita	P11512

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	PP-382-1 / Aroclor 1268	0006587800	05/07/2025	11/07/2024 / Ankita	02/21/2022 / Ankita	P11521

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32007 / PCB Mix, Aroclor 1221, 1000ug/mL, Hexane, 1mL/ampul	A0175456	04/03/2025	10/03/2024 / Ankita	03/18/2022 / Abdul	P11581

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32008 / PCB Mix, Aroclor 1232, 1000ug/mL, Hexane, 1mL/ampul	A0173309	04/03/2025	10/03/2024 / Ankita	03/18/2022 / Abdul	P11587

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32011 / PCB Mix, Aroclor 1254, 1000ug/mL, Hexane, 1mL/ampul	A0175403	04/03/2025	10/03/2024 / Ankita	03/18/2022 / Abdul	P11590

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32410 / PCB Stock Solution, Aroclor 1268 Std, 1mL, Hexane	A0181782	04/03/2025	10/03/2024 / Ankita	03/18/2022 / Abdul	P11597

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards,Inc	91867 / Aroclor 1232 100 ug/mL	020823	04/03/2025	10/03/2024 / Ankita	08/07/2023 / Ankita	P12698

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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	32009 / PCB Mix, Aroclor 1242, 1000ug/mL, Hexane, 1mL/ampul	a0203672	04/03/2025	10/03/2024 / Ankita	12/07/2023 / Ankita	P12929

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32010 / PCB Mix, Aroclor 1248, 1000ug/mL, Hexane, 1mL/ampul	a0202803	04/03/2025	10/03/2024 / Ankita	12/07/2023 / Ankita	P12934

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	20064 / Aroclor 1016/1260	022023	04/03/2025	10/03/2024 / Ankita	12/20/2023 / Yogesh	P12947

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	20064 / Aroclor 1016/1260	022023	08/27/2025	02/27/2025 / Ankita	12/20/2023 / Yogesh	P12948

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Arochlor 1254	121823	04/03/2025	10/03/2024 / Ankita	12/20/2023 / Yogesh	P12957

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards,Inc	90165 / Aroclor 1262	112322	04/03/2025	10/03/2024 / Ankita	12/20/2023 / Yogesh	P13033

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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	32000 / Pesticide Mix, CLP method, Pesticide Surrogate Mix, 200ug/mL, Acetone, 1mL	A0206810	04/03/2025	10/03/2024 / Ankita	04/22/2024 / Abdul	P13350

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	09/05/2025	03/05/2025 / Abdul	04/22/2024 / Abdul	P13354

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	PP-292-1 / Aroclor 1221	0006783205	04/03/2025	10/03/2024 / Ankita	05/02/2024 / Ankita	P13372

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

PRODUCTOS QUIMICOS MONTERREY, S.A. DE C.V.

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

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE CRYSTALS ANHYDROUS		
QUALITY :	ACS (CODE RMB3375)	FORMULA :	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.

RG-02-01, Ed. 3

Recd. by RB on 7/24/23 E3551

Acetone
CMOS

avantor™ | J.T.Baker®

Material No.: 9005-05
Batch No.: 24E0761004
Manufactured Date: 2024-05-02
Retest Date: 2029-05-01
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ($(CH_3)_2CO$) (by GC, corrected for water)	≥ 99.5 %	99.8 %
Color (APHA)	≤ 10	< 5
Residue after Evaporation	≤ 5 ppm	< 1 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.1
Titrable Base (µeq/g)	≤ 0.5	0.1
Water (H_2O)	≤ 0.5 %	0.1 %
Solubility in H_2O	Passes Test	Passes Test
Chloride (Cl)	≤ 0.2 ppm	< 0.2 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.05 ppm
Trace Impurities - Aluminum (Al)	≤ 50.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 5.0 ppb
Trace Impurities - Barium (Ba)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Calcium (Ca)	≤ 25.0 ppb	3.6 ppb
Trace Impurities - Chromium (Cr)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Trace Impurities - Iron (Fe)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb

>>> Continued on page 2 >>>

Recd by RP on 9/25/24

E 3804

Acetone
CMOS

avantor™ | J.T.Baker®

Material No.: 9005-05
Batch No.: 24E0761004

Test	Specification	Result
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Strontium (Sr)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 50.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	7.9 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater (Rion KS42AF)	≤ 100 par/ml	8 par/ml
Particle Count – 1.0 µm and greater (Rion KS42AF)	≤ 8 par/ml	2 par/ml

>>> Continued on page 3 >>>

Acetone
CMOS

avantor™ | J.T.Baker®

Material No.: 9005-05
Batch No.: 24E0761004

Test	Specification	Result

For Microelectronic Use

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

Michelle Bales
Sr. Manager, Quality Assurance

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

avantor™ | J.T.Baker®

Material No.: 9262-03
Batch No.: 24C1862008
Manufactured Date: 2024-01-30
Expiration Date: 2025-04-30
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1
ECD-Sensitive Impurities (as Ethylene Dibromide) – Single Impurity Peak (ng/mL)	≤ 5	1
Assay (Total Saturated C_6 Isomers) (by GC, corrected for water)	≥ 99.5 %	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	≥ 95 %	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.4 ppm
Substances Darkened by 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 9/25/24

E3805

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.: 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

E3825

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™ | J.T.Baker

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 ($(CH_3)_2CO$) (by GC, corrected forwater)	>= 99.4 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.0 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titrable Acid (µeq/g)	<= 0.3	0.2
Titrable Base (µeq/g)	<= 0.6	<0.1
Water (H_2O)	<= 0.5 %	<0.1 %
FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	1

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

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

Recd. by RP on 2/12/25

E 3876

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

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.

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

avantor | J.T.Baker

Material No.: 9266-A4
Batch No.: 24K1762005
Manufactured Date: 2024-10-08
Expiration Date:2026-01-07
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	2
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.5 ppm
Titrable Acid (µeq/g)	<= 0.3	0.0
Chloride (Cl)	<= 10 ppm	<5 ppm
Water (by KF, coulometric)	<= 0.02 %	0.01 %

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

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

E 3878

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

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 0000281827
Manufactured Date: 2021/03/30
Retest Date: 2026/03/29
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.189
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	< 1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	0.5
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	15.0
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

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

Material No.: 9530-33
Batch No.: 0000281827

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	3.0
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	1.0
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	< 0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.2
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	18.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	< 0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.4
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

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

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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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. : 32039 **Lot No.:** A0163157

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

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

Expiration Date : November 30, 2026 **Storage:** 25°C nominal

Handling: This product contains PCBs. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016	1,007.0 µg/mL	+/- 5.8683	µg/mL	Gravimetric
	CAS # 12674-11-2 (Lot 04)		+/- 31.9082	µg/mL	Unstressed
	Purity ----%		+/- 41.6868	µg/mL	Stressed
2	Aroclor 1260	1,008.0 µg/mL	+/- 5.8741	µg/mL	Gravimetric
	CAS # 11096-82-5 (Lot 07)		+/- 31.9399	µg/mL	Unstressed
	Purity ----%		+/- 41.7282	µg/mL	Stressed

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

P10476
&
P10480

AR
02/19/21

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

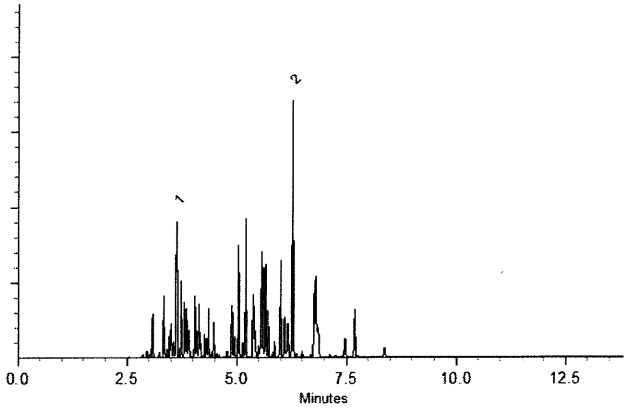
Carrier Gas:
helium-constant pressure 20 psi.

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

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



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

Tom Suckar - Mix Technician

Date Mixed: 03-Aug-2020 **Balance:** B442140311

Justine Albertson - Operations Tech-ARM QC

Date Passed: 05-Aug-2020

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

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 32409 **Lot No.:** A0167722

Description : Aroclor® 1262 Standard

Aroclor® 1262 Standard 1,000 µg/mL, 1mL/ampul, Hexane

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

Expiration Date : April 30, 2027 **Storage:** 25°C nominal

Handling: This product contains PCBs. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1262	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 37324-23-5 (Lot 10849100)		+/- 31.8340	µg/mL	Unstressed
	Purity ----%		+/- 41.5787	µg/mL	Stressed

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

P10496
J
P10500

AJ
09/19/21

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

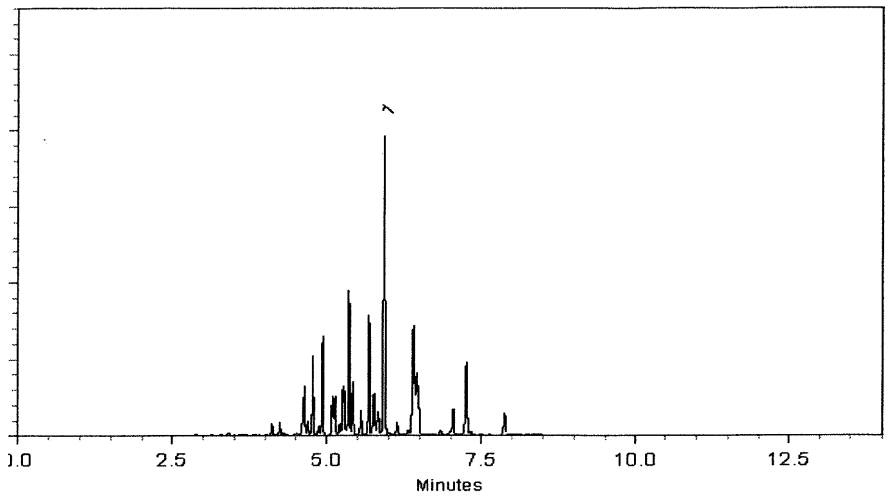
Carrier Gas:
helium-constant pressure 20 psi.

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

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



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

Sam Moodler - Operations Tech I

Date Mixed: 03-Jan-2021 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 05-Jan-2021

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

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name:	Aroclor 1242 Standard	**Lot Number:**	0006665550
Product Number:	PP-312-1	**Lot Issue Date:**	08-Feb-2022
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	31-Jan-2027

	CERTIFIED VALUES			
Component Name	Concentration	Expanded Uncertainty	CAS#	Analyte Lot
Aroclor 1242	100.4	± 0.5 µg/mL	053469-21-9	NT01020

Matrix: isooctane (2,2,4-trimethylpentane)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

P11533 + P11537

AJ 02/21/22

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name:	Aroclor 1248 Standard	**Lot Number:**	0006626997
Product Number:	PP-342-1	**Lot Issue Date:**	17-Aug-2021
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	30-Sep-2025

	CERTIFIED VALUES				
Component Name	Concentration		Expanded Uncertainty	CAS#	Analyte Lot
Aroclor 1248	100.3	±	0.5 µg/mL	012672-29-6	NT01582

Matrix: isooctane (2,2,4-trimethylpentane)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

P11508 ↓ P11512 AJ 12/21/22

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

P11518 ↓ P11522 AJ 02/21/22

Agilent

Certificate of Analysis

Product Name: Aroclor 1268 Standard

Product Number: PP-382-1 **Lot Issue Date:** 09-Feb-2021

Lot Number: 0006587800 **Expiration Date:** 31-Mar-2029

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1268	011100-14-4	RM00937	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

M Bourgeois

Monica Bourgeois
QMS Representative

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ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 32007 **Lot No.:** A0175456

Description : Aroclor® 1221 Standard

Aroclor® 1221 Standard 1,000 µg/mL, Hexane, 1mL/ampul

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

Expiration Date : November 30, 2027 **Storage:** 25°C nominal

Handling: This product contains PCBs. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1221	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 11104-28-2 (Lot 10210500)		+/- 31.7706	µg/mL	Unstressed
	Purity ----%		+/- 41.4958	µg/mL	Stressed

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

P 11578 ↓ P 11582 (S)

AR 04/30/22

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

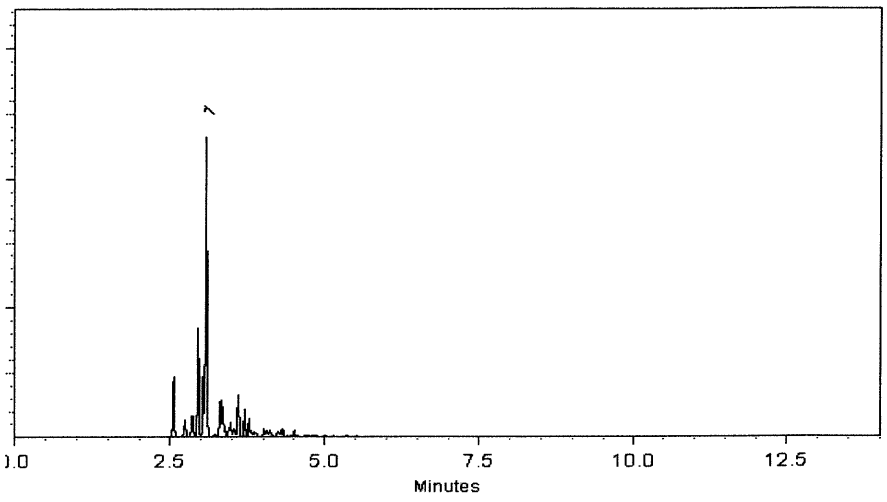
Carrier Gas:
helium-constant pressure 20 psi.

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

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



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

Sam Moodler - Operations Tech I

Date Mixed: 16-Aug-2021 **Balance:** B442140311

Marlina Cowan - Operations Tech I

Date Passed: 18-Aug-2021

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

P11578 ↓ P11582 (5)

AR 04/30/22

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 32008 **Lot No.:** A0173309

Description : Aroclor® 1232 Standard

Aroclor® 1232 Standard 1,000 µg/mL, Hexane, 1mL/ampul

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

Expiration Date : September 30, 2027 **Storage:** 25°C nominal

Handling: This product contains PCBs. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Aroclor 1232	1,001.0 µg/mL	+/- 5.9456 µg/mL	Gravimetric
	CAS # 11141-16-5 (Lot 15665-01)		+/- 31.7389 µg/mL	Unstressed
	Purity ----%		+/- 41.4544 µg/mL	Stressed

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

P11583 ↓ P11597 (S)

AR 04/30/22

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

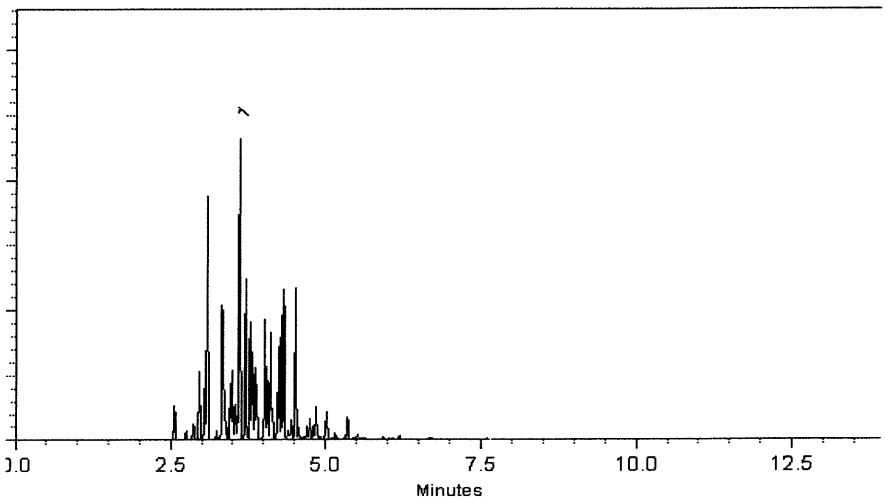
Carrier Gas:
helium-constant pressure 20 psi.

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

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



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

Sam Moodler - Operations Tech I

Date Mixed: 13-Jun-2021 **Balance:** B442140311

Alexis Shelow - Operations Tech I

Date Passed: 16-Jun-2021

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

P11583 ↓ P11587 | (5)

AR 04/30/22

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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. : 32011 **Lot No.:** A0175403

Description : Aroclor® 1254 Standard

Aroclor® 1254 Standard 1,000 µg/mL, Hexane, 1mL/ampul

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

Expiration Date : November 30, 2027 **Storage:** 25°C nominal

Handling: This product contains PCBs. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Aroclor 1254	1,000.7 µg/mL	+/- 5.9437 µg/mL	Gravimetric
	CAS # 11097-69-1 (Lot 124-191-B)		+/- 31.7284 µg/mL	Unstressed
	Purity ----%		+/- 41.4406 µg/mL	Stressed

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

P11588 ↓ P11592 | 5

AR 04/30/2022

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

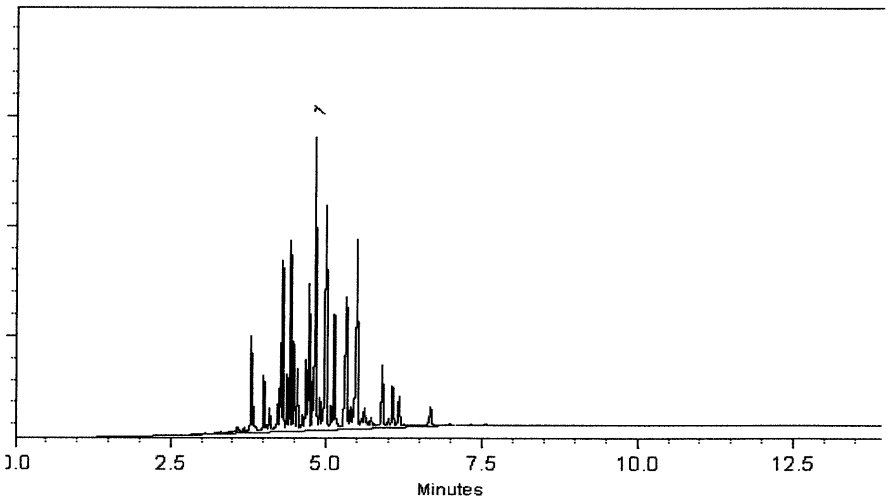
Carrier Gas:
helium-constant pressure 20 psi.

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

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



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

Cathleen Soltis - Mix Technician

Date Mixed: 15-Aug-2021 **Balance:** 1128360905

Alexis Shelow - Operations Tech I

Date Passed: 17-Aug-2021

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

P11588 | (5)
1
P11592

AR
04/30/22

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 32410 **Lot No.:** A0181782

Description : Aroclor® 1268 Standard

Aroclor® 1268 Standard 1,000 µg/mL, 1mL/ampul, Hexane

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

Expiration Date : May 31, 2028 **Storage:** 25°C nominal

Handling: This product contains PCBs. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1268	1,001.4 µg/mL	+/- 5.9480	µg/mL	Gravimetric
	CAS # 11100-14-4 (Lot 10947000)		+/- 31.7516	µg/mL	Unstressed
	Purity ----%		+/- 41.4710	µg/mL	Stressed

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

P 11593 (5)
↓
P 11597

AR 04/30/2022

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

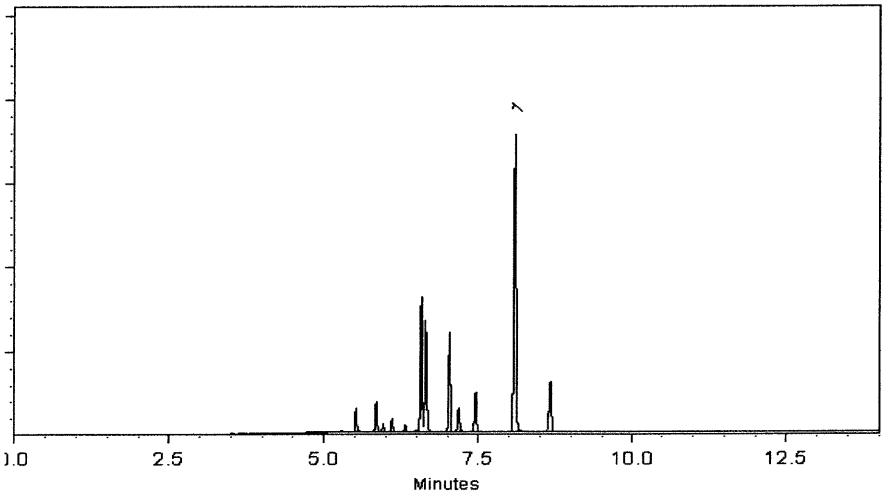
Carrier Gas:
helium-constant pressure 20 psi.

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

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



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

Penelope Riglin - Operations Tech I

Date Mixed: 14-Feb-2022 **Balance:** 1128360905

Clara Windle - Operations Technician I

Date Passed: 17-Feb-2022

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

P 11593 (5)
↓
P 11597
04/30/2022

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CERTIFIED WEIGHT REPORT

Part Number:	91867
Lot Number:	020823
Description:	WP 037 - Aroclor 1232 PCB Technical Mixture
Expiration Date:	020833
Recommended Storage:	Ambient (20 °C)
Nominal Concentration (µg/mL):	100
NIST Test ID#:	6UTB

Solvent(
Aceton

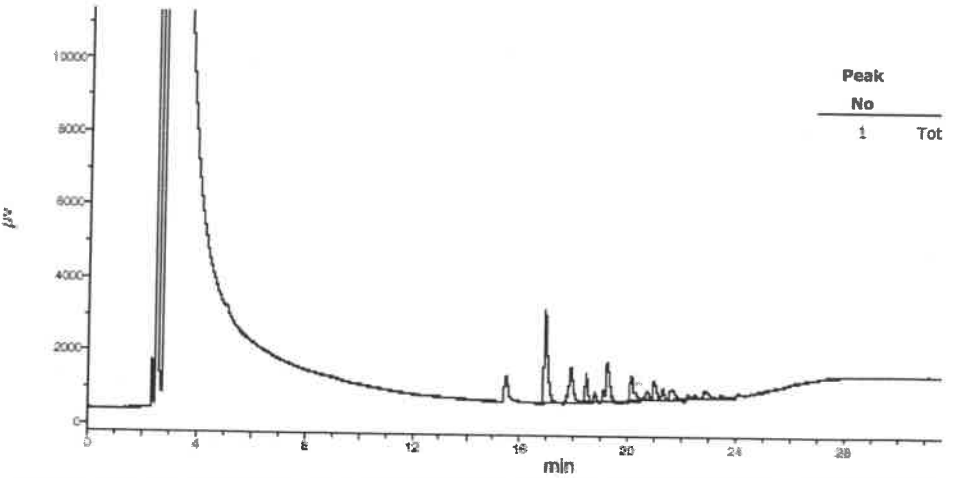
5E-05 Balance Uncertainty
0.057 Flask Uncertainty

Weight(s) shown below were combined and diluted to (mL): 100.0

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g
1. Aroclor 1232	17	45-6A	100	100	0.5	0.01000

- 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 Measure Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Comments
GC3-M1 Analysis by Melissa Stonier
Column ID SPB-608 30 meter X 0.53mm X5µm film thickness
Flow rates: Helium (carrier) = 5mL/min, Helium (make-up) = 25mL/min
Hydrogen (make-up) = 30mL/min, Air (make-up) = 350mL/min
Oven Profile: Temp 1 = 150°C (Time 1 = 4 min), Temp 2 = 290°C (Time 2 = 13.5 min)
Rate = 8°C/min, Total run time = 35 min
Injector temp. = 200°C, FID Temp. = 300°C. FID Signal = Edaq Channel 1
Standard injection =1.5µL, Range=3



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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. : 32009 **Lot No.:** A0203672

Description : Aroclor® 1242 Standard

Aroclor® 1242 Standard 1,000 µg/mL, Hexane, 1mL/ampul

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

Expiration Date : January 31, 2030 **Storage:** 25°C nominal

Handling: This product contains PCBs. **Ship:** Ambient

P12928
↓
P12932
AJ
12/07/23

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Aroclor 1242	53469-21-9	01141	----%	1,004.7 µg/mL	+/- 55.7515

* 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.)

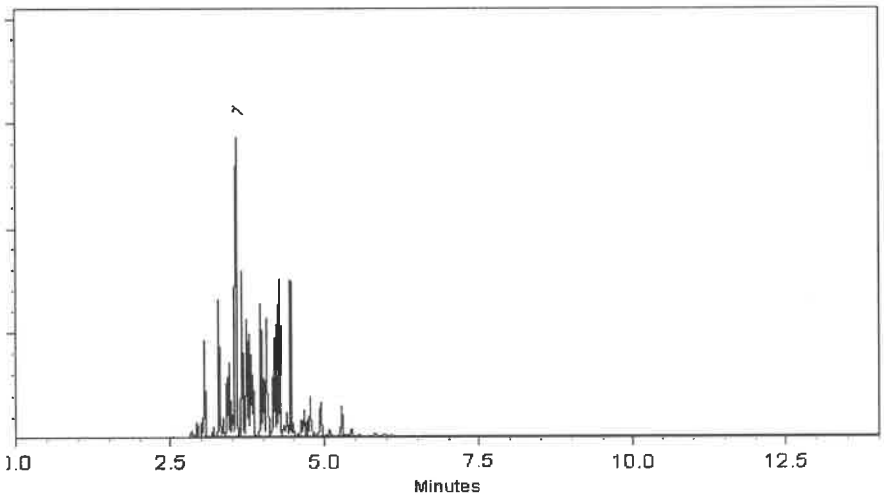
Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD

Split Vent:
10 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.

Russ Bookhamer - Operations Technician I

Date Mixed: 26-Oct-2023 **Balance Serial #** B442140311

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 06-Nov-2023

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

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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.

P12933 ↓ P12937 AJ 12/07/23

Catalog No. : 32010 **Lot No.:** A0202803

Description : Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

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

Expiration Date : January 31, 2030 **Storage:** 25°C nominal

Handling: This product contains PCBs. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Aroclor 1248	12672-29-6	13897600	----%	1,001.7 µg/mL	+/- 55.5850

* 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.)

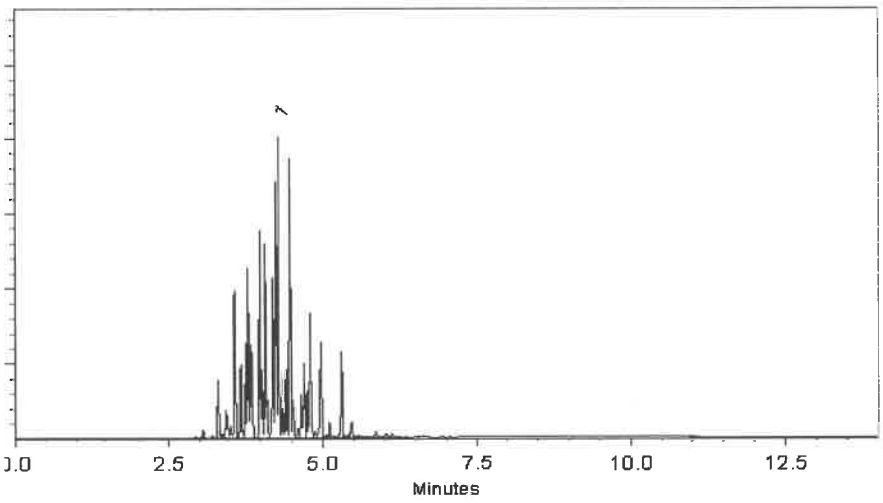
Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD

Split Vent:
10 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.

Laith Clemente - Operations Technician I **Date Mixed:** 03-Oct-2023 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 09-Oct-2023

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

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CERTIFIED WEIGHT REPORT

Part Number:	20064
Lot Number:	022023
Description:	CLP PCB'S - Aroclor Mix
	Aroclors 1016 & 1260
Expiration Date:	022033
Recommended Storage:	Ambient (20 °C)
Nominal Concentration (µg/mL):	1000
NIST Test ID#:	6UTB

Solvent(s):	Lot#
Hexane	273615

5E-05 Balance Uncertainty

Weight(s) shown below were combined and diluted to (mL): 200.0 0.010 Flask Uncertainty

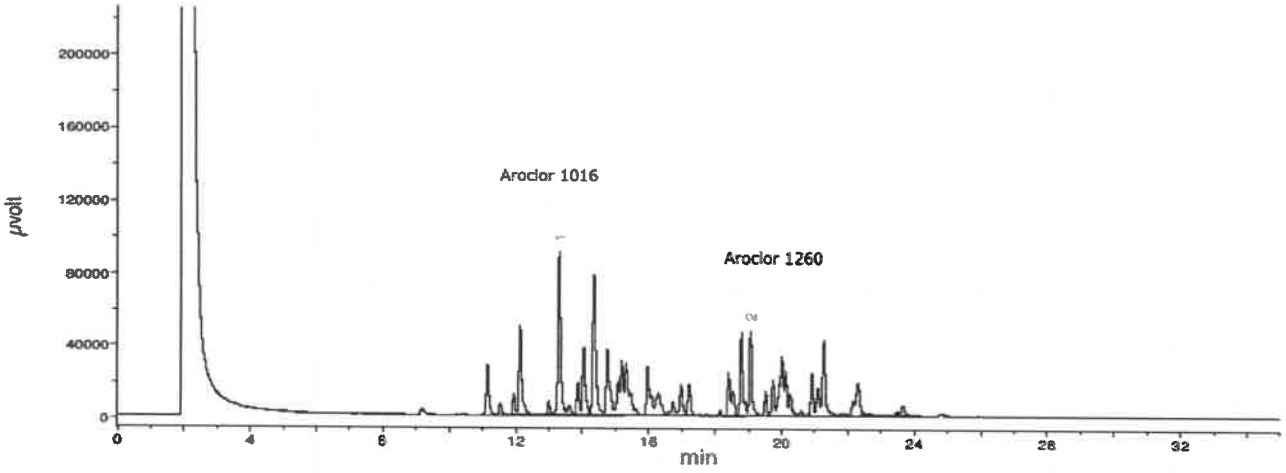
Formulated By:	Benson Chan	022023 DATE
Reviewed By:	Pedro L. Rentas	022023 DATE

P12946 ↓ P12955 — Y.P. 12/20/23

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. Aroclor 1016	15	020491JC	1000	100	0.2	0.20004	0.20060	1002.8	4.0	12674-11-2	N/A	N/A
2. Aroclor 1260	21	020491JC	1000	100	0.2	0.20004	0.20081	1003.9	4.0	11096-82-5	0.5mg/m3	orl-rat 1315mg/kg

- 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).

Comments
GC3-M1 Analysis by Melissa Stonier
Column ID SPB-608 30 meter X 0.53mm X5µm film thickness
Flow rates: Helium (carrier) = 5mL/min, Helium (make-up) = 25mL/min
Hydogen (make-up) = 30mL/min, Air (make-up) = 350mL/min
Oven Profile: Temp 1 = 150°C (Time 1 = 4 min), Temp 2 = 290°C (Time 2 = 13.5 min)
Rate = 8°C/min, Total run time = 35 min
Injector temp. = 200°C, FID Temp. = 300°C. FID Signal = Edaq Channel 1
Standard injection =1.5µL, Range=3



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CERTIFIED WEIGHT REPORT

Part Number:	20064
Lot Number:	022023
Description:	CLP PCB'S - Aroclor Mix
	Aroclors 1016 & 1260
Expiration Date:	022033
Recommended Storage:	Ambient (20 °C)
Nominal Concentration (µg/mL):	1000
NIST Test ID#:	6UTB

Solvent(s):	Lot#
Hexane	273615

5E-05 Balance Uncertainty

Weight(s) shown below were combined and diluted to (mL): 200.0 0.010 Flask Uncertainty

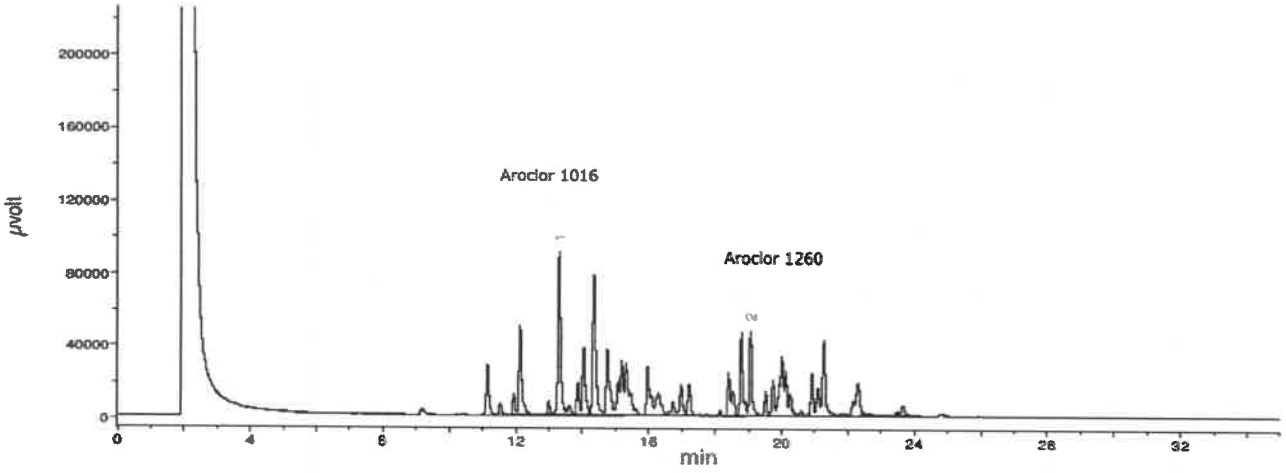
Formulated By:	Benson Chan	022023 DATE
Reviewed By:	Pedro L. Rentas	022023 DATE

P12946 ↓ P12955 — Y.P. 12/20/23

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. Aroclor 1016	15	020491JC	1000	100	0.2	0.20004	0.20060	1002.8	4.0	12674-11-2	N/A	N/A
2. Aroclor 1260	21	020491JC	1000	100	0.2	0.20004	0.20081	1003.9	4.0	11096-82-5	0.5mg/m3	orl-rat 1315mg/kg

- 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).

Comments
GC3-M1 Analysis by Melissa Stonier
Column ID SPB-608 30 meter X 0.53mm X5µm film thickness
Flow rates: Helium (carrier) = 5mL/min, Helium (make-up) = 25mL/min
Hydogen (make-up) = 30mL/min, Air (make-up) = 350mL/min
Oven Profile: Temp 1 = 150°C (Time 1 = 4 min), Temp 2 = 290°C (Time 2 = 13.5 min)
Rate = 8°C/min, Total run time = 35 min
Injector temp. = 200°C, FID Temp. = 300°C. FID Signal = Edaq Channel 1
Standard injection =1.5µL, Range=3



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CERTIFIED WEIGHT REPORT

Part Number:	99139	**Solvent(s):**	**Lot#**	
Lot Number:	121823	Iso-octane	82227	
Description:	Aroclor 1254			
Expiration Date:	121833			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	100			
NIST Test ID#:	6UTB	5E-05	Balance Uncertainty	
Volume(s) shown below were combined and diluted to (mL):		20.0	0.003	Flask Uncertainty

		121823
Formulated By:	Anthony Mahoney	DATE
		121823
Reviewed By:	Pedro L. Rentas	DATE

P12956 & P12957 Y.P. 12/20/23

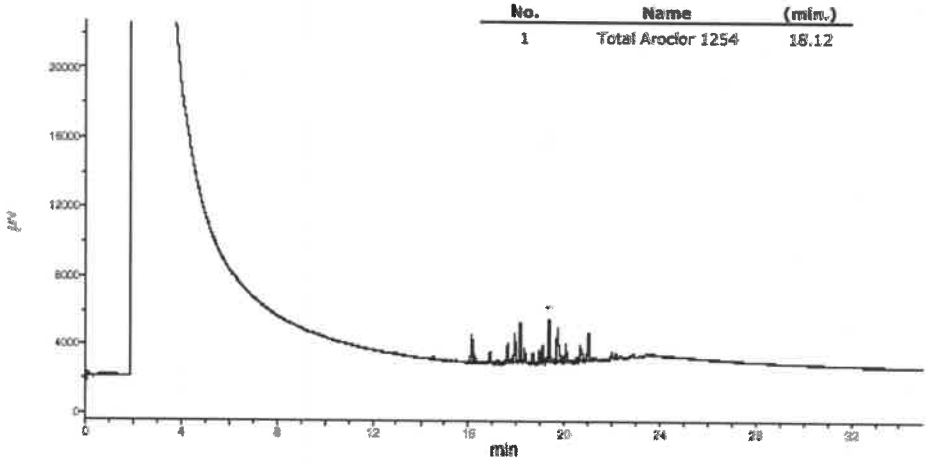
Note: Aroclor 1254 is a mix of isomers.

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc.(µg/mL)	Final Conc.(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Aroclor 1254	79100	121823	0.10	2.00	0.017	1003.3	100.1	1.8	11097-69-1	0.5mg/m3 (skin)	orl-rat 1295mg/kg

- 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).

Comments
GC3-M1 Analysis by Melissa Stonier
Column ID SPB-608 30 meter X 0.53mm X5µm film thickness
Flow rates: Helium (carrier) = 5mL/min, Helium (make-up) = 25mL/min
Hydrogen (make-up) = 30mL/min, Air (make-up) = 350mL/min
Oven Profile: Temp 1 = 150°C (Time 1 = 4 min), Temp 2 = 290°C (Time 2 = 13.5 min)
Rate = 8°C/min, Total run time = 35 min
Injector temp. = 200°C, FID Temp. = 300°C. FID Signal = Edaq Channel 1
Standard injection =1.5µL, Range=3

Peak No.	Name	FID RT (min.)
1	Total Aroclor 1254	18.12



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CERTIFIED WEIGHT REPORT

Part Number: 90165
Lot Number: 112322
Description: Aroclor 1262

Solvent(s): Hexane **Lot#** 273615

Expiration Date: 112332
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB

Weight(s) shown below were combined and diluted to (mL): 50.0 ± 0.005 Flask Uncertainty

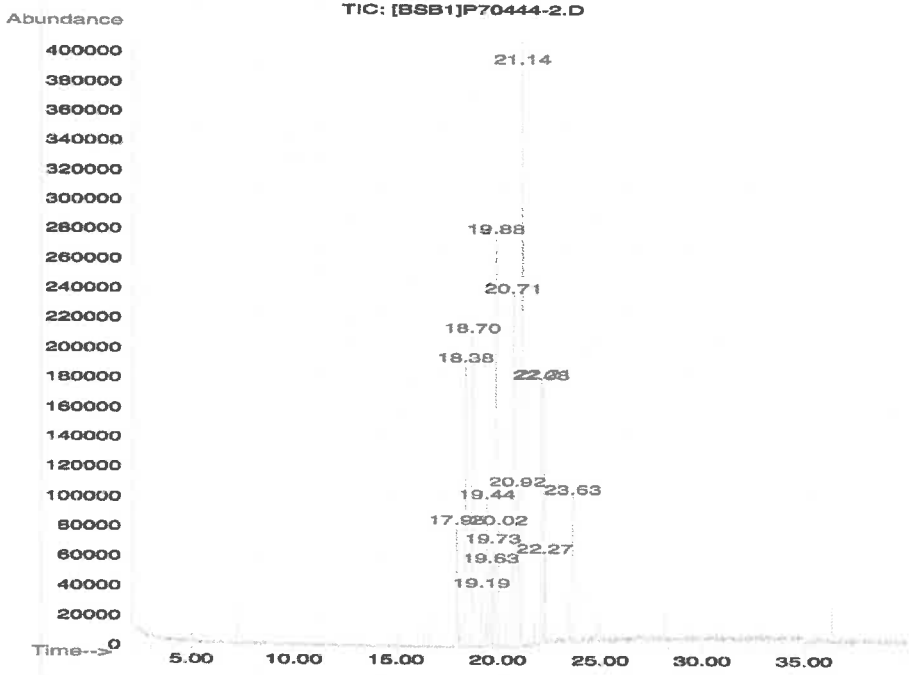
5E-05 Balance Uncertainty

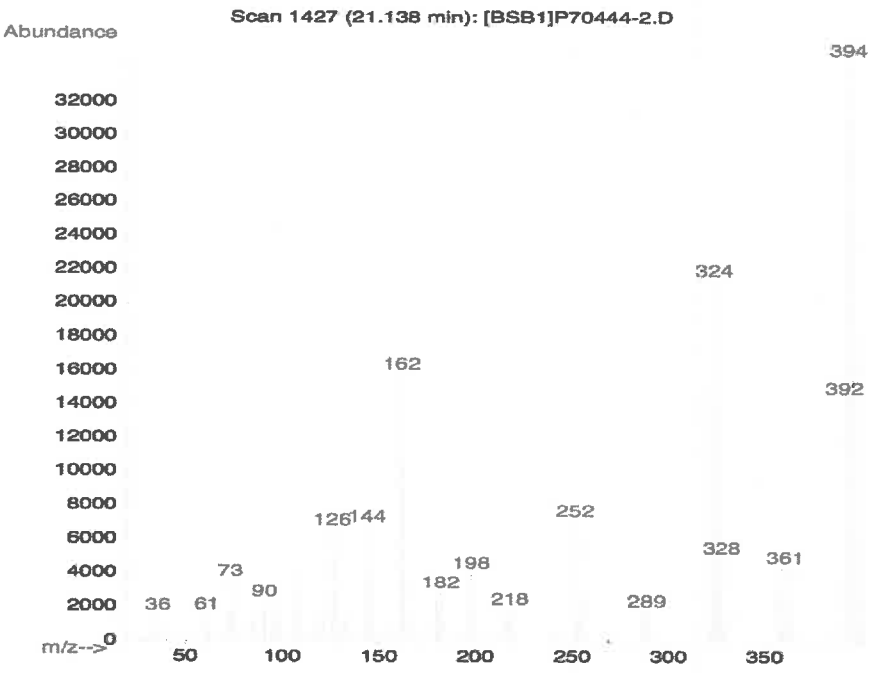
Formulated By:	Prashant Chauhan	112322 DATE
Reviewed By:	Pedro L. Rentas	112322 DATE

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. Aroclor 1262	444	W-130-05	1000	100	0.2	0.05003	0.05016	1002.7	4.5	37324-23-5	N/A	orl-rat 11300mg/kg

Method GC7MSD-7.M: Column:(30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 150°C (0min.), Temp 2 = 290°C (12.5 min.), Rate = 8°C/min., Injector B= 200°C, Detector B = 290°C.

P13032 2 P13033 Y.P. 12/21/23





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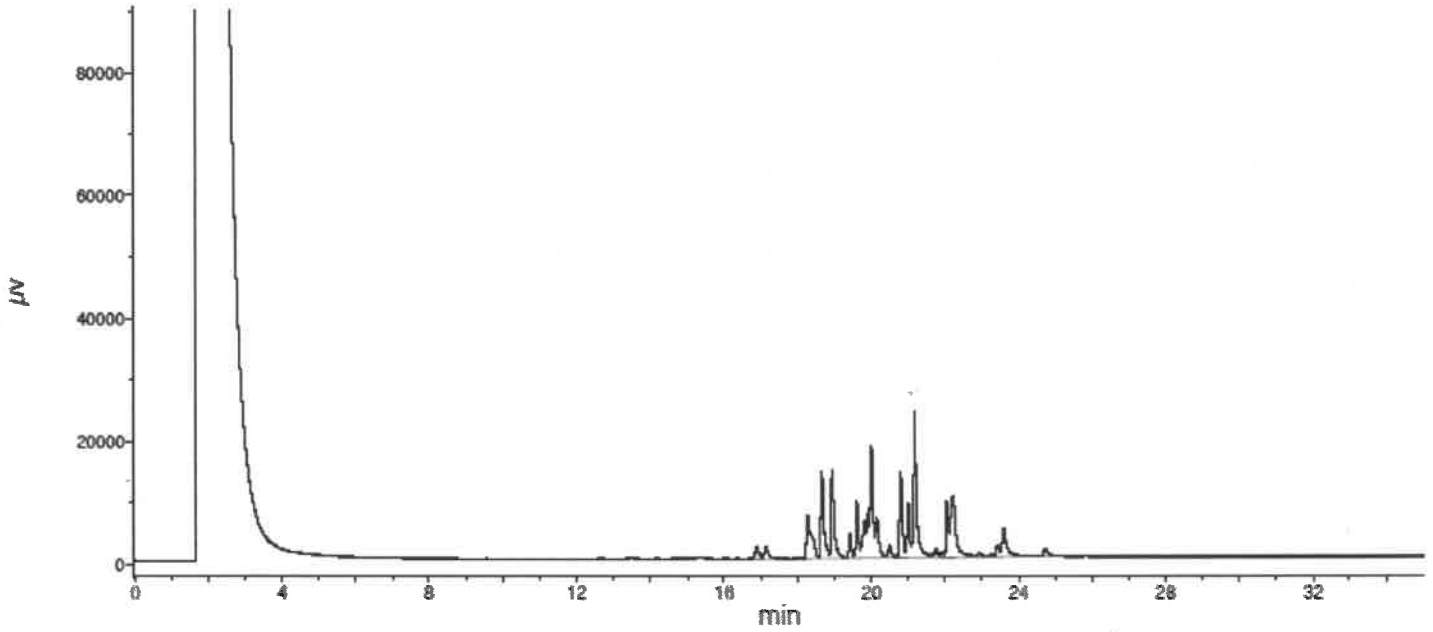
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Run 20, "P90165 L112322 [1000µg/mL in hexane]"

Run Length: 35.00 min, 21000 points at 10 points/second.
Created: Thu, Dec 8, 2022 at 2:31:02 AM.
Sampled: Sequence "120722-GC3M1", Method "GC3-M1".
Analyzed using Method "GC3-M1".

Comments

GC3-M1 Analysis by Melissa Stonier
Column ID SPB-608 30 meter X 0.53mm X5µm film thickness
Flow rates: Helium (carrier) = 5mL/min, Helium (make-up) = 25mL/min
Hydogen (make-up) = 30mL/min, Air (make-up) = 350mL/min
Oven Profile: Temp 1 = 150°C (Time 1 = 4 min), Temp 2 = 290°C (Time 2 = 13.5 min)
Rate = 8°C/min, Total run time = 35 min
Injector temp. = 200°C, FID Temp. = 300°C. FID Signal = Edaq Channel 1
Standard injection =1.5µL, Range=3



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P13348 ↓ P13357 (10)

04/25/2024

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

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.)

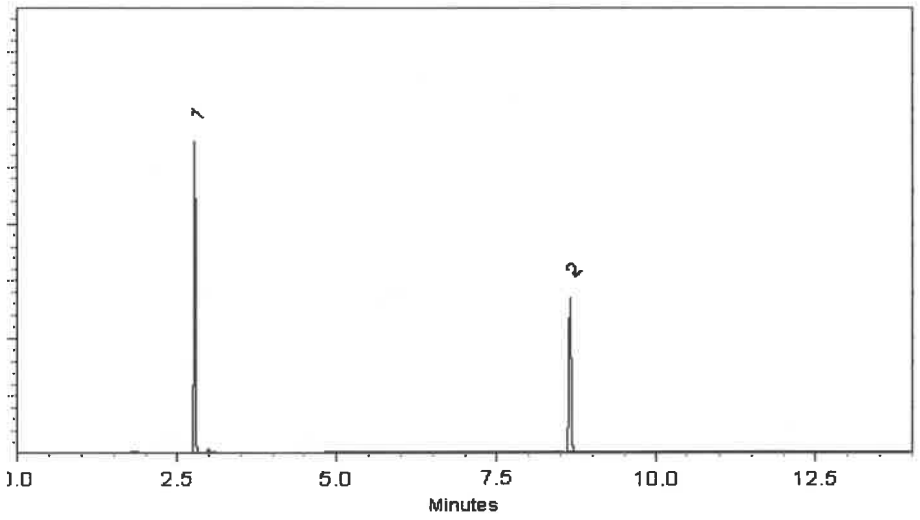
Inj. Temp:
250°C

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)

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P13357

04/25/2025

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.

P13348 ↓ P13357 (10)

04/25/2024

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

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.

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Det. Type:
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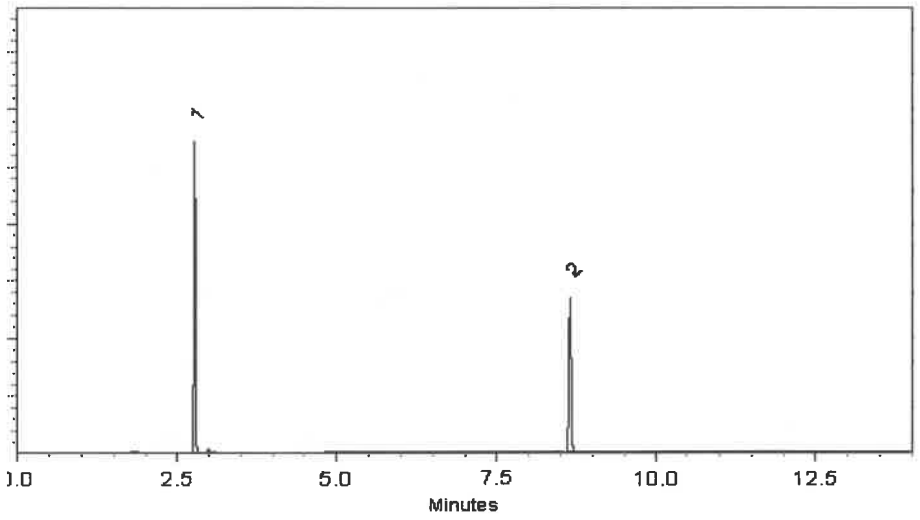

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Laith Clemente - Operations Technician I

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)

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P13357

04/25/2025

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Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name:	Aroclor 1221 Standard	**Lot Number:**	0006783205
Product Number:	PP-292-1	**Lot Issue Date:**	20-Feb-2024
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	31-Mar-2032

Component Name	Concentration		Uncertainty	CAS#	Analyte Lot
Aroclor 1221	100.3	±	0.5 µg/mL	011104-28-2	NT01017

Matrix: isooctane (2,2,4-trimethylpentane)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

P133f2
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P133f3

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05106124

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Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois

QMS Representative

ANAB ANSI National Accreditation Board ACCREDITED REFERENCE MATERIAL PRODUCER

ISO 17034
Cert No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015 Quality Management System. Cert# 951215321

www.agilent.com/quality/

CSD-QA-015.2

ISO 17025
Cert No. AT-1937

250 Smith Street North Kingstown, Rhode Island 02852 **www.agilent.com/quality**