

Prep Standard - Chemical Standard Summary

Order ID : Q1370

Test : PCB

Prepbatch ID : PB166744,

Sequence ID/Qc Batch ID: PR022425,

Standard ID :

EP2565,EP2582,EP2589,PP23776,PP24014,PP24016,PP24017,PP24018,PP24019,PP24020,PP24021,PP24022,PP24023,PP24024,PP24025,PP24026,PP24027,PP24028,PP24029,PP24030,PP24031,PP24032,PP24033,PP24034,PP24035,PP24036,PP24037,PP24038,PP24039,PP24040,PP24041,PP24042,PP24043,PP24044,PP24045,PP24046,PP24047,PP24048,PP24049,PP24050,PP24051,PP24052,PP24053,PP24054,PP24055,PP24124,

Chemical ID :

E3551,E3804,E3826,E3830,E3871,E3873,E3874,E3877,E3878,M5173,P10662,P11582,P12930,P12935,P12947,P13370,P13376,P13378,P13380,P13704,W3112,

Extractions STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2017	1:1 ACETONE/METHYLENE CHLORIDE	EP2582	02/04/2025	07/29/2025	Rajesh Parikh	None	None	RUPESHKUMAR SHAH 02/04/2025

FROM 8000.00000ml of E3873 + 8000.00000ml of E3874 = Final Quantity: 16000.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	EP2589	02/14/2025	07/01/2025	Rajesh Parikh	Extraction_SC ALE_2 (EX-SC-2)	None	RUPESHKUMAR SHAH 02/14/2025
<u>FROM</u> 4000.00000gram of E3551 = Final Quantity: 4000.000 gram								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
404	AR1660 100 PPM Stock Solution 2nd Source	PP23776	10/03/2024	04/01/2025	Ankita Jodhani	None	None	Yogesh Patel 10/03/2024
<u>FROM</u> 1.00000ml of P12947 + 9.00000ml of E3804 = Final Quantity: 10.000 ml								

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
70	10/20 PPM Pest/PCB SOM01.2 Surg Stock	PP24014	11/21/2024	05/18/2025	Ankita Jodhani	None	None	Yogesh Patel 11/22/2024

FROM 1.00000ml of P10662 + 9.00000ml of E3830 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
704	Aroclor 1016/1260 CS5 (1600 ng/ml)	PP24016	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel 11/22/2024

FROM 0.16000ml of P13370 + 99.04000ml of E3826 + 0.80000ml of PP24014 = Final Quantity: 100.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
705	Aroclor 1016/1260 CS4 (800 ng/ml)	PP24017	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24016 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
706	Aroclor 1016/1260 CS3 (400 ng/ml)	PP24018	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.75000ml of E3826 + 0.25000ml of PP24016 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
707	Aroclor 1016/1260 CS2 (200 ng/ml)	PP24019	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.75000ml of E3826 + 0.25000ml of PP24017 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
708	Aroclor 1016/1260 CS1 (100 ng/ml)	PP24020	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.75000ml of E3826 + 0.25000ml of PP24018 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
696	Aroclor 1221 CS5 (1600\80\160 ng/ml)	PP24021	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.16000ml of P11582 + 99.04000ml of E3826 + 0.80000ml of PP24014 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1857	Aroclor 1221 CS4 (800 ng/ml)	PP24022	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24021 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
689	Aroclor 1221 CS3 (400 ng/ml)	PP24023	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.75000ml of E3826 + 0.25000ml of PP24021 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1858	Aroclor 1221 CS2 (200 ng/ml)	PP24024	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24023 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1859	Aroclor 1221 CS1 (100 ng/ml)	PP24025	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24024 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
697	Aroclor 1232 CS5 (1600\80\160 ng/ml)	PP24026	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.16000ml of P13376 + 99.04000ml of E3826 + 0.80000ml of PP24014 = Final Quantity: 100.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1860	Aroclor 1232 CS4 (800 ng/ml)	PP24027	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24026 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
690	Aroclor 1232 CS3 (400 ng/ml)	PP24028	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.75000ml of E3826 + 0.25000ml of PP24026 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1861	Aroclor 1232 CS2 (200 ng/ml)	PP24029	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24028 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1862	Aroclor 1232 CS1 (100 ng/ml)	PP24030	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24029 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
698	Aroclor 1242 CS5 (1600\80\160 ng/ml)	PP24031	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.16000ml of P12930 + 99.04000ml of E3826 + 0.80000ml of PP24014 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1432	Aroclor 1242 CS4 (800 ng/ml)	PP24032	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24031 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
691	Aroclor 1242 CS3 (400 ng/ml)	PP24033	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.75000ml of E3826 + 0.25000ml of PP24031 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1433	Aroclor 1242 CS2 (200 ng/ml)	PP24034	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24033 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1434	Aroclor 1242 CS1 (100 ng/ml)	PP24035	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24034 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
699	Aroclor 1248 CS5 (1600\80\160 ng/ml)	PP24036	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.16000ml of P12935 + 99.04000ml of E3826 + 0.80000ml of PP24014 = Final Quantity: 100.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1255	Aroclor 1248 CS4 (800 ng/ml)	PP24037	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24036 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
692	Aroclor 1248 CS3 (400 ng/ml)	PP24038	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.75000ml of E3826 + 0.25000ml of PP24036 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1256	Aroclor 1248 CS2 (200 ng/ml)	PP24039	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24038 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1257	Aroclor 1248 CS1 (100 ng/ml)	PP24040	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24039 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
700	Aroclor 1254 CS5 (1600\80\160 ng/ml)	PP24041	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.16000ml of P13704 + 99.04000ml of E3826 + 0.80000ml of PP24014 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1863	Aroclor 1254 CS4 (800 ng/ml)	PP24042	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24041 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
693	Aroclor 1254 CS3 (400 ng/ml)	PP24043	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.75000ml of E3826 + 0.25000ml of PP24041 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1864	Aroclor 1254 CS2 (200 ng/ml)	PP24044	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24043 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1865	Aroclor 1254 CS1 (100 ng/ml)	PP24045	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24044 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
701	Aroclor 1262 CS5 (1600\80\160 ng/ml)	PP24046	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.16000ml of P13378 + 99.04000ml of E3826 + 0.80000ml of PP24014 = Final Quantity: 100.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1866	Aroclor 1262 CS4 (800 ng/ml)	PP24047	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24046 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
694	Aroclor 1262 CS3 (400 ng/ml)	PP24048	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.75000ml of E3826 + 0.25000ml of PP24046 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1867	Aroclor 1262 CS2 (200 ng/ml)	PP24049	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24048 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1868	Aroclor 1262 CS1 (100 ng/ml)	PP24050	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24049 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
702	Aroclor 1268 CS5 (1600\80\160 ng/ml)	PP24051	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.16000ml of P13380 + 99.04000ml of E3826 + 0.80000ml of PP24014 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1869	Aroclor 1268 CS4 (800 ng/ml)	PP24052	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24051 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
703	Aroclor 1268 CS3 (400 ng/ml)	PP24053	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.75000ml of E3826 + 0.25000ml of PP24051 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1870	Aroclor 1268 CS2 (200 ng/ml)	PP24054	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24053 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1871	Aroclor 1268 CS1 (100 ng/ml)	PP24055	11/21/2024	05/09/2025	Ankita Jodhani	None	None	Yogesh Patel
								11/22/2024

FROM 0.50000ml of E3826 + 0.50000ml of PP24054 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3798	400 PPB PCB GPC SPIKE	PP24124	01/24/2025	04/01/2025	Abdul Mirza	None	None	Ankita Jodhani
								01/27/2025

FROM 99.60000ml of E3871 + 0.40000ml of PP23776 = Final Quantity: 100.000 ml

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	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)	24G1962003	05/09/2025	11/09/2024 / Rajesh	11/07/2024 / Rajesh	E3826

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	05/18/2025	11/18/2024 / Rajesh	11/15/2024 / Rajesh	E3830

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	07/14/2025	01/14/2025 / Rajesh	12/27/2024 / Rajesh	E3871

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	07/29/2025	01/29/2025 / Rajesh	01/29/2025 / Rajesh	E3873

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)	25A0262002	07/30/2025	01/30/2025 / Rajesh	01/20/2025 / Rajesh	E3874

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-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	32453 / Pesticide Stock Standard, Pesticide Surrogate Mix, 1mL, 100-200ug/mL, acetone	A0170323	05/21/2025	11/21/2024 / Ankita	05/24/2021 / Abdul	P10662

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	05/21/2025	11/21/2024 / Ankita	03/18/2022 / Abdul	P11582

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	05/21/2025	11/21/2024 / Ankita	12/07/2023 / Ankita	P12930

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	05/21/2025	11/21/2024 / Ankita	12/07/2023 / Ankita	P12935

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 #
Restek	32039 / PCB Mix, Aroclor 1016/1260, 1000ug/mL, hexane, 1mL/ampul	A0203315	05/21/2025	11/21/2024 / Ankita	05/03/2024 / Abdul	P13370

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	A0206618	05/21/2025	11/21/2024 / Ankita	05/03/2024 / Abdul	P13376

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	A0208576	05/21/2025	11/21/2024 / Ankita	05/03/2024 / Abdul	P13378

CHEMICAL RECEIPT LOG BOOK

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	A0207475	05/21/2025	11/21/2024 / Ankita	05/03/2024 / Abdul	P13380

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	A0212239	08/31/2030	11/21/2024 /	10/17/2024 / yogesh	P13704

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 / lwona	07/03/2024 / lwona	W3112



**PRODUCTOS
QUÍMICOS
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 ₂ SO ₄
SPECIFICATION NUMBER :	6399	RELEASE DATE:	ABR/21/2023
LOT NUMBER :	313201		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na ₂ SO ₄)	Min. 99.0%	99.7 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.1
Insoluble matter	Max. 0.01%	0.005 %
Loss on ignition	Max. 0.5%	0.1 %
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (as N)	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 foreign 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 R3 on 7/24/23 E 3551

RC-02-01, Ed. 3

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) ₂ CO) (by GC, corrected for water)	≥ 99.5 %	99.8 %
Color (APHA)	≤ 10	< 5
Residue after Evaporation	≤ 5 ppm	< 1 ppm
Titration Acid (μeq/g)	≤ 0.3	0.1
Titration Base (μeq/g)	≤ 0.5	0.1
Water (H ₂ O)	≤ 0.5 %	0.1 %
Solubility in H ₂ O	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

Recd by RP on 9/25/24

>>> Continued on page 2 >>>

E 3804

Acetone
CMOS

 **avantor™**



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™**



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

Test	Specification	Result
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For Microelectronic Use

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



Michelle Bales
Sr. Manager, Quality Assurance

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



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

Certificate of Analysis

Test	Specification	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)	$\geq 99.5 \%$	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.1 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	$\leq 0.05 \%$	< 0.01 %

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

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

E 3826

Rec'd by RP on 11/7/24

Jamie Croak
Director Quality Operations, Bioscience Production

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis



Material No.: 9254-03

Batch No.: 24H2762008

Manufactured Date: 2024-04-18

Expiration Date: 2027-04-18

Revision No.: 0

Certificate of Analysis

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

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

Rec'd by RP on 11/15/24

E 3830

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

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

12/27/24

 **avantors**



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 Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	2
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	100.0%
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.5 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	0.0
Chloride (Cl)	≤ 10 ppm	< 5 ppm
Water (by KF, coulometric)	$\leq 0.02\%$	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 3871

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

Acetone

BAKER RESI-ANALYZED® Reagent

For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 24H2762008

Manufactured Date: 2024-04-18

Expiration Date: 2027-04-18

Revision No.: 0

Certificate of Analysis

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

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 1/29/25

E 3873

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

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



Material No.: 9266-A4
Batch No.: 25A0262002
Manufactured Date: 2024-11-21
Expiration Date: 2026-02-20
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	4
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	99.9%
Color (APHA)	≤ 10	10
Residue after Evaporation	≤ 1.0 ppm	0.8 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	< 0.1
Chloride (Cl)	≤ 10 ppm	< 5 ppm
Water (by KF, coulometric)	$\leq 0.02\%$	$< 0.01\%$

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

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

E 3874

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

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

Harout Sahagian **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)



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)	$\geq 99.8 \%$	100.0 %
Color (APHA)	≤ 10	5
Residue after Evaporation	$\leq 1.0 \text{ ppm}$	0.5 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	0.0
Chloride (Cl)	$\leq 10 \text{ ppm}$	$< 5 \text{ ppm}$
Water (by KF, coulometric)	$\leq 0.02 \%$	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

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

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


Jamie Ethier
Vice President Global Quality



CERTIFIED REFERENCE MATERIAL

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Bellefonte, PA 16823-8812
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Certificate of Analysis



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. : 32453 **Lot No.:** A0170323

Description : SOM01.1 Pesticide Surrogate Standard
Pesticide Surrogate Mix 100-200µg/mL, Acetone, 1mL/ampul

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

Expiration Date : June 30, 2027 **Storage:** 0°C or colder

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

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,4,5,6-Tetrachloro-m-xylene CAS # 877-09-8 (Lot 0052481) Purity 98%	100.0 µg/mL	+/- 0.7088 µg/mL +/- 3.1930 µg/mL +/- 4.1577 µg/mL	Gravimetric Unstressed Stressed
2	Decachlorobiphenyl (BZ# 209) CAS # 2051-24-3 (Lot ER071509-01) Purity 99%	200.0 µg/mL	+/- 1.4182 µg/mL +/- 6.3886 µg/mL +/- 8.3187 µg/mL	Gravimetric Unstressed Stressed

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

P 10653
↓
P 10662
AR
05.26.2021

Column:

30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

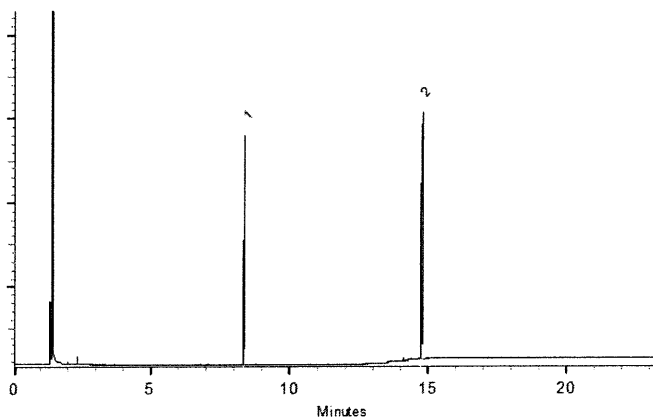
250°C

Det. Temp:

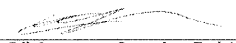
330°C

Det. Type:

FID

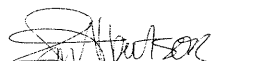


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Erik Strommer - Operations Tech I

Date Mixed: 18-Mar-2021

Balance: B251644995


Justine Albertson - Operations Tech-ARM QC

Date Passed: 22-Mar-2021

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. : 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)

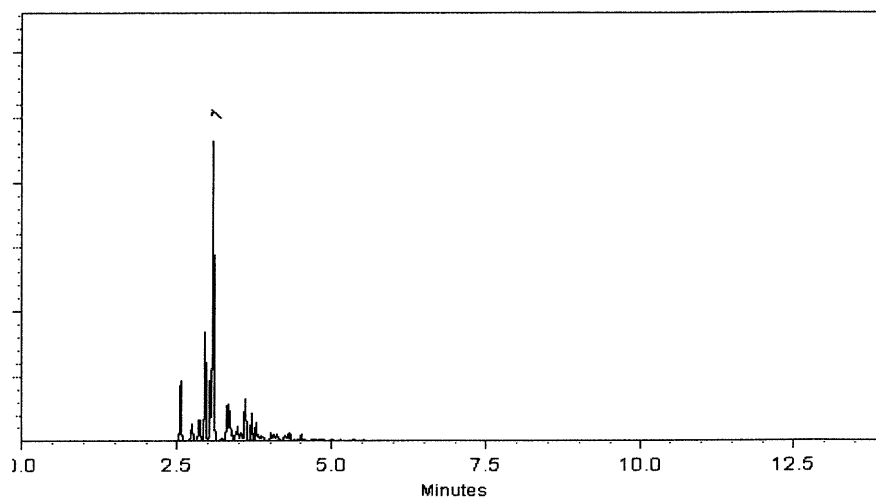
Carrier Gas:
helium-constant pressure 20 psi.

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
Sam Moodler - Operations Tech I

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

Marlene Cowan
Marlene Cowan - Operations Tech I

Date Passed: 18-Aug-2021

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

P11578
↓
P11582 / (S)

AR
04/30/22



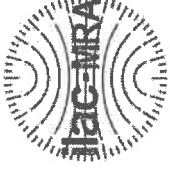
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Fax: 1-814-353-1309

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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.: 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

12/27/23

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

Solvent: Hexane

CAS # 110-54-3

Purity 99%

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

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:

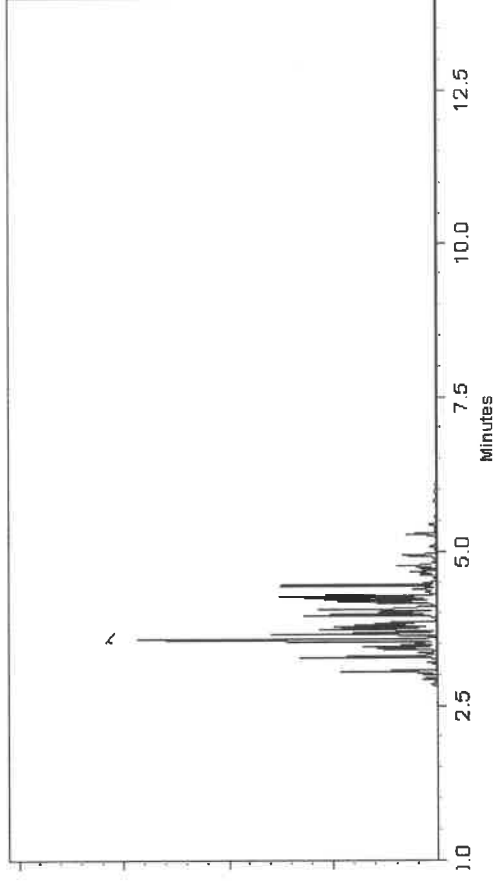
ECD

Split Vent:

10 ml/min.

Inj. Vol

0.2ul



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 Boothamer

Russ Boothamer - Operations Technician I

Date Mixed: 26-Oct-2023

Balance Serial #

B442140311

Jennifer Polino

Jennifer Polino - Operations Tech III - ARM QC

Date Passed: 06-Nov-2023

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



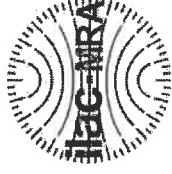
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Fax: 1-814-353-1309

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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.: 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

P1210967
P1210977
P1210923

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

Solvent: Hexane

CAS # 110-54-3

Purity 99%

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

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:

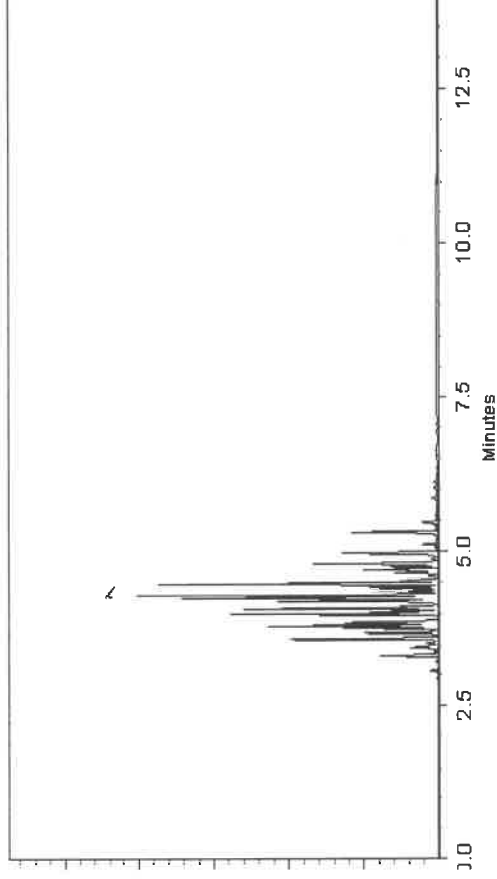
ECD

Split Vent:

10 ml/min.

Inj. Vol

0.2ul



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.

[Signature]
Laith Clemente - Operations Technician I

Date Mixed: 03-Oct-2023

Balance Serial # 1128360905

[Signature]
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 09-Oct-2023

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



Certified Reference Material CRM

CERTIFIED WEIGHT REPORT

Part Number: 20084
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): Hexane Lot# 273615
5E-05 Balance Uncertainty
0.010 Flask Uncertainty
Nominal Conc (µg/mL): 200.0
Purity (%) 100
Purity (%) 100

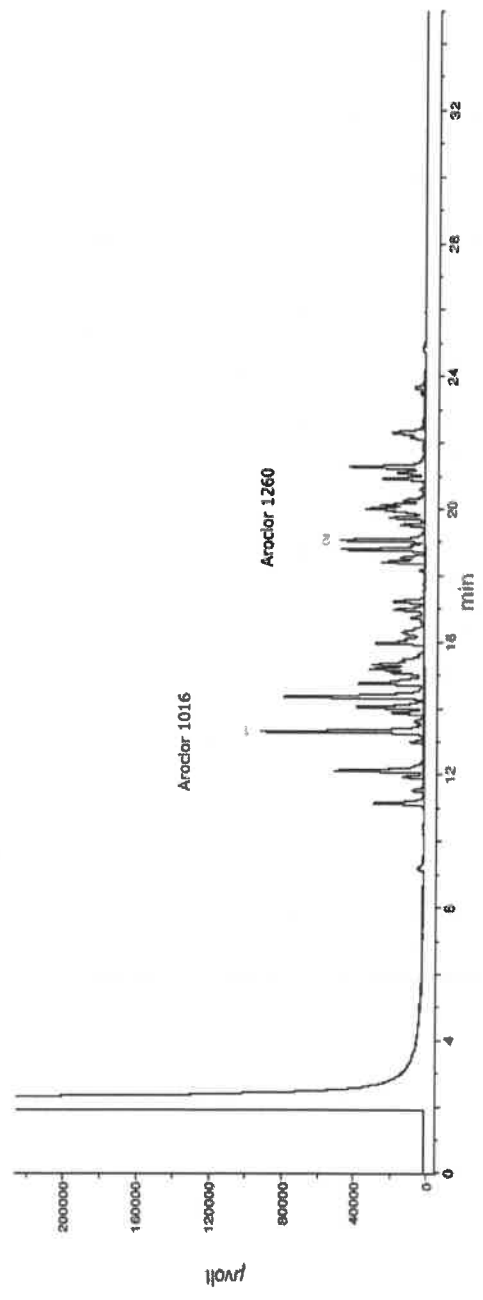
Formulated By: Benson Chan DATE 022023
Reviewed By: Pedro L. Rentas DATE 022023

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

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Purity (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	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	11086-82-5	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).
* 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 Stortier
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 = 280°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 = Etdaq Channel 1
Standard Injection = 1.5µL, Range=3





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Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 32039 **Lot No.:** A0203315

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 : 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 1016	12674-11-2	4	----%	1,009.5 µg/mL	+/- 56.0077
2	Aroclor 1260	11096-82-5	1396281	----%	1,009.0 µg/mL	+/- 55.9800

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

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

P 13370
↓
P 13371 } ②

[Signature]
05/06/2024

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:

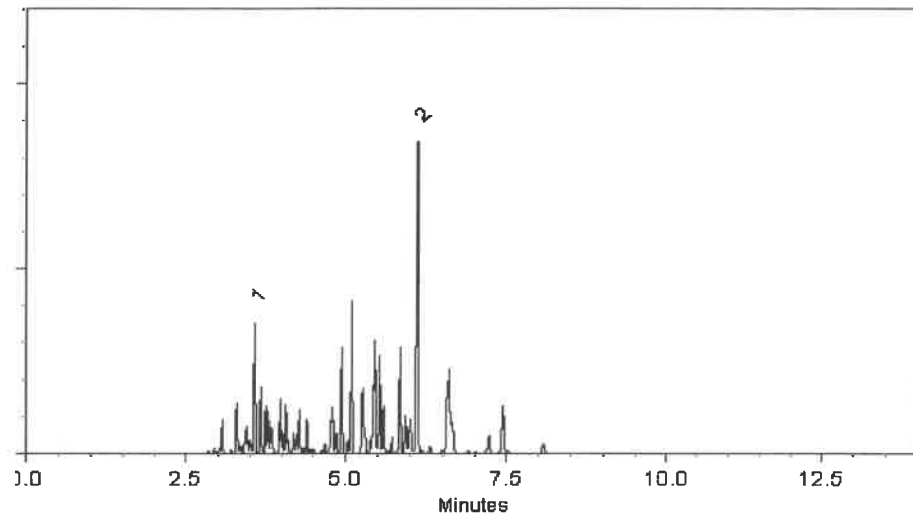
ECD

Split Vent:

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.


Dakota Parson - Operations Technician I

Date Mixed: 18-Oct-2023

Balance Serial # B442140311


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 23-Oct-2023

Manufactured under Restek's ISO 9001:2015
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P13370 } ②
↓
P13371


05/06/2024



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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.:** A0206618
Description : Aroclor® 1232 Standard
Aroclor® 1232 Standard 1,000 µg/mL, Hexane, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : April 30, 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 1232	11141-16-5	15665-01	---%	1,007.6 µg/mL	+/- 55.9143

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

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

P 13376
↓
P 13377

05/6/2024

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:

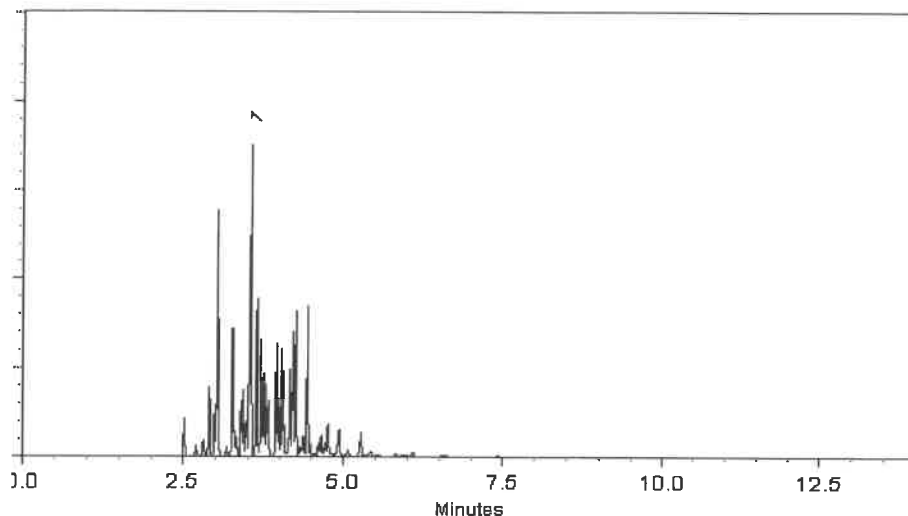
ECD

Split Vent:

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.

Stacey Wanner - Operations Technician I

Date Mixed: 16-Jan-2024

Balance Serial # 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 18-Jan-2024

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

P13376
↓
P13377
②

Stacey
05/01/2024



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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.:** A0206618
Description : Aroclor® 1232 Standard
Aroclor® 1232 Standard 1,000 µg/mL, Hexane, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : April 30, 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 1232	11141-16-5	15665-01	---%	1,007.6 µg/mL	+/- 55.9143

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

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

P 13376
↓
P 13377 (2)

✓
05/6/2024

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:

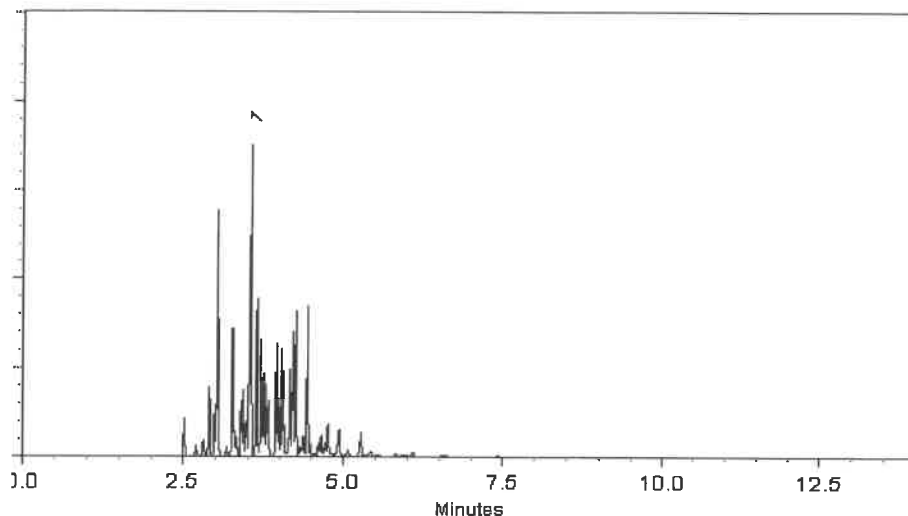
ECD

Split Vent:

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.

Stacey Wanner - Operations Technician I

Date Mixed: 16-Jan-2024

Balance Serial # 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 18-Jan-2024

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

P13376
↓
P13377
②

Stacey
05/01/2024



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 32410 **Lot No.:** A0207475

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, 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 1268	11100-14-4	10947000	---%	1,000.0 µg/mL	+/- 55.4925

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

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

P 13380
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P 13381
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SAZU
05/6/2024

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:

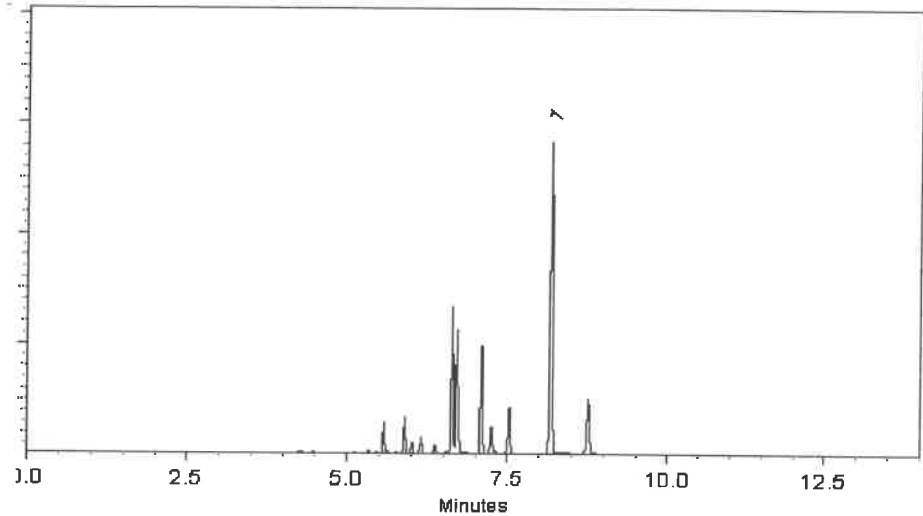
ECD

Split Vent:

Split ratio 500:1

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.

Michael Maye
Michael Maye - Operations Tech I

Date Mixed: 06-Feb-2024

Balance Serial # B442140311

Dillon Murphy
Dillon Murphy - Operations Technician I

Date Passed: 09-Feb-2024

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

P13380 } ②
↓
P13381
1

[Signature]
05/6/2024



110 Benner Circle
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Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 32011 **Lot No.:** A0212239

Description : Aroclor® 1254 Standard

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

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

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

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

P13704 } Y.P.
P13705 } 10/17/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Aroclor 1254	11097-69-1	124-191-B	----%	1,002.0 µg/mL	+/- 55.6035

* 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:

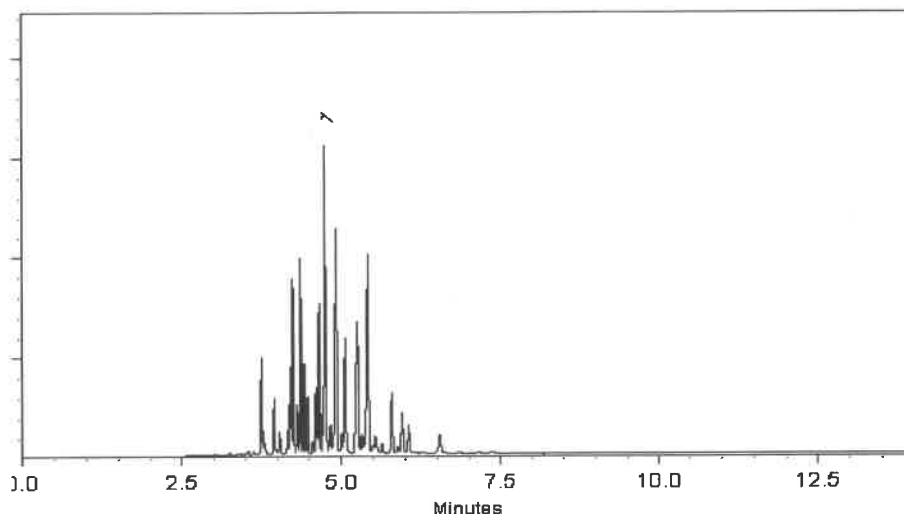
ECD

Split Vent:

300 ml/min.

Inj. Vol

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.

Russ Bookhamer - Operations Technician I

Date Mixed: 30-May-2024

Balance Serial # B251644995

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 03-Jun-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

