

Prep Standard - Chemical Standard Summary

Order ID : P3845

Test : PCB

Prepbatch ID : PB163234,

Sequence ID/Qc Batch ID: PQ090924,pq091024,

Standard ID :

EP2524,EP2532,PP23215,PP23216,PP23217,PP23218,PP23219,PP23220,PP23221,PP23222,PP23223,PP23224,PP23225,PP23226,PP23227,PP23228,PP23229,PP23230,PP23231,PP23232,PP23233,PP23234,PP23235,PP23236,PP23237,PP23238,PP23239,PP23240,PP23241,PP23242,PP23243,PP23244,PP23245,PP23246,PP23247,PP23248,PP23249,PP23250,PP23251,PP23252,PP23253,PP23254,PP23255,PP23257,PP23258,PP23259,PP23262,PP23263,PP23264,PP23265,PP23266,PP23267,PP23268,PP23269,PP23270,PP23271,PP23272,PP23273,PP23516,PP23578,PP23579,PP23608,

Chemical ID :

E3551,E3732,E3735,E3769,E3770,E3772,E3789,E3790,M5037,P10482,P10499,P11506,P11511,P11520,P11580,P11586,P11589,P11596,P12209,P12697,P12810,P12814,P12928,P12933,P12946,P12956,P13032,P13372,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	EP2524	08/14/2024	12/15/2024	Rajesh Parikh	None	None	RUPESHKUMAR SHAH 08/14/2024

FROM 1000.00000ml of M5037 + 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>
3923	Baked Sodium Sulfate	EP2532	08/30/2024	01/03/2025	Rajesh Parikh	Extraction_SC ALE_2 (EX-SC-2)	None	RUPESHKUMAR SHAH 08/30/2024

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
84	Pest/PCB Surrogate Stock 20 PPM	PP23215	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 1.00000ml of P12810 + 9.00000ml of E3735 = 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>
202	AR1660 1000/100 ppb working solution 1st source	PP23216	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.10000ml of P10482 + 99.40000ml of E3735 + 0.50000ml of PP23215 = 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>
203	AR1660 750 PPB STD	PP23217	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.25000ml of E3735 + 0.75000ml of PP23216 = 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>
204	AR1660 500 PPB STD	PP23218	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23216 = 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>
205	AR1660 250 PPB STD	PP23219	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
04/22/2024								

FROM 0.75000ml of E3735 + 0.25000ml of PP23216 = 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>
206	AR1660 50 PPB STD	PP23220	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
04/22/2024								

FROM 0.90000ml of E3735 + 0.10000ml of PP23218 = 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>
213	AR1221 1000 PPB WORKING SOLUTION	PP23221	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.10000ml of P11580 + 99.40000ml of E3735 + 0.50000ml of PP23215 = 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>
1079	AR1221 750 PPB STD	PP23222	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.25000ml of E3735 + 0.75000ml of PP23221 = 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>
222	AR1221 500 PPB STD	PP23223	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23221 = 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>
1080	AR1221 250 PPB STD	PP23224	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.75000ml of E3735 + 0.25000ml of PP23221 = 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>
1081	AR1221 50 PPB STD	PP23225	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.90000ml of E3735 + 0.10000ml of PP23223 = 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>
214	AR1232 1000 PPB WORKING SOLUTION	PP23226	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.10000ml of P11586 + 99.40000ml of E3735 + 0.50000ml of PP23215 = 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>
1063	AR1232 750 PPB STD	PP23227	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.25000ml of E3735 + 0.75000ml of PP23226 = 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>
223	AR1232 500 PPB STD	PP23228	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23226 = 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>
1064	AR1232 250 PPB STD	PP23229	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.75000ml of E3735 + 0.25000ml of PP23226 = 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>
1065	AR1232 50 PPB STD	PP23230	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.90000ml of E3735 + 0.10000ml of PP23228 = 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>
215	AR1242 1000 PPB WORKING STD	PP23231	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.10000ml of P12928 + 99.40000ml of E3735 + 0.50000ml of PP23215 = 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>
1067	AR1242 750 PPB STD	PP23232	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.25000ml of E3735 + 0.75000ml of PP23231 = 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>
224	AR1242 500 PPB STD	PP23233	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23231 = 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>
1068	AR1242 250 PPB STD	PP23234	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.75000ml of E3735 + 0.25000ml of PP23231 = 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>
1069	AR1242 50 PPB STD	PP23235	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.90000ml of E3735 + 0.10000ml of PP23233 = 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>
216	AR1248 1000 PPB WORKING STD	PP23236	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.10000ml of P12933 + 99.40000ml of E3735 + 0.50000ml of PP23215 = 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>
1075	AR1248 750 PPB STD	PP23237	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.25000ml of E3735 + 0.75000ml of PP23236 = 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>
225	AR1248 500 PPB STD	PP23238	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23236 = 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>
1076	AR1248 250 PPB STD	PP23239	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.75000ml of E3735 + 0.25000ml of PP23236 = 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>
1077	AR1248 50 PPB STD	PP23240	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.90000ml of E3735 + 0.10000ml of PP23238 = 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>
217	AR1254 1000 PPB WORKING STD	PP23241	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.10000ml of P11589 + 99.40000ml of E3735 + 0.50000ml of PP23215 = 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>
1071	AR1254 750 PPB STD	PP23242	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.25000ml of E3735 + 0.75000ml of PP23241 = 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>
226	AR1254 500 PPB STD	PP23243	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23241 = 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>
1072	AR1254 250 PPB STD	PP23244	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.75000ml of E3735 + 0.25000ml of PP23241 = 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>
1073	AR1254 50 PPB STD	PP23245	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.90000ml of E3735 + 0.10000ml of PP23243 = 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>
1529	AR1262 1000 PPB Working Solution	PP23246	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.10000ml of P10499 + 99.40000ml of E3735 + 0.50000ml of PP23215 = 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>
3753	AR1262 750 PPB STD	PP23247	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.25000ml of E3735 + 0.75000ml of PP23246 = 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>
1530	AR1262 500 PPB STD	PP23248	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23246 = 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>
3754	AR1262 250 PPB STD	PP23249	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.75000ml of E3735 + 0.25000ml of PP23246 = 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>
3755	AR1262 50 PPB STD	PP23250	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.90000ml of E3735 + 0.10000ml of PP23248 = 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>
1532	AR1268 1000 PPB Working Solution	PP23251	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.10000ml of P11596 + 99.40000ml of E3735 + 0.50000ml of PP23215 = 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>
3820	AR1268 750 PPB STD	PP23252	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.25000ml of E3735 + 0.75000ml of PP23251 = 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>
1533	AR1268 500 PPB STD	PP23253	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23251 = 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>
3821	AR1268 250 PPB STD	PP23254	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.75000ml of E3735 + 0.25000ml of PP23251 = 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>
3822	AR1268 50 PPB STD	PP23255	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.90000ml of E3735 + 0.10000ml of PP23253 = 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>
404	AR1660 100 PPM Stock Solution 2nd Source	PP23257	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 1.00000ml of P12209 + 9.00000ml of E3732 = 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>
405	AR1660 1000/100 PPB ICV STD	PP23258	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 98.50000ml of E3735 + 0.50000ml of PP23215 + 1.00000ml of PP23257 = 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>
406	AR1660 500 PPB ICV	PP23259	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23258 = 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>
1887	AR1232 1000 PPB Working Sol. 2nd Source	PP23262	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 1.00000ml of P12697 + 98.50000ml of E3735 + 0.50000ml of PP23215 = 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>
1888	AR1232 500 PPB ICV	PP23263	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23262 = 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>
1889	AR1242 1000 PPB Working Sol. 2nd Source	PP23264	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel 04/22/2024

FROM 1.00000ml of P11506 + 98.50000ml of E3735 + 0.50000ml of PP23215 = 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>
1891	AR1242 500 PPB ICV	PP23265	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel 04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23264 = 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>
1890	AR1248 1000 PPB Working Sol. 2nd Source	PP23266	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 1.00000ml of P11511 + 98.50000ml of E3735 + 0.50000ml of PP23215 = 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>
1892	AR1248 500 PPB ICV	PP23267	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23266 = 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>
1893	AR1254 1000 PPB Working Sol. 2nd Source	PP23268	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 1.00000ml of P12956 + 98.00000ml of E3735 + 0.50000ml of PP23215 = 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>
1894	AR1254 500 PPB ICV	PP23269	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23268 = 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>
3757	AR1262 1000 PPB Working Solution second source	PP23270	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.10000ml of P13032 + 99.40000ml of E3735 + 0.50000ml of PP23215 = 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>
3758	AR1262 500 PPB STD ICV	PP23271	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23270 = 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>
3817	AR1268 1000 ppb Working Soln. 2nd source	PP23272	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 1.00000ml of P11520 + 98.50000ml of E3735 + 0.50000ml of PP23215 = 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>
3823	AR1268 500 PPB STD ICV	PP23273	04/22/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								04/22/2024

FROM 0.50000ml of E3735 + 0.50000ml of PP23272 = 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>
3857	5000 PPB PCB SPIKE SOLUTION 2ND SOURCE	PP23516	07/12/2024	01/12/2025	Abdul Mirza	None	None	Ankita Jodhani
								07/16/2024

FROM 0.50000ml of P12946 + 99.50000ml of E3769 = 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>
3789	AR1221 1000 PPB WORKING SOL.2ND SOURCE(AGILENT)	PP23578	08/05/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								08/06/2024

FROM 1.00000ml of P13372 + 98.50000ml of E3770 + 0.50000ml of PP23215 = 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>
3790	AR1221 500 PPB ICV(AGILENT)	PP23579	08/05/2024	10/22/2024	Ankita Jodhani	None	None	Yogesh Patel
								08/06/2024

FROM 0.50000ml of E3770 + 0.50000ml of PP23578 = 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>
465	200 PPB Pest/PCB Surrogate Spike	PP23608	08/08/2024	02/01/2025	Abdul Mirza	None	None	Ankita Jodhani
								08/08/2024

FROM 1.00000ml of P12814 + 999.00000ml of E3772 = Final Quantity: 1000.000 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	01/03/2025	01/03/2024 / Rajesh	07/20/2023 / Rajesh	E3551

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	23H1462005	10/22/2024	04/22/2024 / Rajesh	04/12/2024 / Rajesh	E3732

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	10/22/2024	04/22/2024 / Rajesh	04/19/2024 / Rajesh	E3735

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)	23H1462005	01/12/2025	07/12/2024 / Rajesh	07/02/2024 / Rajesh	E3769

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	04/15/2025	07/12/2024 / Rajesh	07/02/2024 / Rajesh	E3770

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)	22L2862006	02/01/2025	08/01/2024 / Rajesh	07/19/2024 / Rajesh	E3772

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24C1862008	02/13/2025	08/13/2024 / Rajesh	08/13/2024 / Rajesh	E3789

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)	24G0862022	02/26/2025	08/26/2024 / Rajesh	08/07/2024 / Rajesh	E3790

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)	0000250349	12/15/2024	01/06/2022 / mohan	09/18/2021 / mohan	M5037

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	10/22/2024	04/22/2024 / Ankita	03/19/2021 / Abdul	P10482

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	10/22/2024	04/22/2024 / Ankita	03/19/2021 / Ankita	P10499

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	PP-312-1 / Aroclor 1242	0006665550	10/22/2024	04/22/2024 / Ankita	02/21/2022 / Ankita	P11506

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	PP-342-1 / Aroclor 1248	0006626997	10/22/2024	04/22/2024 / Ankita	02/21/2022 / Ankita	P11511

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Agilent Technologies	PP-382-1 / Aroclor 1268	0006587800	10/22/2024	04/22/2024 / Ankita	02/21/2022 / Ankita	P11520

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	10/22/2024	04/22/2024 / Ankita	03/18/2022 / Abdul	P11580

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	10/22/2024	04/22/2024 / Ankita	03/18/2022 / Abdul	P11586

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	10/22/2024	04/22/2024 / Ankita	03/18/2022 / Abdul	P11589

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	10/22/2024	04/22/2024 / Ankita	03/18/2022 / Abdul	P11596

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	20064 / Aroclor 1016/1260	033121	10/22/2024	04/22/2024 / Ankita	11/16/2022 / Ankita	P12209

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	10/22/2024	04/22/2024 / Ankita	08/07/2023 / Ankita	P12697

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	A0200112	10/22/2024	04/22/2024 / Ankita	09/25/2023 / Abdul	P12810

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	A0200112	02/08/2025	08/08/2024 / Abdul	09/25/2023 / Abdul	P12814

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	10/22/2024	04/22/2024 / Ankita	12/07/2023 / Ankita	P12928

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	10/22/2024	04/22/2024 / Ankita	12/07/2023 / Ankita	P12933

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	20064 / Aroclor 1016/1260	022023	01/12/2025	07/12/2024 / Abdul	12/20/2023 / Yogesh	P12946

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Arochlor 1254	121823	10/22/2024	04/22/2024 / Ankita	12/20/2023 / Yogesh	P12956

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	90165 / Aroclor 1262	112322	10/22/2024	04/22/2024 / Ankita	12/20/2023 / Yogesh	P13032

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



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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 32000 **Lot No.:** A0200112

Description : Pesticide Surrogate Mix
Pesticide Surrogate Mix 200 µg/mL; Acetone, 1mL/ampul

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

Expiration Date : October 31, 2029 **Storage:** 10°C or colder

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

P 12806
P 12815 / 10
✓
9/25/2023

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%	201.3 µg/mL	+/- 11.1676
2	Decachlorobiphenyl (BZ# 209)	2051-24-3	30679	99%	201.5 µg/mL	+/- 11.1787

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

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

Tech Tips:

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

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

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

Quality Confirmation Test

Column:

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

Carrier Gas:

helium-constant pressure 20 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

300°C

Det. Type:

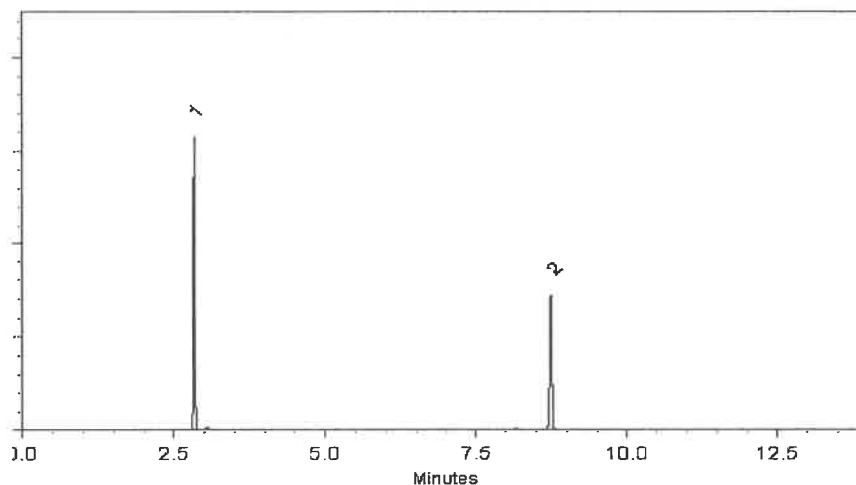
ECD

Split Vent:

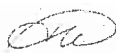
10 ml/min.

Inj. Vol

1µl



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


Jess Hoy - Operations Tech I

Date Mixed: 20-Jul-2023

Balance Serial # B442140311


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Jul-2023

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

P12806 } (10)
↓
P12815
1
W. Stuef
9/25/2023



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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. : 32000 **Lot No.:** A0200112

Description : Pesticide Surrogate Mix
Pesticide Surrogate Mix 200 µg/mL; Acetone, 1mL/ampul

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

Expiration Date : October 31, 2029 **Storage:** 10°C or colder

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

P 12806
P 12815 / 10
✓
9/25/2023

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%	201.3 µg/mL	+/- 11.1676
2	Decachlorobiphenyl (BZ# 209)	2051-24-3	30679	99%	201.5 µg/mL	+/- 11.1787

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

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

Tech Tips:

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

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

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

Quality Confirmation Test

Column:

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

Carrier Gas:

helium-constant pressure 20 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

300°C

Det. Type:

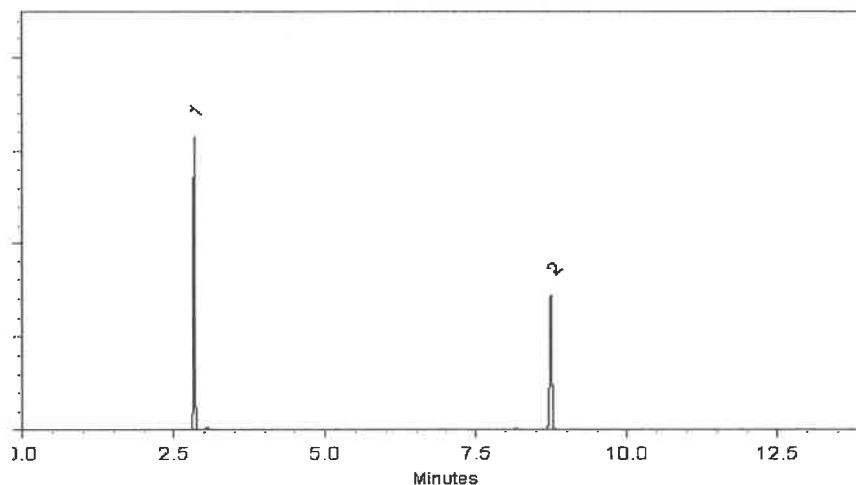
ECD

Split Vent:

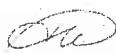
10 ml/min.

Inj. Vol

1µl



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


Jess Hoy - Operations Tech I

Date Mixed: 20-Jul-2023

Balance Serial # B442140311


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Jul-2023

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

P12806 } (10)
↓
P12815
1
W. Stuef
9/25/2023



**PRODUCTOS
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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

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

 **avantor™**



Material No.: 9254-03
Batch No.: 23H1462005
Manufactured Date: 2023-07-26
Expiration Date: 2026-07-25
Revision No.: 0

Certificate of Analysis

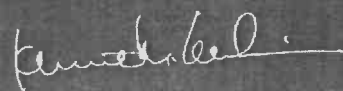
Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	≥ 99.4 %	99.7 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (μeq/g)	≤ 0.3	0.1
Titration Base (μeq/g)	≤ 0.6	< 0.1
Water (H ₂ O)	≤ 0.5 %	0.3 %
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: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 4/12/24

E 3732



Ken Koehnlein
Sr. Manager, Quality Assurance

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



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 ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	≤ 0.05 %	< 0.01 %

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

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

Recd. by RP on 4/19/24

E3735

Jamie Croak
Director Quality Operations, Bioscience Production

Acetone

BAKER RESI-ANALYZED® Reagent

For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 23H1462005

Manufactured Date: 2023-07-26

Expiration Date: 2026-07-25

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	≥ 99.4 %	99.7 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (μeq/g)	≤ 0.3	0.1
Titration Base (μeq/g)	≤ 0.6	< 0.1
Water (H ₂ O)	≤ 0.5 %	0.3 %
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: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 7/21/24

E 3769

Ken Koehnlein
Sr. Manager, Quality Assurance

Acetone

BAKER RESI-ANALYZED® Reagent

For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 23H1462005

Manufactured Date: 2023-07-26

Expiration Date: 2026-07-25

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	≥ 99.4 %	99.7 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (μeq/g)	≤ 0.3	0.1
Titration Base (μeq/g)	≤ 0.6	< 0.1
Water (H ₂ O)	≤ 0.5 %	0.3 %
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: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 7/21/24

E 3769

Ken Koehnlein
Sr. Manager, Quality Assurance

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis



Material No.: 9254-03
Batch No.: 22L2862006
Manufactured Date: 2022-12-19
Expiration Date: 2025-12-18
Revision No.: 0

Certificate of Analysis

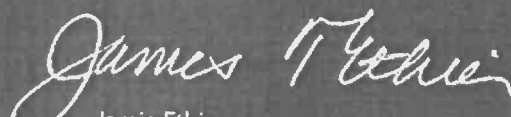
Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	≥ 99.4 %	99.7 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (μeq/g)	≤ 0.3	0.1
Titration Base (μeq/g)	≤ 0.6	< 0.1
Water (H ₂ O)	≤ 0.5 %	0.3 %
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	4

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 7/19/24

E3772


Jamie Ethier
Vice President Global Quality

Material No.: 926
Batch No.: 24C186
Manufactured Date: 2024-0
Expiration Date: 2025-0
Revision N

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 ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	≤ 0.05 %	< 0.01 %

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

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

Recd. by RP on 8/13/24

E 3789



Jamie Croak
Director Quality Operations, Bioscience Products

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

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



Material No.: 9266-A4
Batch No.: 24G0862022
Manufactured Date: 2024-06-05
Expiration Date: 2025-09-04
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	4
Assay (CH ₂ Cl ₂) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8 \%$	100.0 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Titration Acid (μ 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: USA
Packaging Site: Phillipsburg Mfg Ctr & DC
Manufacturer source batch: MG24F05012

E 3790

Jamie Croak
Director Quality Operations, Bioscience Production

Sulfuric Acid

BAKER INSTRA-ANALYZED® Reagent

For Trace Metal Analysis

Low Selenium

avantorsm



Material No.: 9673-33

Batch No.: 0000250349

Manufactured Date: 2019/12/17

Retest Date: 2024/12/15

Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS - Assay (H ₂ SO ₄)	95.0 - 98.0 %	96.5
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Substances Reducing Permanganate (as SO ₂)	<= 2 ppm	< 2
Ammonium (NH ₄)	<= 1 ppm	< 1
Chloride (Cl)	<= 0.1 ppm	< 0.1
Nitrate (NO ₃)	<= 0.2 ppm	< 0.1
Phosphate (PO ₄)	<= 0.5 ppm	< 0.1
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	0.2
Arsenic and Antimony (as As)	<= 4 ppb	< 2
Trace Impurities - Barium (Ba)	<= 10.0 ppb	< 1.0
Trace Impurities - Beryllium (Be)	<= 10.0 ppb	< 1.0
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 10.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 2.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	2.9
Trace Impurities - Chromium (Cr)	<= 6.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 0.5 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 10.0 ppb	< 1.0
Trace Impurities - Germanium (Ge)	<= 10.0 ppb	< 10.0
Trace Impurities - Gold (Au)	<= 10.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 500 ppb	< 100

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

Avantor Performance Materials, LLC

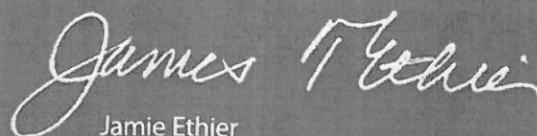
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Material No.: 9673-33
Batch No.: 0000250349

Test	Specification	Result
Trace Impurities - Iron (Fe)	<= 50.0 ppb	4.1
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 10.0 ppb	< 1.0
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	< 0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 2.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 10.0 ppb	< 1.0
Trace Impurities - Potassium (K)	<= 500.0 ppb	< 2.0
Trace Impurities - Selenium (Se)	<= 50.0 ppb	22.9
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 500.0 ppb	2.7
Trace Impurities - Strontium (Sr)	<= 5.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 10.0 ppb	< 5.0
Trace Impurities - Thallium (Tl)	<= 20.0 ppb	< 5.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 10.0 ppb	< 1.0
Trace Impurities - Vanadium (V)	<= 10.0 ppb	< 1.0
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 10.0 ppb	< 1.0

For Laboratory, Research or Manufacturing Use

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



Jamie Ethier
Vice President Global Quality

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

Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

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. : 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 CAS # 12674-11-2 (Lot 04) Purity ----%	1,007.0 µg/mL	+/- 5.8683 µg/mL Gravimetric +/- 31.9082 µg/mL Unstressed +/- 41.6868 µg/mL Stressed
2	Aroclor 1260 CAS # 11096-82-5 (Lot 07) Purity ----%	1,008.0 µg/mL	+/- 5.8741 µg/mL Gravimetric +/- 31.9399 µg/mL Unstressed +/- 41.7282 µg/mL Stressed

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

P 10476
↓

P 10480

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:

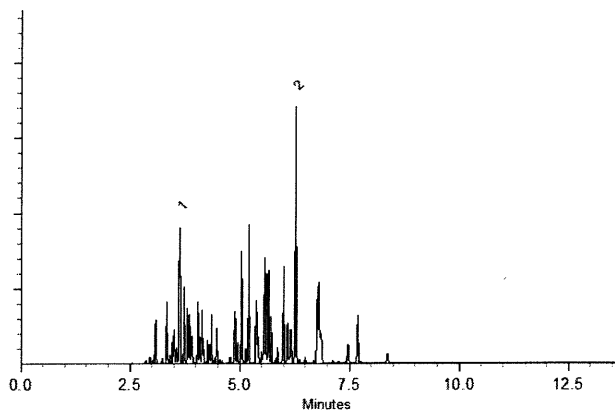
250°C

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



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

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. : 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
↓
P10500

AJ
09/19/21

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

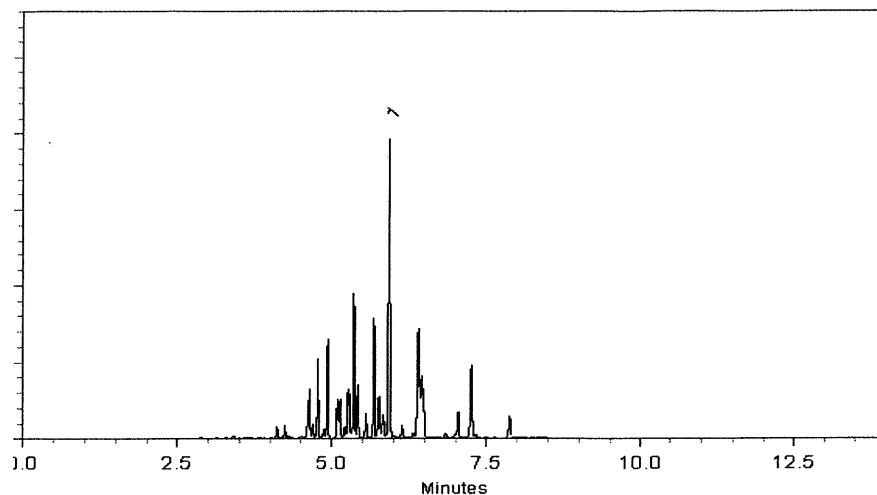
Carrier Gas:
helium-constant pressure 20 psi.

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
Sam Moodler - Operations Tech I

Date Mixed: 03-Jan-2021

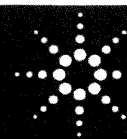
Balance: B707717271

Marlene Cowan
Marlene 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

Component Name	CERTIFIED VALUES			CAS#	Analyte Lot
	Concentration	Expanded Uncertainty			
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.

P11503
↓
P11507A7
02/21/22

Page: 1 of 2

CSD-QA-015.1

ISO 17034



Agilent

Trusted Answers

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 Cert
No. AR-1936

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

Page: 2 of 2

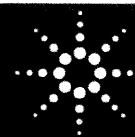
www.agilent.com/quality/

CSD-QA-015.1



ISO 17025
Cert No. AT-

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

Component Name	CERTIFIED VALUES		CAS#	Analyte Lot
	Concentration	Expanded Uncertainty		
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

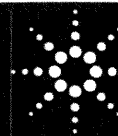
↓

P11512

AJ

2/21/22

ISO 17034



Agilent

Trusted Answers

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 Cert
No. AR-1936

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

Page: 2 of 2

www.agilent.com/quality/

CSD-QA-015.1



ISO 17025 Cert
No. AT-1937



Certificate of Analysis

P11518
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P11522
AJ
02/21/22

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.

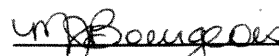
Expiration of Certification:

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:


Monica Bourgeois
QMS Representative



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
Page: 1 of 1

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



ISO 17025 Cert
No. AT-1937



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

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. : 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)

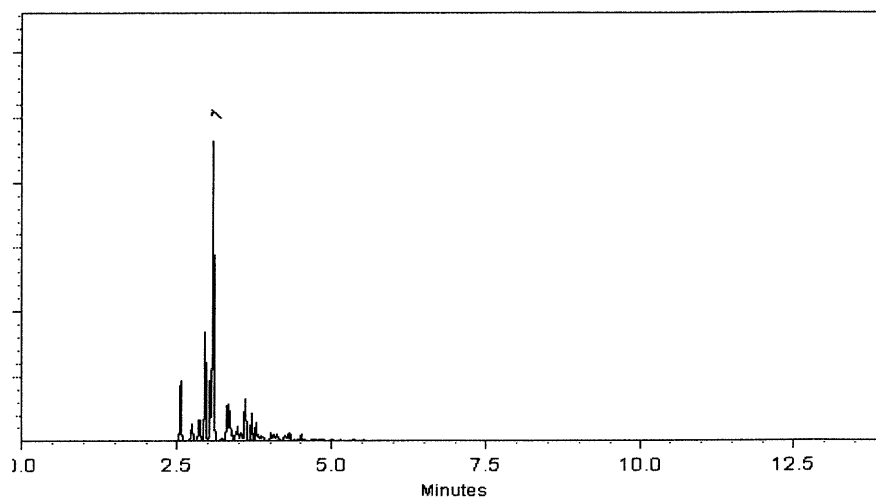
Carrier Gas:
helium-constant pressure 20 psi.

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



CERTIFIED REFERENCE MATERIAL

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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. : 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
↓
P11587 / (S)

AR
04/30/22

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

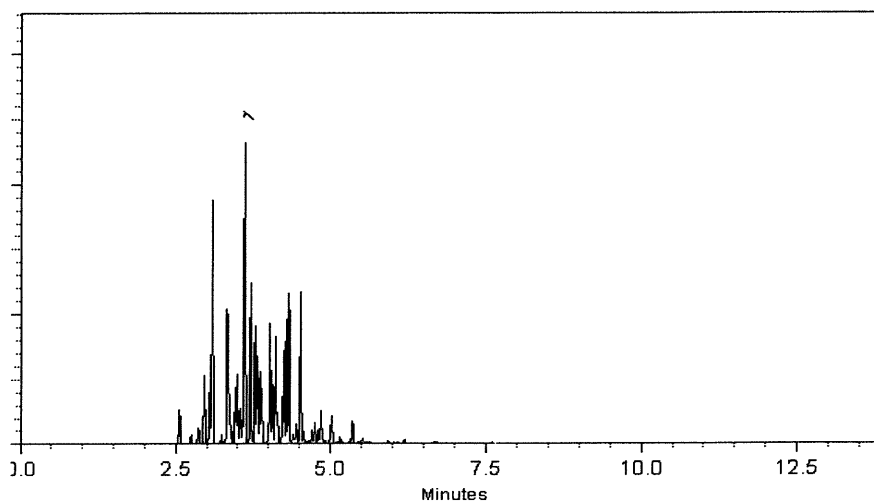
Carrier Gas:
helium-constant pressure 20 psi.

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

Alexis Shelow
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 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. : 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 CAS # 11097-69-1 (Lot 124-191-B) Purity ----%	1,000.7 µg/mL	+/- 5.9437 µg/mL Gravimetric +/- 31.7284 µg/mL Unstressed +/- 41.4406 µg/mL Stressed

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

P11588
↓
P11592 / (S)

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:

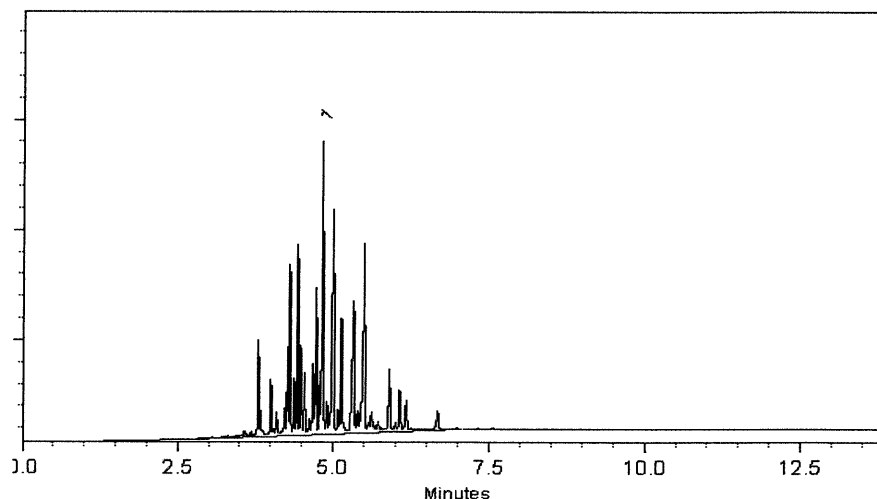
250°C

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

Cathleen Soltis - Mix Technician

Date Mixed: 15-Aug-2021

Balance: 1128360905

Alexis Shelow

Alexis Shelow - Operations Tech I

Date Passed: 17-Aug-2021

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

P11588
↓
P11592 / (5)

AR
04/30/22



CERTIFIED REFERENCE MATERIAL

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Tel: (800)356-1688
Fax: (814)353-1309

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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. : 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 CAS # 11100-14-4 Purity ----%	1,001.4 µg/mL (Lot 10947000)	+/- 5.9480 µg/mL Gravimetric +/- 31.7516 µg/mL Unstressed +/- 41.4710 µg/mL Stressed

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

P 11593
↓
P 11597
⑤

UAR
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:

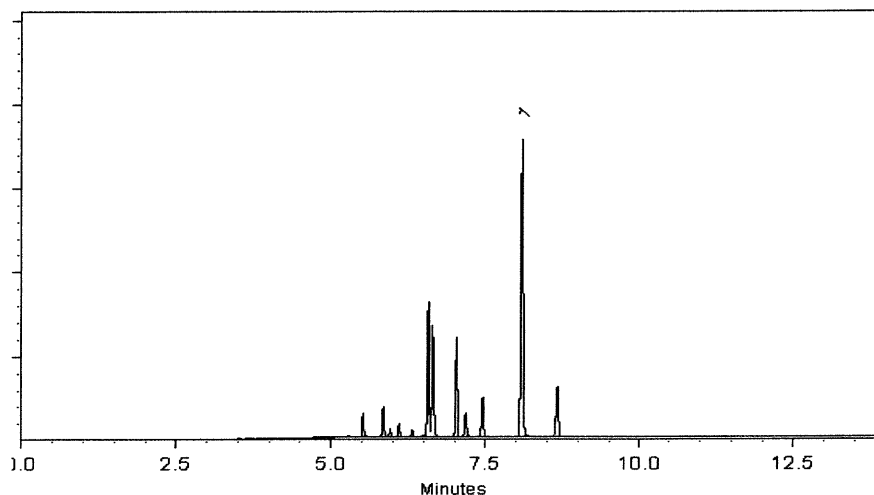
250°C

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 S. Riglin
Penelope Riglin - Operations Tech I

Date Mixed: 14-Feb-2022

Balance: 1128360905

Clara Windle
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
[Signature]
04/30/2022



Certified Reference Material CRM

CERTIFIED WEIGHT REPORT

Part Number: 20064
Lot Number: 033121
Description: CLP PCB'S - Aroclor Mix
Aroclors 1016 & 1260
033131
Expiration Date:
Ambient (20 °C)
1000
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test ID#:
6UTB

Solvent(s): Hexane
Lot# 233256

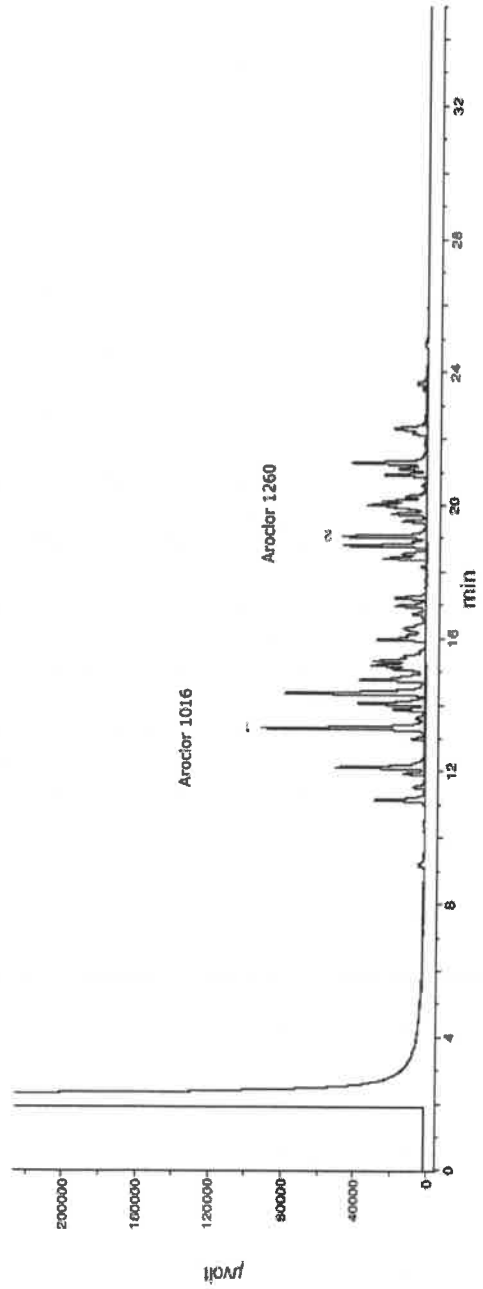
Formulated By:	Prashant Chauhan	033121	DATE
Reviewed By:	Pedro L. Rentas	033121	DATE

Weight(s) shown below were combined and diluted to (mL): 200.1 5E-05 Balance Uncertainty 0.058 Flask Uncertainty

SDS Information												
(Solvent Safety Info. On Attached pg.)												
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)	CAS#	OSHA PEL (TWA)	LD50
1. Aroclor 1016	15	020491JC	1000	100	0.2	0.20007	0.20025	1000.9	4.1	12674-11-2	N/A	N/A
2. Aroclor 1260	21	020491JC	1000	100	0.2	0.20007	0.20035	1001.4	4.1	11096-82-5	0.5mg/m3	ori-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 certified (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Comments
GC3-M1 Analysis by Melissa Stortier
Column ID SPB-608 30 meter X 0.53mm X 5µm 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 = Etdaq Channel 1
Standard injection = 1.5µL, Range=3



P12201
AS
11/16/22
J
P12210



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

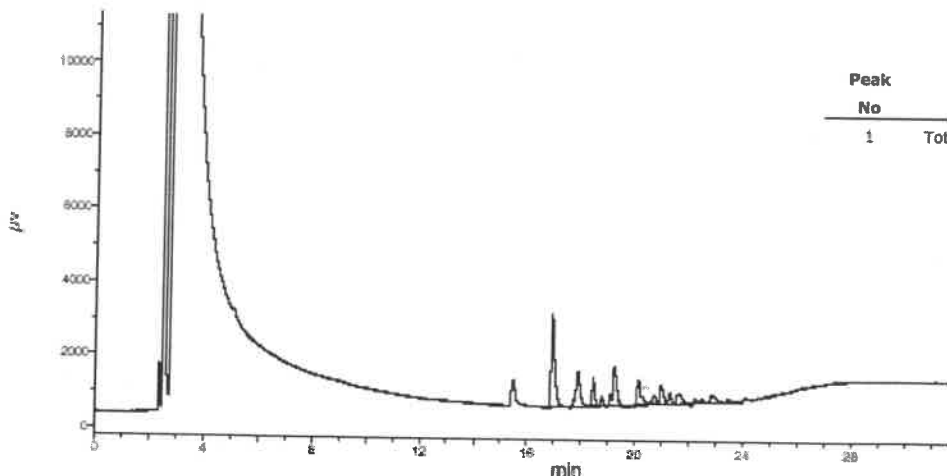
Weight(s) shown below were combined and diluted to (mL): **100.0**
 5E-05 Balance Uncertainty
 0.057 Flask Uncertainty

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

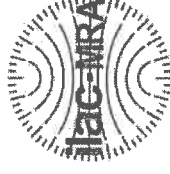
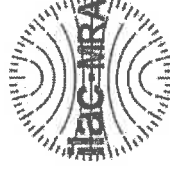
GC3-M1 Analysis by Melissa Stonier
 Column ID SPB-608 30 meter X 0.53mm X 5µm film thickness
 Flow rates: Helium (carrier) = 5mL/min, Helium (make-up) = 25mL/min
 Hydrogen (make-up) = 30mL/min, Air (make-up) = 350mL/min
 Oven Profile: Temp 1 = 150°C (Time 1 = 4 min), Temp 2 = 290°C (Time 2 = 13.5 min)
 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





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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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

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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:

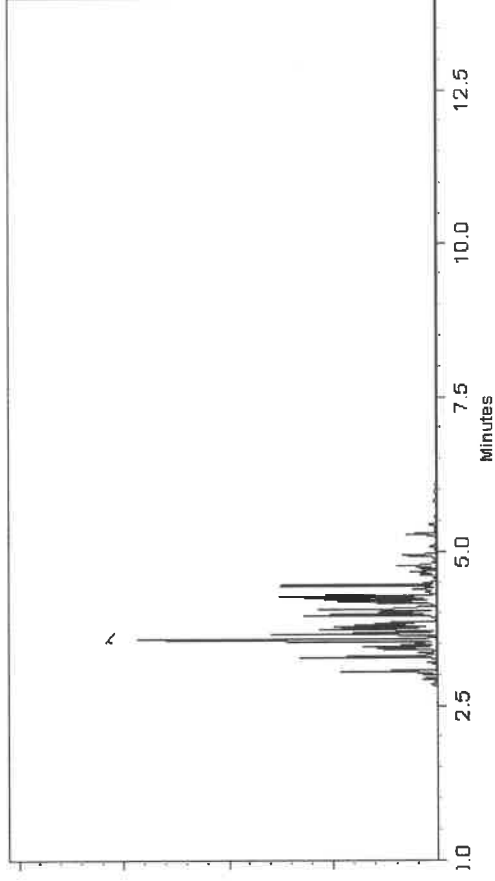
ECD

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



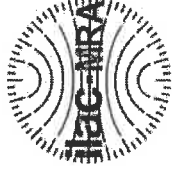
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



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.: 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
P1210973
P1210973

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:

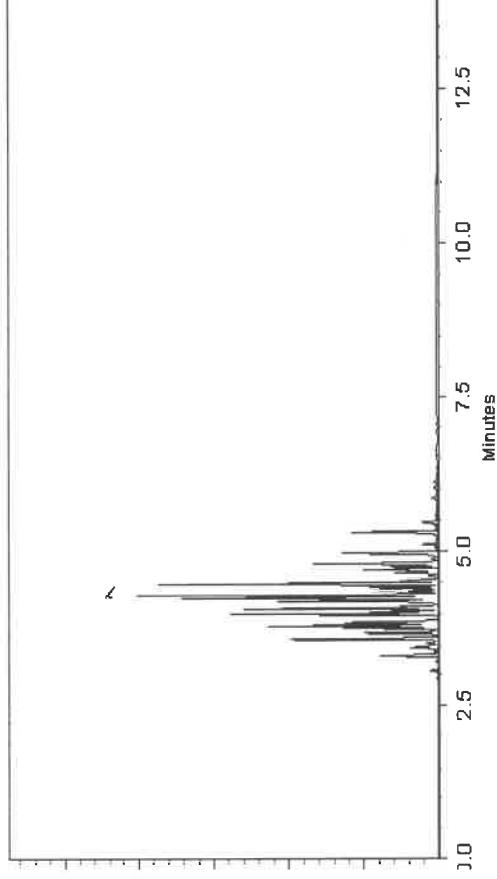
ECD

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.

Laith Clemente
Laith Clemente - Operations Technician I

Date Mixed: 03-Oct-2023

Balance Serial #

1128360905

Jennifer Pollino
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:
20064

Solvent(s):
Hexane

Lot#
273615

Lot Number:
022023

Formulated By:
Benson Chan

DATE
022023

Description:
CLP PCB'S - Aroclor Mix
Aroclors 1016 & 1260

Reviewed By:
Pedro L. Rentas

DATE
022023

Expiration Date:
022033

Expanded
Uncertainty
(+/-) (µg/mL)

4.0

Recommended Storage:
Ambient (20 °C)

Actual
Conc (µg/mL)

1002.8

Nominal Concentration (µg/mL):
1000

OSHA PEL (TWA)

LD50

NIST Test ID#:
6UTB

Actual
Weight(g)

0.20060

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

Conc (µg/mL)

1000

5E-05 Balance Uncertainty

Purity

0.2

0.010 Flask Uncertainty

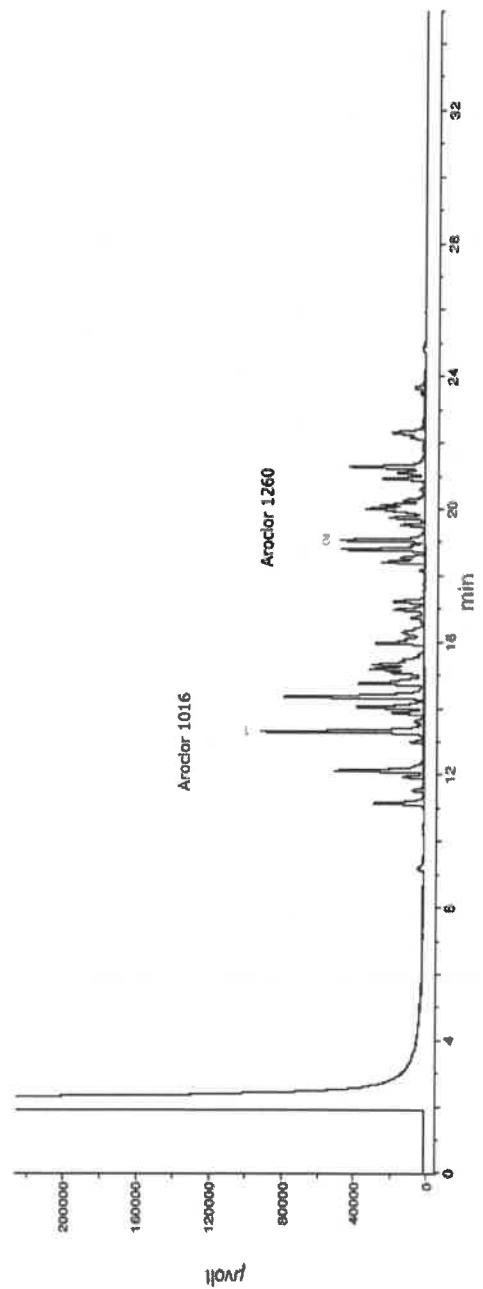
(%)

100

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Expanded Uncertainty (+/-) (µg/mL)	Actual Conc (µg/mL)	Actual Weight(g)	Actual Weight(g)	CAS#	OSHA PEL (TWA)	LD50
1. Aroclor 1016	15	020491JC	1000	100	0.2	1002.8	0.20060	1002.8	12674-11-2	N/A	N/A
2. Aroclor 1260	21	020491JC	1000	100	0.2	1003.9	0.20081	1003.9	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





Certified Reference Material CRM

CERTIFIED WEIGHT REPORT

Part Number: 99139
Lot Number: 121823
Description: Aroclor 1254

Solvent(s): Iso-octane
Lot#: 82227

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

P12956 / Y.P.
12/18/23
P12957

Expiration Date: 121833
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 100
NIST Test ID#: 6UTB

Volume(s) shown below were combined and diluted to (mL): 20.0
5E-05 Balance Uncertainty
0.003 Flask Uncertainty

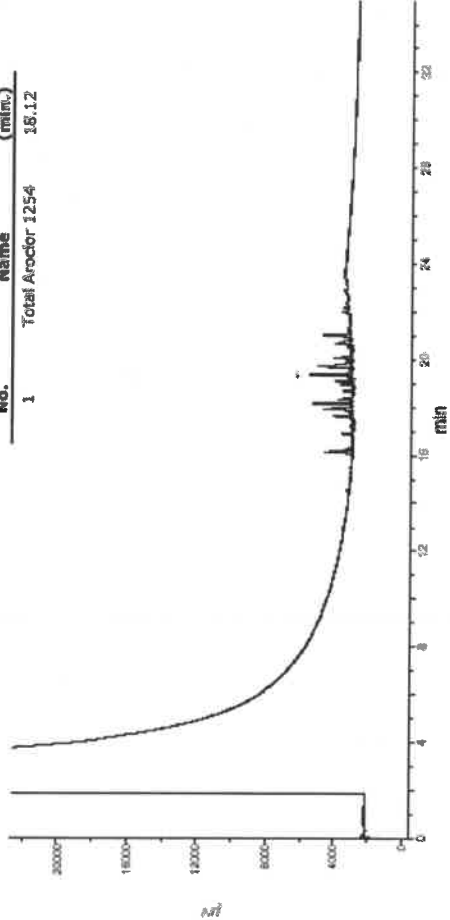
Note: Aroclor 1254 is a mix of isomers.

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#	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)	or-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 certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

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 = 250 °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





CERTIFIED WEIGHT REPORT

Part Number: 90165
Lot Number: 112322
Description: Atrocior 1262
Expiration Date: 112332
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6LUTB
Weight(s) shown were combined and diluted to (mL): 50.0

Solvent(s): Hexane
Lot# 273615

SE-05 Balance Uncertainty
0.005 Flask Uncertainty

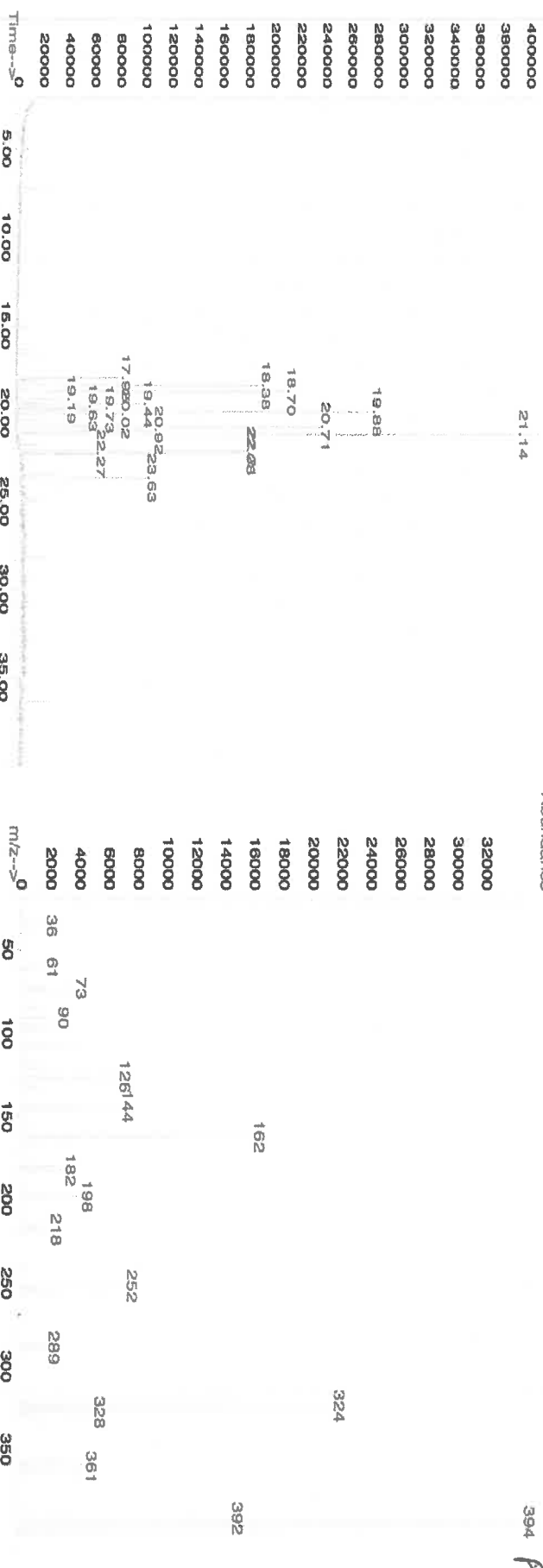
Formulated By:	Prashant Chauhan	112322	DATE
Reviewed By:	Pedro L. Rentes	112322	DATE

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)	CAS#	OSHA PEL (TWA)	LD50
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1. Atrocior 1262	444	W-130-05	1000	100	0.2	0.05003	0.05016	1002.7	4.5	37324-23-5	N/A	or-tal 11300mg/kg
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Method GC/MSD-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.

TIC: [BSB1]P70444-2.D Scan 1427 (21.138 min): [BSB1]P70444-2.D



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

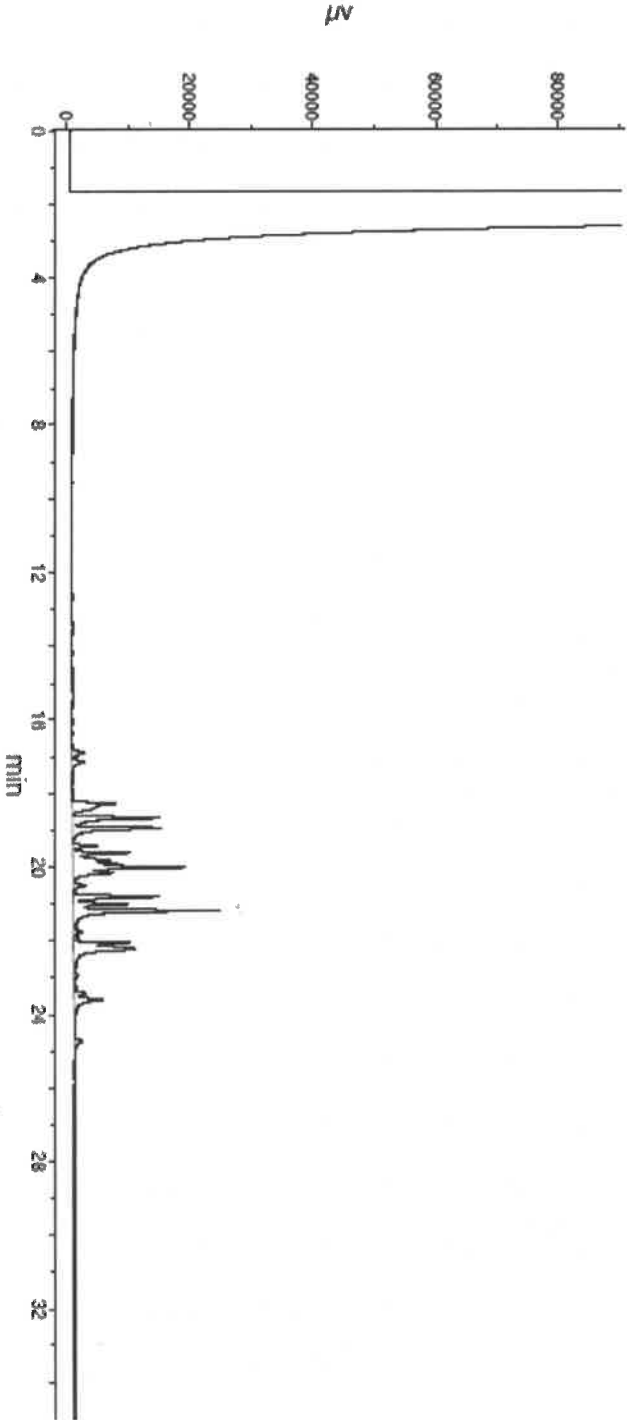


Run 20, "P90165 L112322 [1000µg/mL in hexane]"

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
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





ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Aroclor 1221 Standard
Product Number: PP-292-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006783205
Lot Issue Date: 20-Feb-2024
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.

P13342
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P13343

Page: 1 of 2

CSD-QA-015.2

ISO 17025
Cert No. AT-1937

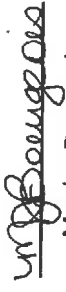
250 Smith Street North Kingstown, Rhode Island 02852 www.agilent.com/quality



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
Cert No. AR-1936

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

Page: 2 of 2

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CSD-QA-015.2

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