

## Prep Standard - Chemical Standard Summary

**Order ID :** Q2592

**Test :** PCB Group1

**Prepbatch ID :** PB168852,

**Sequence ID/Qc Batch ID:** pp071525,

**Standard ID :**

EP2610,EP2613,EP2624,PP24329,PP24330,PP24331,PP24332,PP24333,PP24334,PP24335,PP24336,PP24337,PP24338,PP24339,PP24340,PP24341,PP24342,PP24343,PP24344,PP24345,PP24346,PP24347,PP24348,PP24349,PP24350,PP24351,PP24352,PP24353,PP24354,PP24355,PP24356,PP24357,PP24358,PP24359,PP24360,PP24361,PP24362,PP24363,PP24364,PP24365,PP24366,PP24367,PP24368,PP24369,PP24370,PP24371,PP24372,PP24373,PP24374,PP24375,PP24376,PP24377,PP24378,PP24379,PP24380,PP24381,PP24382,PP24384,PP24385,PP24386,PP24387,PP24650,PP24663,

**Chemical ID :**

E3551,E3804,E3877,E3932,E3933,E3940,E3944,E3950,E3951,M6157,P11522,P12699,P12702,P12931,P12936,P12949,P12950,P12957,P13356,P13373,P13381,P13589,P13591,P13697,P13702,P13786,P13830,P13878,P13883,W3112,W3177,



| <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                                                              | <a href="#">EP2610</a> | 05/07/2025       | 11/07/2025             | RUPESHKUMAR SHAH   | Extraction_SCALE_2<br>(EX-SC-2) | None             | Riteshkumar Patel<br><br>05/07/2025 |
| <u>FROM</u>      | 1000.00000ml of M6157 + 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>            |
|------------------------------------------------------------------------------------------------|-------------------|------------------------|------------------|------------------------|--------------------|----------------|------------------|---------------------------------|
| 230                                                                                            | 1:1ACETONE/HEXANE | <a href="#">EP2613</a> | 05/09/2025       | 11/05/2025             | RUPESHKUMAR SHAH   | None           | None             | Riteshkumar Patel<br>05/09/2025 |
| <b><u>FROM</u></b> 4000.00000ml of E3932 + 4000.00000ml of E3933 = Final Quantity: 8000.000 ml |                   |                        |                  |                        |                    |                |                  |                                 |



| <u>Recipe ID</u>                                                    | <u>NAME</u>          | <u>NO.</u>             | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u>                  | <u>PipetteID</u> | <u>Supervised By</u>            |
|---------------------------------------------------------------------|----------------------|------------------------|------------------|------------------------|--------------------|---------------------------------|------------------|---------------------------------|
| 3923                                                                | Baked Sodium Sulfate | <a href="#">EP2624</a> | 06/26/2025       | 12/04/2025             | RUPESHKUMAR SHAH   | Extraction_SCALE_2<br>(EX-SC-2) | None             | Riteshkumar Patel<br>06/26/2025 |
| <b>FROM</b> 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>      |
|-----------------------------------------------------------------------------------------|---------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|---------------------------|
| 84                                                                                      | Pest/PCB Surrogate Stock 20 PPM | <a href="#">PP24329</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza<br>04/03/2025 |
| <b><u>FROM</u></b> 1.00000ml of P13356 + 9.00000ml of W3177 = 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> |
|------------------|-------------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 202              | AR1660 1000/100 ppb working solution 1st source | <a href="#">PP24330</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                                 |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.10000ml of P13697 + 99.40000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 203              | AR1660 750 PPB STD | <a href="#">PP24331</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.25000ml of W3177 + 0.75000ml of PP24330 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 204              | AR1660 500 PPB STD | <a href="#">PP24332</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24330 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 205              | AR1660 250 PPB STD | <a href="#">PP24333</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.75000ml of W3177 + 0.25000ml of PP24330 = 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> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 206              | AR1660 50 PPB STD | <a href="#">PP24334</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                   |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.90000ml of W3177 + 0.10000ml of PP24332 = 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> |
|------------------|----------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 213              | AR1221 1000 PPB WORKING SOLUTION | <a href="#">PP24335</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                  |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.10000ml of P13702 + 99.40000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1079             | AR1221 750 PPB STD | <a href="#">PP24336</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.25000ml of W3177 + 0.75000ml of PP24335 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 222              | AR1221 500 PPB STD | <a href="#">PP24337</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24335 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1080             | AR1221 250 PPB STD | <a href="#">PP24338</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.75000ml of W3177 + 0.25000ml of PP24335 = 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> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1081             | AR1221 50 PPB STD | <a href="#">PP24339</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                   |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.90000ml of W3177 + 0.10000ml of PP24337 = 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> |
|------------------|----------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 214              | AR1232 1000 PPB WORKING SOLUTION | <a href="#">PP24340</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                  |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.10000ml of P13878 + 99.40000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1063             | AR1232 750 PPB STD | <a href="#">PP24341</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.25000ml of W3177 + 0.75000ml of PP24340 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 223              | AR1232 500 PPB STD | <a href="#">PP24342</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24340 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1064             | AR1232 250 PPB STD | <a href="#">PP24343</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.75000ml of W3177 + 0.25000ml of PP24340 = 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> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1065             | AR1232 50 PPB STD | <a href="#">PP24344</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                   |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.90000ml of W3177 + 0.10000ml of PP24342 = 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> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 215              | AR1242 1000 PPB WORKING STD | <a href="#">PP24345</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                             |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.10000ml of P12931 + 99.40000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1067             | AR1242 750 PPB STD | <a href="#">PP24346</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.75000ml of W3177 + 0.75000ml of PP24345 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 224              | AR1242 500 PPB STD | <a href="#">PP24347</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24345 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1068             | AR1242 250 PPB STD | <a href="#">PP24348</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.75000ml of W3177 + 0.25000ml of PP24345 = 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> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1069             | AR1242 50 PPB STD | <a href="#">PP24349</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                   |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.90000ml of W3177 + 0.10000ml of PP24347 = 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> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 216              | AR1248 1000 PPB WORKING STD | <a href="#">PP24350</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                             |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.10000ml of P12936 + 99.40000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1075             | AR1248 750 PPB STD | <a href="#">PP24351</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.25000ml of W3177 + 0.75000ml of PP24350 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 225              | AR1248 500 PPB STD | <a href="#">PP24352</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24350 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1076             | AR1248 250 PPB STD | <a href="#">PP24353</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.75000ml of W3177 + 0.25000ml of PP24350 = 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> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1077             | AR1248 50 PPB STD | <a href="#">PP24354</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                   |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.90000ml of W3177 + 0.10000ml of PP24352 = 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> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 217              | AR1254 1000 PPB WORKING STD | <a href="#">PP24355</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                             |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.10000ml of P13830 + 99.40000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1071             | AR1254 750 PPB STD | <a href="#">PP24356</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.25000ml of W3177 + 0.75000ml of PP24355 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 226              | AR1254 500 PPB STD | <a href="#">PP24357</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24355 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1072             | AR1254 250 PPB STD | <a href="#">PP24358</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.75000ml of W3177 + 0.25000ml of PP24355 = 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> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1073             | AR1254 50 PPB STD | <a href="#">PP24359</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                   |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.90000ml of W3177 + 0.10000ml of PP24357 = 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> |
|------------------|----------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1529             | AR1262 1000 PPB Working Solution | <a href="#">PP24360</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                  |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.10000ml of P13883 + 99.40000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3753             | AR1262 750 PPB STD | <a href="#">PP24361</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.25000ml of W3177 + 0.75000ml of PP24360 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1530             | AR1262 500 PPB STD | <a href="#">PP24362</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24360 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3754             | AR1262 250 PPB STD | <a href="#">PP24363</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.75000ml of W3177 + 0.25000ml of PP24360 = 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> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3755             | AR1262 50 PPB STD | <a href="#">PP24364</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                   |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.90000ml of W3177 + 0.10000ml of PP24362 = 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> |
|------------------|----------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1532             | AR1268 1000 PPB Working Solution | <a href="#">PP24365</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                  |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.10000ml of P13381 + 99.40000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3820             | AR1268 750 PPB STD | <a href="#">PP24366</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.25000ml of W3177 + 0.75000ml of PP24365 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1533             | AR1268 500 PPB STD | <a href="#">PP24367</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24365 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3821             | AR1268 250 PPB STD | <a href="#">PP24368</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.75000ml of W3177 + 0.25000ml of PP24365 = 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> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3822             | AR1268 50 PPB STD | <a href="#">PP24369</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                   |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.90000ml of W3177 + 0.10000ml of PP24367 = 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> |
|------------------|---------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 404              | AR1660 100 PPM Stock Solution<br>2nd Source | <a href="#">PP24370</a> | 03/18/2025       | 09/18/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                             |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 1.00000ml of P12949 + 9.00000ml of E3804 = 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> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 405              | AR1660 1000/100 PPB ICV STD | <a href="#">PP24371</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                             |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 98.50000ml of W3177 + 0.50000ml of PP24329 + 1.00000ml of PP24370 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 406              | AR1660 500 PPB ICV | <a href="#">PP24372</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24371 = 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> |
|------------------|-------------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3789             | AR1221 1000 PPB WORKING SOL.2ND SOURCE(AGILENT) | <a href="#">PP24373</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                                 |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 1.00000ml of P13373 + 98.50000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1886             | AR1221 500 PPB ICV | <a href="#">PP24374</a> | 03/18/2025       | 08/12/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of E3877 + 0.50000ml of W3177 = 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> |
|------------------|--------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1887             | AR1232 1000 PPB Working Sol.<br>2nd Source | <a href="#">PP24375</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                            |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 1.00000ml of P12699 + 98.50000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1888             | AR1232 500 PPB ICV | <a href="#">PP24376</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24375 = 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> |
|------------------|--------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1889             | AR1242 1000 PPB Working Sol.<br>2nd Source | <a href="#">PP24377</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                            |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 1.00000ml of P13589 + 98.50000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1891             | AR1242 500 PPB ICV | <a href="#">PP24378</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24377 = 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> |
|------------------|--------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1890             | AR1248 1000 PPB Working Sol.<br>2nd Source | <a href="#">PP24379</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                            |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 1.00000ml of P13591 + 98.50000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1892             | AR1248 500 PPB ICV | <a href="#">PP24380</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24379 = 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> |
|------------------|--------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1893             | AR1254 1000 PPB Working Sol.<br>2nd Source | <a href="#">PP24381</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                            |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 1.00000ml of P12957 + 98.50000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1894             | AR1254 500 PPB ICV | <a href="#">PP24382</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                    |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24381 = 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> |
|------------------|------------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3757             | AR1262 1000 PPB Working Solution second source | <a href="#">PP24384</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                                |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 1.00000ml of P12702 + 98.50000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3758             | AR1262 500 PPB STD ICV | <a href="#">PP24385</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                        |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24384 = 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> |
|------------------|---------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3817             | AR1268 1000 ppb Working Soln.<br>2nd source | <a href="#">PP24386</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                             |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 1.00000ml of P11522 + 98.50000ml of W3177 + 0.50000ml of PP24329 = 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> |
|------------------|------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3823             | AR1268 500 PPB STD ICV | <a href="#">PP24387</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                        |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 0.50000ml of W3177 + 0.50000ml of PP24386 = 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> |
|------------------|----------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3857             | 5000 PPB PCB SPIKE SOLUTION 2ND SOURCE | <a href="#">PP24650</a> | 06/16/2025       | 12/11/2025             | Abdul Mirza        | None           | None             | Yogesh Patel         |
|                  |                                        |                         |                  |                        |                    |                |                  | 07/21/2025           |

**FROM** 0.50000ml of P12950 + 99.50000ml of E3940 = 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> |
|------------------|----------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 465              | 200 PPB Pest/PCB Surrogate Spike | <a href="#">PP24663</a> | 06/24/2025       | 12/24/2025             | Abdul Mirza        | None           | None             | Yogesh Patel         |
|                  |                                  |                         |                  |                        |                    |                |                  | 07/21/2025           |

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

## 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 | 12/04/2025      | 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) | 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-9254-03 / Acetone, Ultra Resi (cs/4x4L) | 24H1462005 | 11/05/2025      | 05/05/2025 / RUPESH     | 04/23/2025 / RUPESH         | E3932          |

| Supplier         | ItemCode / ItemName                       | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|-------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 25C0362005 | 11/05/2025      | 05/05/2025 / RUPESH     | 04/23/2025 / RUPESH         | E3933          |

| Supplier         | ItemCode / ItemName                        | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|--------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9254-03 / Acetone, Ultra Resi (cs/4x4L) | 24H1462005 | 12/11/2025      | 06/11/2025 / Rajesh     | 06/04/2025 / Rajesh         | E3940          |

## CHEMICAL RECEIPT LOG BOOK

| Supplier         | ItemCode / ItemName                        | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|--------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9254-03 / Acetone, Ultra Resi (cs/4x4L) | 24H1462005 | 05/24/2027      | 06/20/2025 / RUPESH     | 05/14/2025 / RUPESH         | E3944          |

| Supplier         | ItemCode / ItemName                       | Lot #      | Expiration Date | Date Opened / Opened By  | Received Date / Received By | Chemtech Lot # |
|------------------|-------------------------------------------|------------|-----------------|--------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 25C0362005 | 04/30/2026      | 07/08/2025 / RITESHKUMAR | 07/03/2025 / RUPESH         | E3950          |

| Supplier         | ItemCode / ItemName                      | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-3382-05 / Sand, Purified (cs/4x2.5kg) | 25A2756718 | 12/31/2028      | 07/09/2025 / RUPESH     | 04/28/2020 / RUPESH         | E3951          |

| Supplier         | ItemCode / ItemName                                     | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|---------------------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L) | 24i1262013 | 11/07/2025      | 05/07/2025 / RUPESH     | 02/18/2025 / Mohan          | M6157          |

| Supplier             | ItemCode / ItemName     | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------------------|-------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Agilent Technologies | PP-382-1 / Aroclor 1268 | 0006587800 | 09/18/2025      | 03/18/2025 / yogesh     | 02/21/2022 / Ankita         | P11522         |

| 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 | 09/18/2025      | 03/18/2025 / yogesh     | 08/07/2023 / Ankita         | P12699         |

## CHEMICAL RECEIPT LOG BOOK

| Supplier                | ItemCode / ItemName            | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-------------------------|--------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc | x9166 / Aroclor 1262 100 ug/mL | 060523 | 09/18/2025      | 03/18/2025 / yogesh     | 08/07/2023 / Ankita         | P12702         |

| 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 | 09/18/2025      | 03/18/2025 / yogesh     | 12/07/2023 / Ankita         | P12931         |

| 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 | 09/18/2025      | 03/18/2025 / yogesh     | 12/07/2023 / Ankita         | P12936         |

| Supplier                 | ItemCode / ItemName       | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|---------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 20064 / Aroclor 1016/1260 | 022023 | 09/18/2025      | 03/18/2025 / yogesh     | 12/20/2023 / Yogesh         | P12949         |

| Supplier                 | ItemCode / ItemName       | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|---------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 20064 / Aroclor 1016/1260 | 022023 | 12/16/2025      | 06/16/2025 / Abdul      | 12/20/2023 / Yogesh         | P12950         |

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

## CHEMICAL RECEIPT LOG BOOK

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

| Supplier             | ItemCode / ItemName     | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------------------|-------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Agilent Technologies | PP-292-1 / Aroclor 1221 | 0006783205 | 09/18/2025      | 03/18/2025 / yogesh     | 05/02/2024 / Ankita         | P13373         |

| 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 | 09/18/2025      | 03/18/2025 / yogesh     | 05/03/2024 / Abdul          | P13381         |

| Supplier             | ItemCode / ItemName     | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------------------|-------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Agilent Technologies | PP-312-1 / Aroclor 1242 | 0006665550 | 09/18/2025      | 03/18/2025 / yogesh     | 10/14/2024 / Ankita         | P13589         |

| Supplier             | ItemCode / ItemName     | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------------------|-------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Agilent Technologies | PP-342-1 / Aroclor 1248 | 0006726317 | 09/18/2025      | 03/18/2025 / yogesh     | 10/14/2024 / Ankita         | P13591         |

| 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 | A0210629 | 09/18/2025      | 03/18/2025 / yogesh     | 10/17/2024 / yogesh         | P13697         |

## CHEMICAL RECEIPT LOG BOOK

| 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 | A0215270 | 09/18/2025      | 03/18/2025 / yogesh     | 10/17/2024 / yogesh         | P13702         |

| Supplier | ItemCode / ItemName                                                                | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------------------------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32000 / Pesticide Mix, CLP method, Pesticide Surrogate Mix, 200ug/mL, Acetone, 1mL | A0214495 | 12/24/2025      | 06/24/2025 / Abdul      | 11/19/2024 / Ankita         | P13786         |

| Supplier | ItemCode / ItemName                                         | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32011 / PCB Mix, Aroclor 1254, 1000ug/mL, Hexane, 1mL/ampul | A0217391 | 09/18/2025      | 03/18/2025 / yogesh     | 12/09/2024 / Ankita         | P13830         |

| 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 | A0219655 | 09/18/2025      | 03/18/2025 / yogesh     | 01/23/2025 / Ankita         | P13878         |

| 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 | A0220950 | 09/18/2025      | 03/18/2025 / yogesh     | 01/23/2025 / Ankita         | P13883         |

| 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          |

**CHEMICAL RECEIPT LOG BOOK**

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



**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 <sub>2</sub> SO <sub>4</sub> |
| SPECIFICATION NUMBER : | 6399                              | RELEASE DATE: | ABR/21/2023                     |
| LOT NUMBER :           | 313201                            |               |                                 |

| TEST                                     | SPECIFICATIONS | LOT VALUES  |
|------------------------------------------|----------------|-------------|
| Assay (Na <sub>2</sub> SO <sub>4</sub> ) | 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 <sub>4</sub> )             | 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 <sub>3</sub> ) <sub>2</sub> 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 <sub>2</sub> O)                                                | ≤ 0.5 %       | 0.1 %       |
| Solubility in H <sub>2</sub> O                                          | Passes Test   | Passes Test |
| Chloride (Cl)                                                           | ≤ 0.2 ppm     | < 0.2 ppm   |
| Phosphate (PO <sub>4</sub> )                                            | ≤ 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

E 3804

>>> Continued on page 2 >>>

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 |
|------|---------------|--------|
|------|---------------|--------|

For Microelectronic Use

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



Michelle Bales  
Sr. Manager, Quality Assurance

## Certificate of Analysis

1 Reagent Lane  
 Fair Lawn, NJ 07410  
 201.796.7100 tel  
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System  
 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

|                   |                                                                                                                                                                                                   |                             |            |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------|
| Catalog Number    | H303                                                                                                                                                                                              | Quality Test / Release Date | 11/07/2024 |
| Lot Number        | 243570                                                                                                                                                                                            |                             |            |
| Description       | HEXANES - OPTIMA                                                                                                                                                                                  |                             |            |
| Country of Origin | United States                                                                                                                                                                                     | Suggested Retest Date       | Nov/2029   |
| Chemical Origin   | Organic - non animal                                                                                                                                                                              |                             |            |
| BSE/TSE Comment   | No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product. |                             |            |

| N/A                         |            |                                 |                         |
|-----------------------------|------------|---------------------------------|-------------------------|
| Result Name                 | Units      | Specifications                  | Test Value              |
| APPEARANCE                  |            | REPORT                          | Clear, colorless liquid |
| ASSAY (N-HEXANE)            | %          | >= 60                           | 69                      |
| ASSAY (SUM C6 HYDROCARBONS) | %          | >= 99.9                         | >99.9                   |
| COLOR                       | APHA       | <= 5                            | <5                      |
| DENSITY AT 25 DEGREES C     | GM/ML      | Inclusive Between 0.653 - 0.673 | 0.669                   |
| EVAPORATION RESIDUE         | ppm        | <= 1                            | <1                      |
| FLUORESCENCE BACKGROUND     | ppb        | <= 1                            | <1                      |
| IDENTIFICATION              | PASS/FAIL  | = PASS TEST                     | PASS TEST               |
| OPTICAL ABS AT 195 NM       | ABS. UNITS | <= 1                            | 0.74                    |
| OPTICAL ABS AT 210 NM       | ABS. UNITS | <= 0.25                         | 0.17                    |
| OPTICAL ABS AT 220 NM       | ABS. UNITS | <= 0.07                         | 0.05                    |
| OPTICAL ABS AT 254 NM       | ABS. UNITS | <= 0.005                        | 0.001                   |
| PESTICIDE RESIDUE ANALYSIS  | NG/L       | <= 10                           | <10                     |
| REFRACTIVE INDEX @ 25 DEG C |            | Inclusive Between 1.375 - 1.385 | 1.379                   |
| SUITABILITY FOR GC/MS       |            | = PASS TEST                     | PASS TEST               |
| SULFUR COMPOUNDS            | %          | <= 0.005                        | <0.005                  |
| THIOPHENE                   | PASS/FAIL  | = PASS TEST                     | PASS TEST               |
| WATER (H2O)                 | %          | <= 0.01                         | <0.01                   |
| WATER-SOLUBLE TITRABLE ACID | MEQ/G      | <= 0.0003                       | 0.0001                  |

Recd. by RP on 2/12/25

 E3877

Harout Sahagian - Quality Control Manager - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.

If there are any questions with this certificate, please call at (800) 227-6701.

\*Based on suggested storage condition.

Acetone  
BAKER RESI-ANALYZED® Reagent  
For Organic Residue Analysis

 avantor™



Material No.: 9254-03

Batch No.: 24H1462005

Manufactured Date: 2024-05-24

Expiration Date: 2027-05-24

Revision No.: 0

## Certificate of Analysis

| Test                                                                    | Specification | Result      |
|-------------------------------------------------------------------------|---------------|-------------|
| Assay ((CH <sub>3</sub> ) <sub>2</sub> CO) (by GC, corrected for water) | >= 99.4 %     | 99.8 %      |
| Color (APHA)                                                            | <= 10         | 5           |
| Residue after Evaporation                                               | <= 1.0 ppm    | 0.2 ppm     |
| Substances Reducing Permanganate                                        | Passes Test   | Passes Test |
| Titration Acid (µeq/g)                                                  | <= 0.3        | 0.2         |
| Titration Base (µeq/g)                                                  | <= 0.6        | <0.1        |
| Water (H <sub>2</sub> O)                                                | <= 0.5 %      | 0.2 %       |
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)    | <= 5          | <1          |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)    | <= 10         | 1           |

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

RS

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3932



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

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

 **avantors**<sup>TM</sup>



Material No.: 9262-03

Batch No.: 25C0362005

Manufactured Date: 2025-01-29

Expiration Date: 2026-04-30

Revision No.: 0

## Certificate of Analysis

| Test                                                                           | Specification  | Result      |
|--------------------------------------------------------------------------------|----------------|-------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)           | $\leq 5$       | 1           |
| ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)            | $\leq 10$      | 6           |
| ECD-Sensitive Impurities (as EthyleneDibromide) - Single Impurity Peak (ng/mL) | $\leq 5$       | 5           |
| Assay (Total Saturated C <sub>6</sub> Isomers) (by GC, corrected for water)    | $\geq 99.5 \%$ | 100.0 %     |
| Assay (as n-Hexane) (by GC, corrected for water)                               | $\geq 95 \%$   | 100 %       |
| Color (APHA)                                                                   | $\leq 10$      | 10          |
| Residue after Evaporation                                                      | $\leq 1.0$ ppm | 0.1 ppm     |
| Substances Darkened by H <sub>2</sub> SO <sub>4</sub>                          | Passes Test    | Passes Test |
| Water (by KF, coulometric)                                                     | $\leq 0.05 \%$ | $< 0.01 \%$ |

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

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E3933



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

Acetone

BAKER RESI-ANALYZED® Reagent  
For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 24H1462005

Manufactured Date: 2024-05-24

Expiration Date: 2027-05-24

Revision No.: 0

## Certificate of Analysis

| Test                                                                    | Specification | Result      |
|-------------------------------------------------------------------------|---------------|-------------|
| Assay ((CH <sub>3</sub> ) <sub>2</sub> CO) (by GC, corrected for water) | >= 99.4 %     | 99.8 %      |
| Color (APHA)                                                            | <= 10         | 5           |
| Residue after Evaporation                                               | <= 1.0 ppm    | 0.2 ppm     |
| Substances Reducing Permanganate                                        | Passes Test   | Passes Test |
| Titration Acid (µeq/g)                                                  | <= 0.3        | 0.2         |
| Titration Base (µeq/g)                                                  | <= 0.6        | <0.1        |
| Water (H <sub>2</sub> O)                                                | <= 0.5 %      | 0.2 %       |
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)    | <= 5          | <1          |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)    | <= 10         | 1           |

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

Recd by RP on 6/11/25

E3940

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

Acetone  
BAKER RESI-ANALYZED® Reagent  
For Organic Residue Analysis

Avantor™



Material No.: 9254-03

Batch No.: 24H1462005

Manufactured Date: 2024-05-24

Expiration Date: 2027-05-24

Revision No.: 0

## Certificate of Analysis

| Test                                                                    | Specification | Result      |
|-------------------------------------------------------------------------|---------------|-------------|
| Assay ((CH <sub>3</sub> ) <sub>2</sub> CO) (by GC, corrected for water) | >= 99.4 %     | 99.8 %      |
| Color (APHA)                                                            | <= 10         | 5           |
| Residue after Evaporation                                               | <= 1.0 ppm    | 0.2 ppm     |
| Substances Reducing Permanganate                                        | Passes Test   | Passes Test |
| Titration Acid (μeq/g)                                                  | <= 0.3        | 0.2         |
| Titration Base (μeq/g)                                                  | <= 0.6        | <0.1        |
| Water (H <sub>2</sub> O)                                                | <= 0.5 %      | 0.2 %       |
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)    | <= 5          | <1          |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)    | <= 10         | 1           |

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

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

E3944

Jamie Croak  
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC



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



Material No.: 9262-03

Batch No.: 25C0362005

Manufactured Date: 2025-01-29

Expiration Date: 2026-04-30

Revision No.: 0

## Certificate of Analysis

| Test                                                                            | Specification  | Result      |
|---------------------------------------------------------------------------------|----------------|-------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)            | $\leq 5$       | 1           |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)            | $\leq 10$      | 6           |
| ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL) | $\leq 5$       | 5           |
| Assay (Total Saturated C <sub>6</sub> Isomers) (by GC, corrected for water)     | $\geq 99.5 \%$ | 100.0 %     |
| Assay (as n-Hexane) (by GC, corrected for water)                                | $\geq 95 \%$   | 100 %       |
| Color (APHA)                                                                    | $\leq 10$      | 10          |
| Residue after Evaporation                                                       | $\leq 1.0$ ppm | 0.1 ppm     |
| Substances Darkened by H <sub>2</sub> SO <sub>4</sub>                           | Passes Test    | Passes Test |
| Water (by KF, coulometric)                                                      | $\leq 0.05 \%$ | $< 0.01 \%$ |

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

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

3950

Recd on 7/02/25

Jamie Croak  
Director Quality Operations, Bioscience Production



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

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

*Received on 1/12/25.*

**E3951**

Internal ID #: 793

| Signature                                                                                                                                                                                                                                                                                                   | Additional Information                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>We certify that this batch conforms to the specifications listed above.</p> <p>This document has been electronically produced and is valid without a signature.</p> <p>Leona Edwardson, Quality Control Sr. Manager - Solon<br/> VWR Chemicals, LLC.<br/> 28600 Fountain Parkway, Solon OH 44139 USA</p> | <p>Analysis may have been rounded to significant digits in specification limits</p> <p>Product meets analytical specifications of the grades listed.</p> |

Sulfuric Acid  
BAKER INSTRA-ANALYZED® Reagent  
For Trace Metal Analysis  
Low Selenium

avantor™



MG157  
MS

Material No.: 9673-33

Batch No.: 24I1262013

Manufactured Date: 2024-08-07

Retest Date: 2029-08-06

Revision No.: 0

## Certificate of Analysis

| Test                                                        | Specification | Result      |
|-------------------------------------------------------------|---------------|-------------|
| ACS – Assay (H <sub>2</sub> SO <sub>4</sub> )               | 95.0 – 98.0 % | 96.2 %      |
| Appearance                                                  | Passes Test   | Passes Test |
| ACS – Color (APHA)                                          | <= 10         | 5           |
| ACS – Residue after Ignition                                | <= 3 ppm      | <1 ppm      |
| ACS – Substances Reducing Permanganate(as SO <sub>2</sub> ) | <= 2 ppm      | <2 ppm      |
| Ammonium (NH <sub>4</sub> )                                 | <= 1 ppm      | <1 ppm      |
| Chloride (Cl)                                               | <= 0.1 ppm    | <0.1 ppm    |
| Nitrate (NO <sub>3</sub> )                                  | <= 0.2 ppm    | 0.1 ppm     |
| Phosphate (PO <sub>4</sub> )                                | <= 0.5 ppm    | <0.1 ppm    |
| Trace Impurities – Aluminum (Al)                            | <= 30.0 ppb   | <5.0 ppb    |
| Arsenic & Antimony (as As)                                  | <= 4.0 ppb    | <2.0 ppb    |
| Trace Impurities – Boron (B)                                | <= 10.0 ppb   | <5.0 ppb    |
| Trace Impurities – Cadmium (Cd)                             | <= 2.0 ppb    | <1.0 ppb    |
| Trace Impurities – Chromium (Cr)                            | <= 6.0 ppb    | <1.0 ppb    |
| Trace Impurities – Cobalt (Co)                              | <= 0.5 ppb    | <0.3 ppb    |
| Trace Impurities – Copper (Cu)                              | <= 1.0 ppb    | <1.0 ppb    |
| Trace Impurities – Gold (Au)                                | <= 10.0 ppb   | <5.0 ppb    |
| Heavy Metals (as Pb)                                        | <= 500.0 ppb  | <100.0 ppb  |
| Trace Impurities – Iron (Fe)                                | <= 50.0 ppb   | <1.0 ppb    |
| Trace Impurities – Lead (Pb)                                | <= 0.5 ppb    | <0.5 ppb    |
| Trace Impurities – Magnesium (Mg)                           | <= 7.0 ppb    | <1.0 ppb    |
| Trace Impurities – Manganese (Mn)                           | <= 1.0 ppb    | <1.0 ppb    |
| Trace Impurities – Mercury (Hg)                             | <= 0.5 ppb    | <0.1 ppb    |
| Trace Impurities – Nickel (Ni)                              | <= 2.0 ppb    | <0.3 ppb    |
| Trace Impurities – Potassium (K)                            | <= 500.0 ppb  | <10.0 ppb   |
| Trace Impurities – Selenium (Se)                            | <= 50.0 ppb   | 7.2 ppb     |
| Trace Impurities – Silicon (Si)                             | <= 100.0 ppb  | 12.8 ppb    |
| Trace Impurities – Silver (Ag)                              | <= 1.0 ppb    | <1.0 ppb    |

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

Avantor Performance Materials LLC

Sulfuric Acid

BAKER INSTRA-ANALYZED® Reagent

For Trace Metal Analysis

Low Selenium

 **avantors**™



Material No.: 9673-33

Batch No.: 2411262013

| Test                              | Specification    | Result      |
|-----------------------------------|------------------|-------------|
| Trace Impurities – Sodium (Na)    | $\leq 500.0$ ppb | $< 5.0$ ppb |
| Trace Impurities – Strontium (Sr) | $\leq 5.0$ ppb   | $< 1.0$ ppb |
| Trace Impurities – Tin (Sn)       | $\leq 5.0$ ppb   | 1.1 ppb     |
| Trace Impurities – Zinc (Zn)      | $\leq 5.0$ ppb   | $< 1.0$ ppb |

For Laboratory, Research, or Manufacturing Use

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC



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



# Certificate of Analysis

P11518  
↓  
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/NCCL 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](http://www.agilent.com) for information regarding this RM.

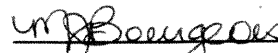
**Expiration of Certification:**

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/](http://www.agilent.com/quality/)  
CSD-QA-015.1



ISO 17025 Cert  
No. AT-1937



## 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 ( $\mu\text{g/mL}$ ): **100**  
 NIST Test ID#: **6UTB**

Solvent(  
Aceton

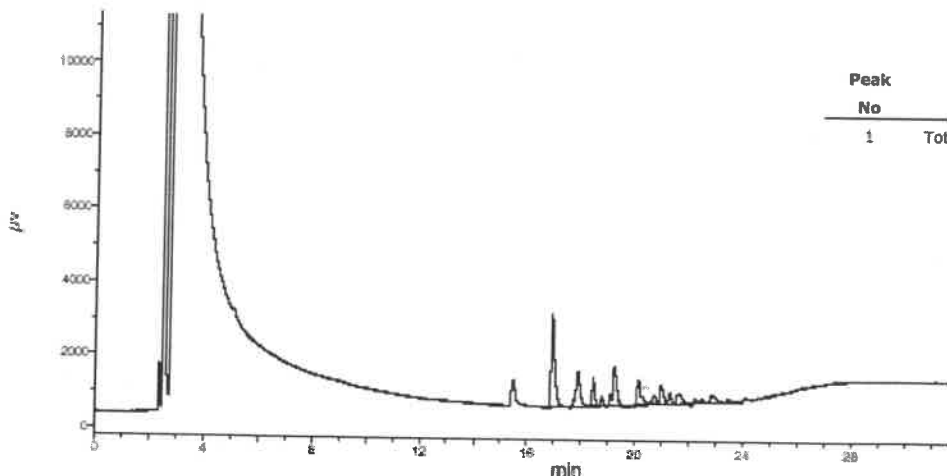
Weight(s) shown below were combined and diluted to (mL): **100.0**  
 5E-05 Balance Uncertainty  
 0.057 Flask Uncertainty

| Compound        | RM# | Lot Number | Nominal Conc ( $\mu\text{g/mL}$ ) | 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 5 $\mu\text{m}$  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 = 1.5 $\mu\text{L}$ , Range=3





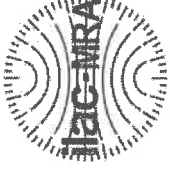
110 Benner Circle  
Bellefonte, PA 16823-8812  
Tel: 1-814-353-1300  
Fax: 1-814-353-1309

[www.restek.com](http://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.:** 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:**

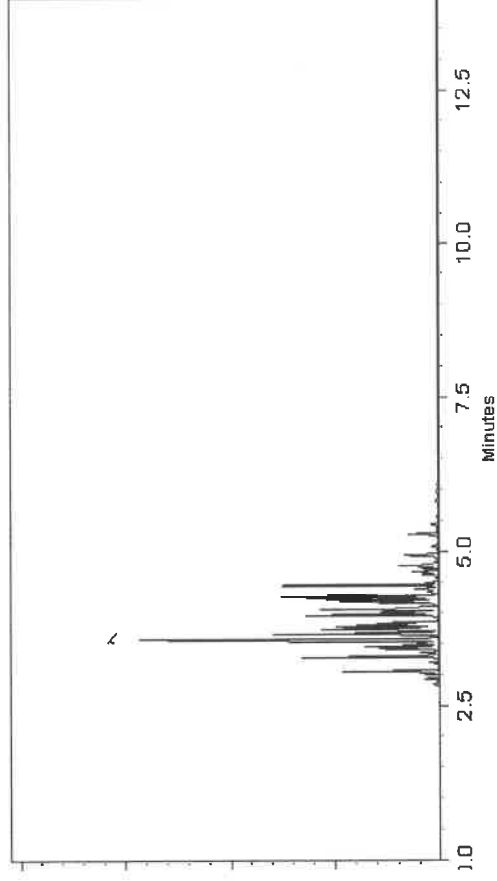
ECD

**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





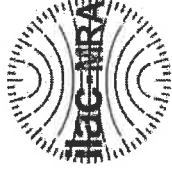
110 Benner Circle  
Bellefonte, PA 16823-8812  
Tel: 1-814-353-1300  
Fax: 1-814-353-1309

[www.restek.com](http://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.:** 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

P1219697  
P1219697  
A1  
12104123

### 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:**

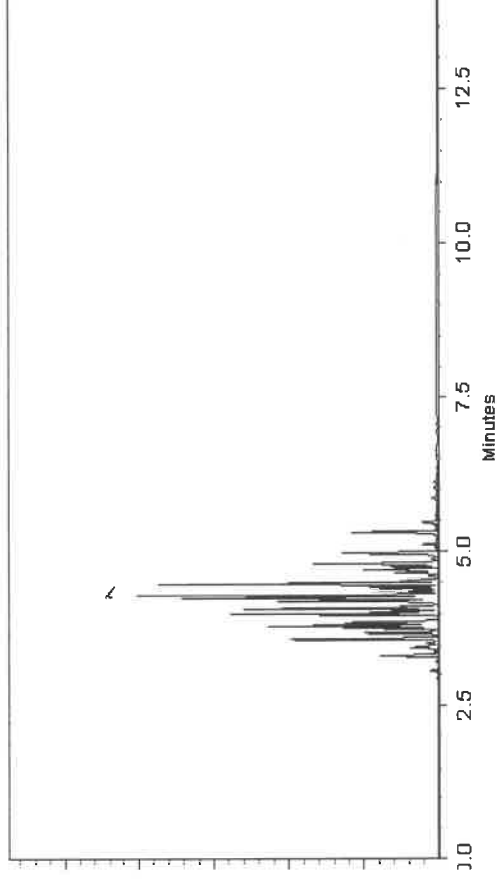
ECD

**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

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

20064

022023

CLP PCB'S - Aroclor Mix  
Aroclors 1016 & 1260

022033

Ambient (20 °C)

1000

6UTB

Formulated By: Benson Chan

Reviewed By: Pedro L. Rentas

DATE: 022023

DATE: 022023

Solvent(s): Hexane

Lot#: 273615

5E-05 Balance Uncertainty

0.010 Flask Uncertainty

200.0

200.0

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

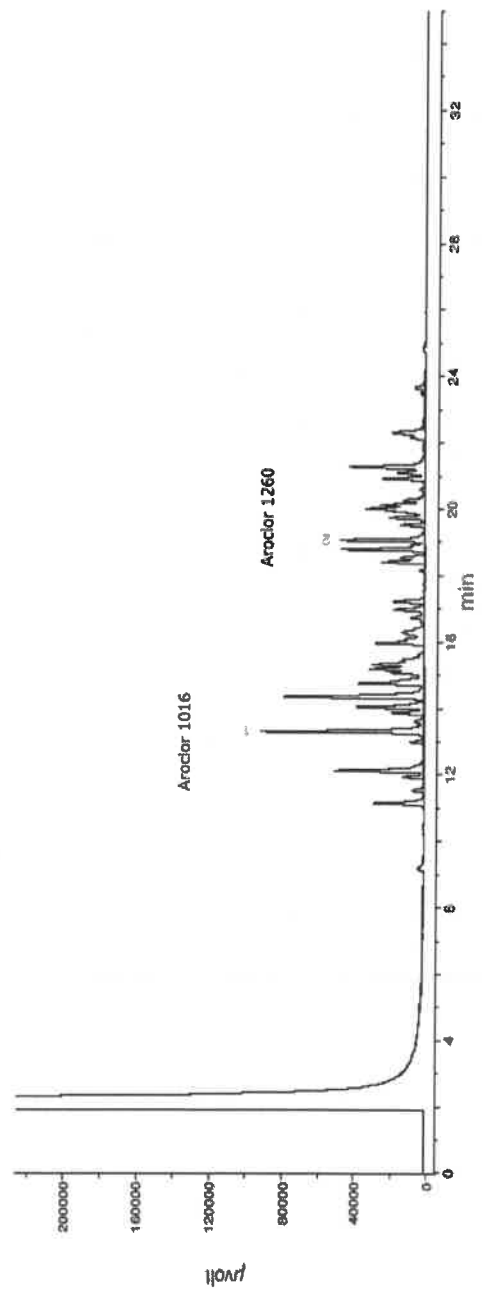
200.0

PR2946 718  
↓  
12/20/23  
P12955

| Compound        | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Purity Uncertainty | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | CAS#       | (Solvent Safety Info. On Attached pg.) | 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







Certified Reference Material CRM

CERTIFIED WEIGHT REPORT

Part Number: 20084  
Lot Number: 022023  
Description: CLP PCB'S - Aroclor Mix  
Aroclors 1016 & 1260  
022033  
Expiration Date: Ambient (20 °C)  
Recommended Storage: 1000  
Nominal Concentration (µg/mL): 6UTB  
NIST Test ID#: 200.0

Solvent(s): Hexane  
Lot#: 273615

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

022023  
DATE

022023  
DATE

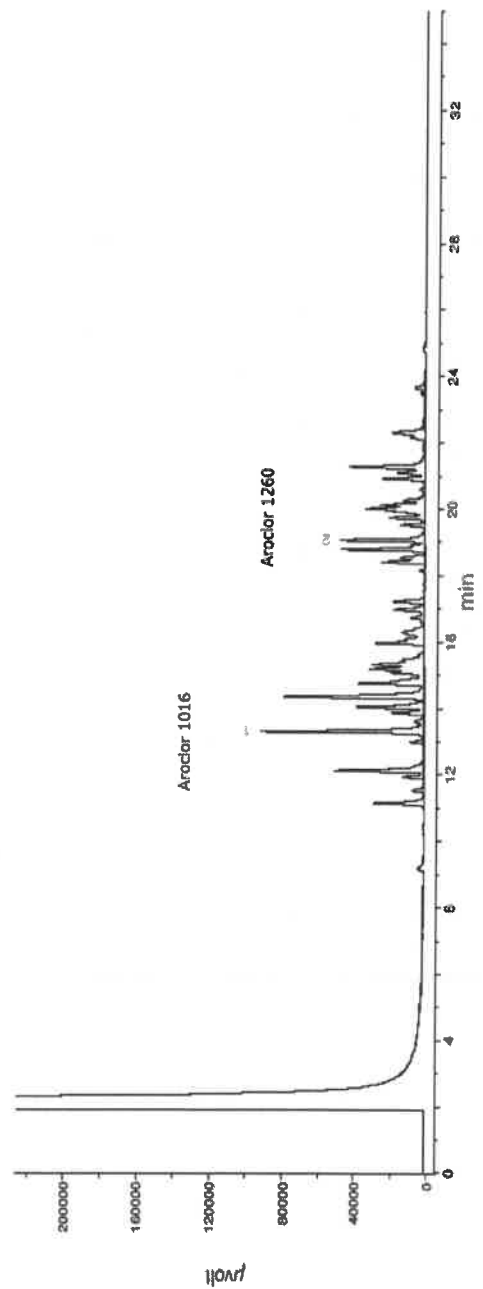
5E-05 Balance Uncertainty  
0.010 Flask Uncertainty

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

| Compound        | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Purity Uncertainty | 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







CERTIFIED WEIGHT REPORT

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

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  
Note: Aroclor 1254 is a mix of isomers.

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

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

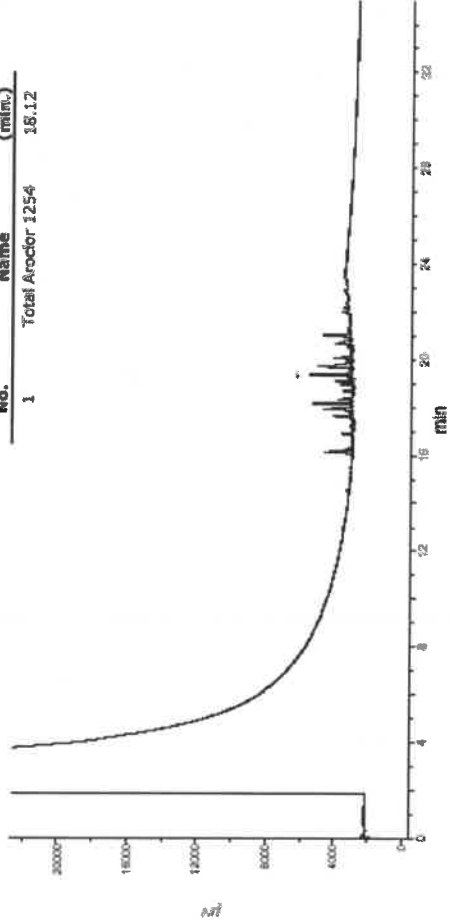
P12956 / Y.P.  
12/18/23  
P12957

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

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









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.:** A0206810

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

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

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

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

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DAUF  
04/25/2024

### CERTIFIED VALUES

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

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

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

### Tech Tips:

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

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

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

## Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

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:**

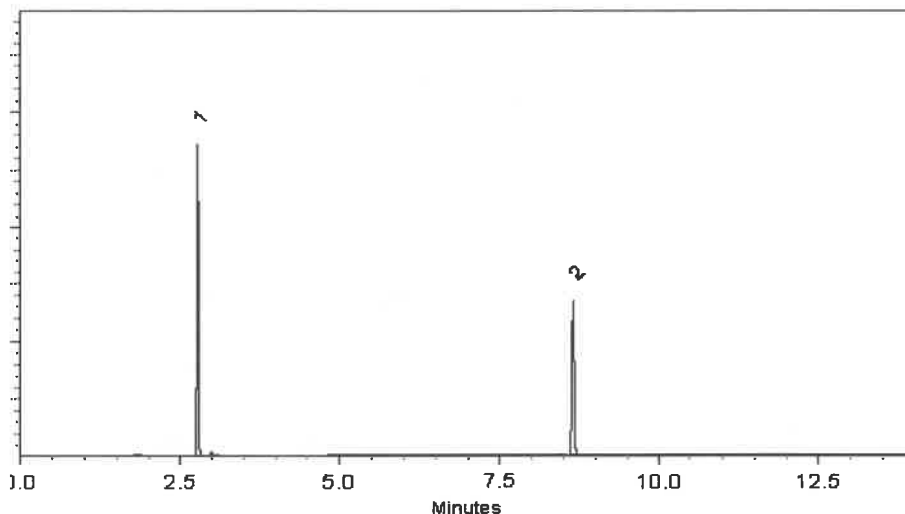
ECD

**Split Vent:**

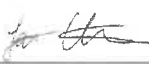
10 ml/min.

**Inj. Vol**

1µl

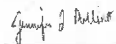


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

  
Laith Clemente - Operations Technician I

Date Mixed: 22-Jan-2024

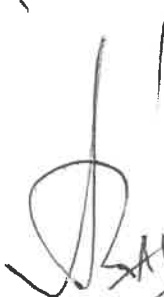
Balance Serial # 1128360905

  
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Jan-2024

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

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SAUF  
04/25/2025



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](http://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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Page: 1 of 2

CSD-QA-015.2

ISO 17025

Cert No. AT-1937

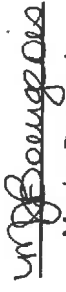
250 Smith Street North Kingstown, Rhode Island 02852 [www.agilent.com/quality](http://www.agilent.com/quality)



**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

[www.agilent.com/quality/](http://www.agilent.com/quality/)  
CSD-QA-015.2

ISO 17025  
Cert No. AT-1937

250 Smith Street North Kingstown, Rhode Island 02852 [www.agilent.com/quality](http://www.agilent.com/quality)



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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. :** 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%

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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:**

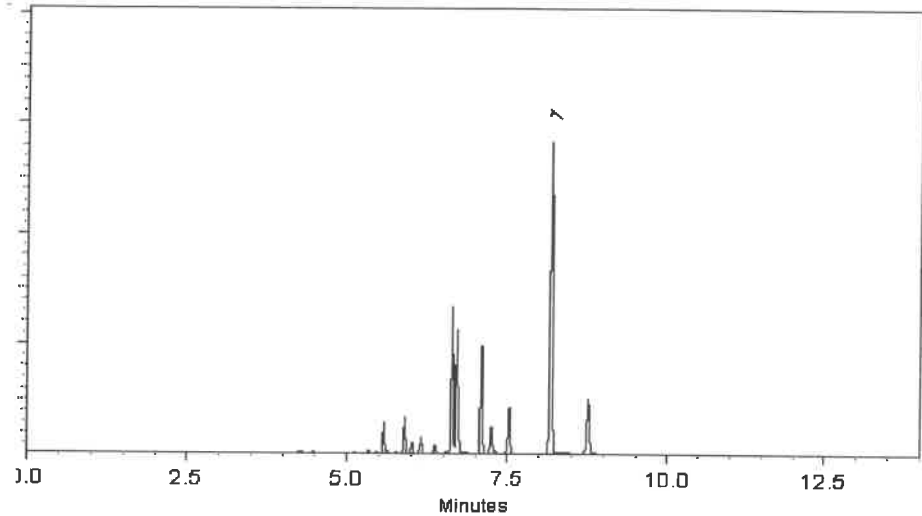
ECD

**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

*Dylan Murphy*  
Dylan Murphy - Operations Technician I

Date Passed: 09-Feb-2024

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

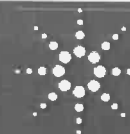
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*[Signature]*  
05/6/2024





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](http://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.

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↓  
P13590AJ  
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ISO 17034



**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# 95T215321

Page: 2 of 2

[www.agilent.com/quality/](http://www.agilent.com/quality/)

CSD-QA-015.1



ISO 17025  
Cert No. AT-

**Reference Material Certificate**  
**Product Information Sheet**

**Product Name:** Aroclor 1248 Standard

**Lot Number:** 0006726317

**Product Number:** PP-342-1

**Lot Issue Date:** 27-Jan-2023

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

**Expiration Date:** 28-Feb-2031

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

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

**Description:**

This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) 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. Purity values are taken from approved vendor raw material certificates.

**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 (RM) 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](http://www.agilent.com) for information regarding this analytical reference material.

**Intended Use:**

This analytical reference (RM) 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 (RM) 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.

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**Maintenance of Certification:**

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

---

**Sample lot approver:**

Monica Bourgeois  
QMS Representative



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-015.1

ISO 17025



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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. :** 32039 **Lot No.:** A0210629

**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 :** July 31, 2030 **Storage:** 25°C nominal

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

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P13701 } Y.P.  
10/19/24

### 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 | 07      | ----%  | 1,005.3 µg/mL               | +/- 55.7809                            |
| 2             | Aroclor 1260 | 11096-82-5 | 1320657 | ----%  | 1,000.0 µg/mL               | +/- 55.4850                            |

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

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

## Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

300°C

**Det. Type:**

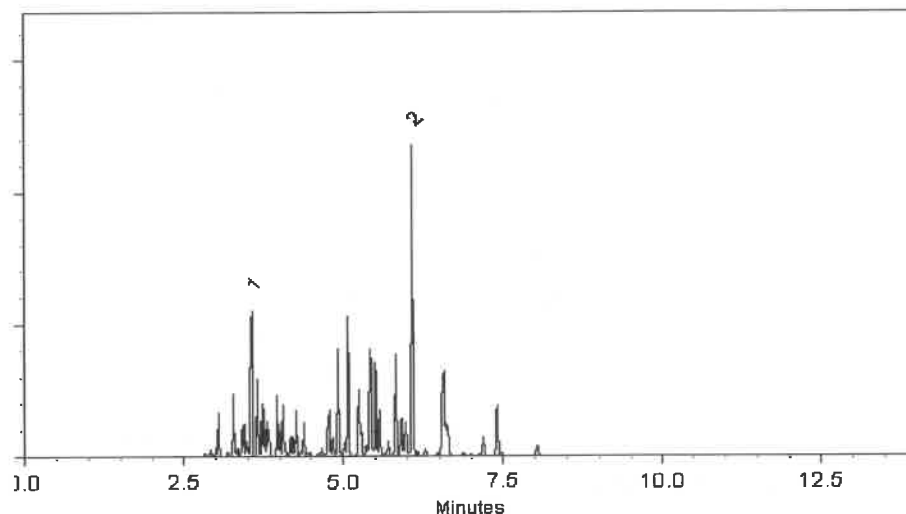
ECD

**Split Vent:**

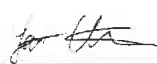
10 ml/min.

**Inj. Vol**

0.2µl

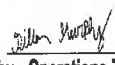


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

  
Laith Clemente - Operations Technician I

**Date Mixed:** 22-Apr-2024

**Balance Serial #** B442140311

  
Dillan Murphy - Operations Technician I

**Date Passed:** 24-Apr-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.







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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. :** 32007 **Lot No.:** A0215270

**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, 2030 **Storage:** 25°C nominal

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

P13902  
P13703 } Y.P.  
10/17/24

### CERTIFIED VALUES

| Elution Order | Compound     | CAS #      | Lot #    | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|--------------|------------|----------|--------|-----------------------------|----------------------------------------|
| 1             | Aroclor 1221 | 11104-28-2 | 14969200 | ----%  | 1,005.0 µg/mL               | +/- 55.7700                            |

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

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

## Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

300°C

**Det. Type:**

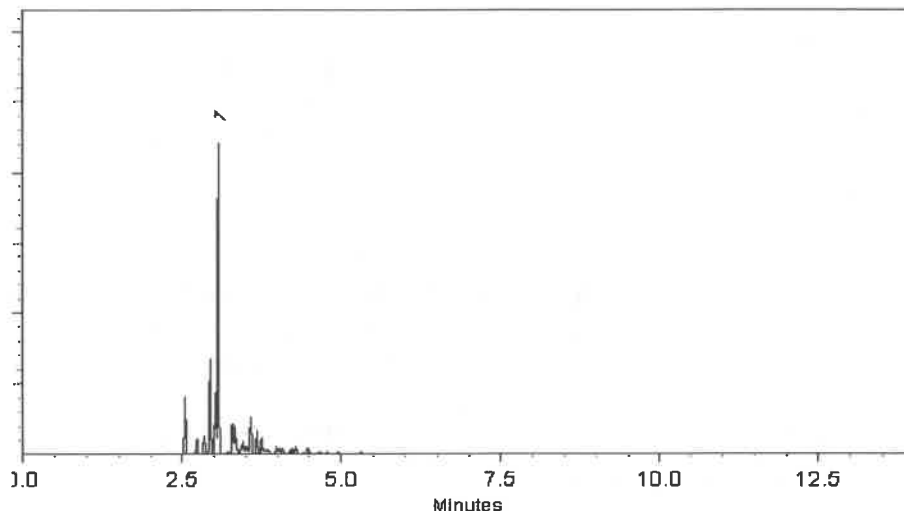
ECD

**Split Vent:**

10 ml/min.

**Inj. Vol**

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.

*Michael Maye*  
Michael Maye - Operations Tech I

Date Mixed: 16-Aug-2024

Balance Serial # 1128360905

*Jennifer Pollino*  
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 20-Aug-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.





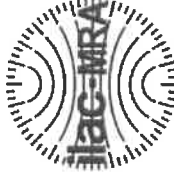
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**CERTIFIED REFERENCE MATERIAL**

## 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.:** A0214495

**Description :** Pesticide Surrogate Mix

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

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

**Expiration Date :** October 31, 2030      **Storage:** 10°C or colder

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

P19785  
AJ  
11/19/24  
P19789

### CERTIFIED VALUES

| Elution Order | Compound                     | CAS #     | Lot #    | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|------------------------------|-----------|----------|--------|-----------------------------|----------------------------------------|
| 1             | 2,4,5,6-Tetrachloro-m-xylene | 877-09-8  | RP220407 | 99%    | 200.2 µg/mL                 | +/- 11.1087                            |
| 2             | Decachlorobiphenyl (BZ# 209) | 2051-24-3 | 30679    | 99%    | 201.4 µg/mL                 | +/- 11.1753                            |

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

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

### Tech Tips:

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

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

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

## Quality Confirmation Test

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

**Carrier Gas:**  
helium-constant pressure 20 psi.

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

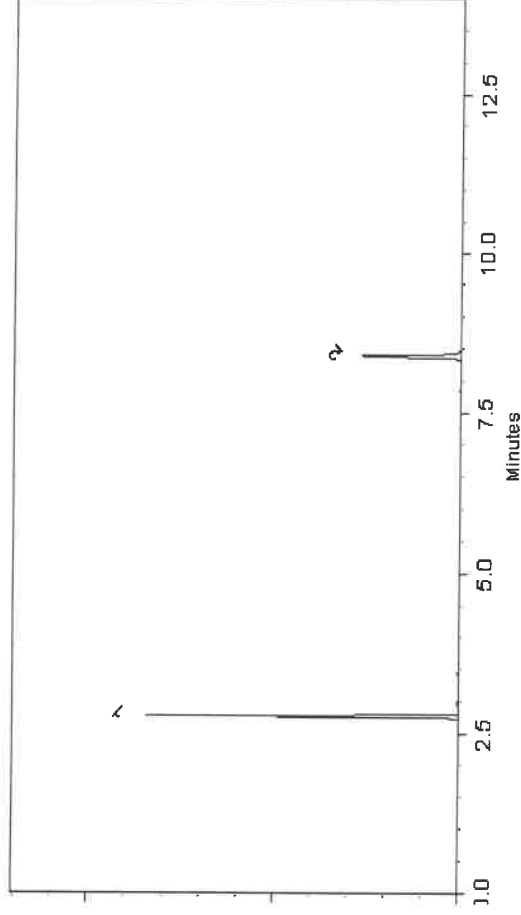
**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD

**Split Vent:**  
10 ml/min.

**Inj. Vol**  
1µl



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

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

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

*Jennifer Pollino*  
**Jennifer Pollino - Operations Tech III - ARM QC**

**Date Passed:** 01-Aug-2024

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



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# Certificate of Analysis

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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. :** 32011 **Lot No.:** A0217391

**Description :** Aroclor® 1254 Standard

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

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

**Expiration Date :** January 31, 2031 **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 1254 | 11097-69-1 | 124-191-B | ----%  | 1,004.7 µg/mL               | +/- 55.7515                            |

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

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

P13830  
↓  
P13832  
AJ  
12/09/24

# 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:**

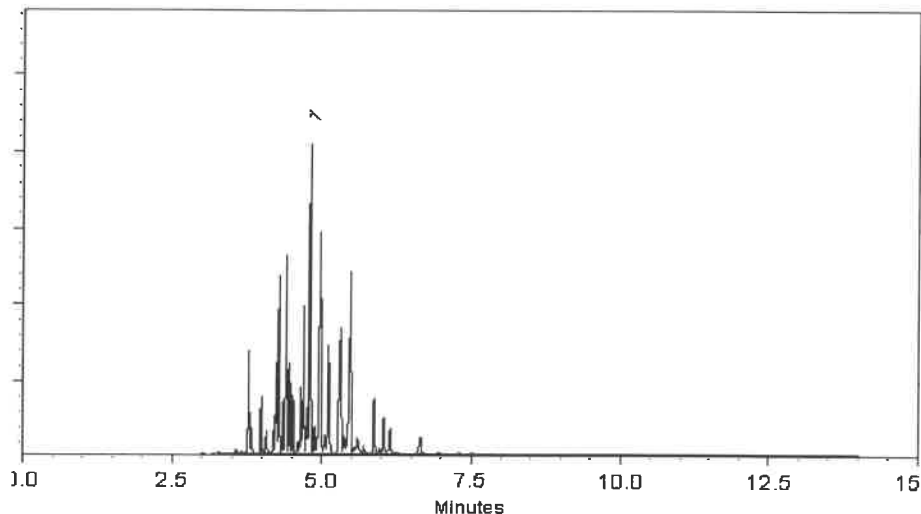
ECD

**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.

*Michael Maye*  
**Michael Maye - Operations Tech I**

**Date Mixed:** 02-Oct-2024

**Balance Serial #** C322230531

*Jennifer Pollino*  
**Jennifer Pollino - Operations Tech III - ARM QC**

**Date Passed:** 07-Oct-2024

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





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**CERTIFIED REFERENCE MATERIAL**

# Certificate of Analysis

*chromatographic plus*



## FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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**Catalog No. :** 32008

**Lot No.:** A0219655

**Description :** Aroclor® 1232 Standard

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

**Container Size :** 2 mL

**Pkg Amt:** > 1 mL

**Expiration Date :** March 31, 2031

**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 | ---%   | 1,007.0 µg/mL               | +/- 55.8810                            |

**Solvent:** Hexane

**CAS #** 110-54-3

**Purity** 99%

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

P13878



AJ  
01/28/25

P13880

## 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:**

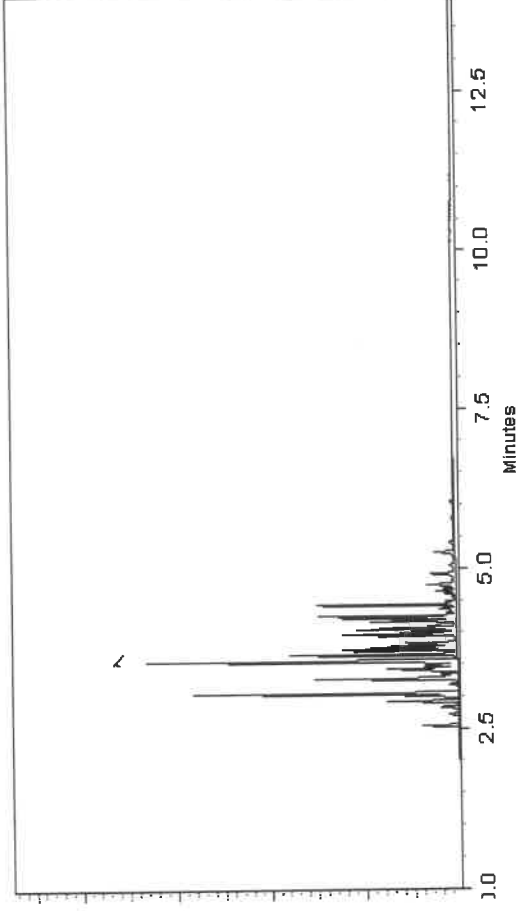
ECD

**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.

*Michael Maye*  
**Michael Maye - Operations Tech I**

**Date Mixed:** 02-Dec-2024

**Balance Serial #**

C322230531

*Brittany Federhik*

**Brittany Federhiko - Operations Tech I**

**Date Passed:** 05-Dec-2024

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



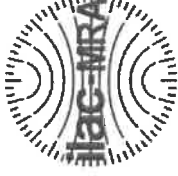
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## Certificate of Analysis

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### FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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**Catalog No.:** 32409      **Lot No.:** A0220950

**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, 2031      **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 1262 | 37324-23-5 | 10849100 | ----%  | 1,002.0 µg/mL               | +/- 55.6035                            |

**Solvent:** Hexane

**CAS #** 110-54-3  
**Purity** 99%

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

P13882

↓

AJ  
01/28/25

P13883

## Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

300°C

**Det. Type:**

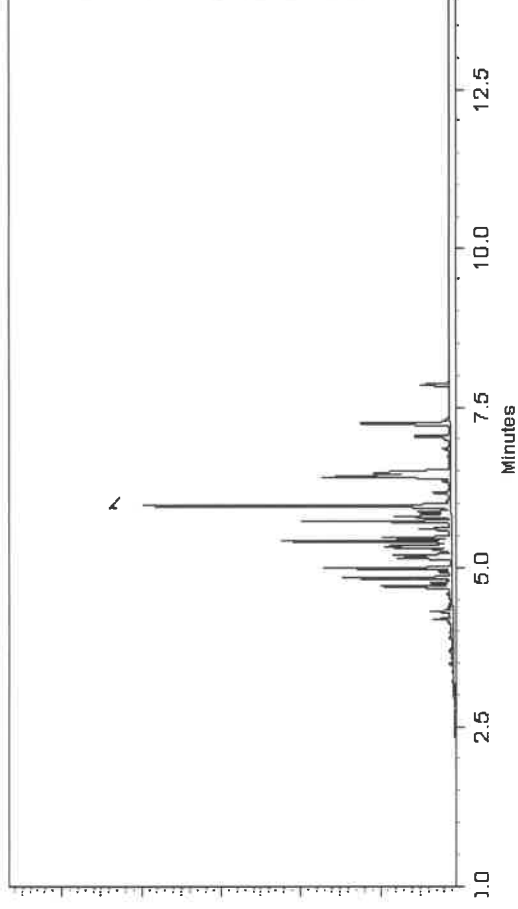
ECD

**Split Vent:**

300 ml/min.

**Inj. Vol**

0.2µl



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

  
**Tom Suckal - Mix Technician**

**Date Mixed:** 09-Jan-2025 **Balance Serial #** C322230531

  
**Britiany Federenko - Operations Tech I**

**Date Passed:** 14-Jan-2025

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

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)            | $\leq 5$       | 3           |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)            | $\leq 10$      | 1           |
| ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL) | $\leq 5$       | 1           |
| Assay (Total Saturated C <sub>6</sub> 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)                                                                    | $\leq 10$      | 5           |
| Residue after Evaporation                                                       | $\leq 1.0$ ppm | 0.1 ppm     |
| Substances Darkened by H <sub>2</sub> SO <sub>4</sub>                           | 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

Jamie Croak  
Director Quality Operations, Bioscience Production