

**Prep Standard - Chemical Standard Summary****Order ID :** O1232**Test :** PCB**Prepbatch ID :** PB150372,**Sequence ID/Qc Batch ID:** PP012023,**Standard ID :**

EP2279,EP2290,EP2294,PP21357,PP21413,PP21417,PP21419,PP21420,PP21421,PP21422,PP21423,PP21424,PP21425,PP21426,PP21427,PP21428,PP21429,PP21430,PP21431,PP21432,PP21433,PP21434,PP21435,PP21436,PP21437,PP21438,PP21439,PP21440,PP21441,PP21442,PP21443,PP21444,PP21445,PP21446,PP21447,PP21448,PP21449,PP21450,PP21451,PP21452,PP21453,PP21454,PP21455,PP21456,PP21457,PP21458,PP21459,PP21460,PP21461,PP21462,PP21463,PP21464,PP21465,PP21466,PP21467,PP21468,PP21469,PP21470,PP21471,PP21472,PP21473,PP21474,PP21475,

**Chemical ID :**

E2865,E3412,E3436,E3453,E3454,E3455,E3456,M5211,P10092,P10101,P10154,P10479,P10490,P10494,P10496,P10786,P10787,P11048,P11053,P11366,P11367,P11493,P11503,P11508,P11515,P11583,P11593,W2606,

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## Extractions STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>          | <u>NO.</u>             | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u>           |
|------------------|----------------------|------------------------|------------------|------------------------|--------------------|----------------|------------------|--------------------------------|
| 3923             | Baked Sodium Sulfate | <a href="#">EP2279</a> | 11/28/2022       | 04/13/2023             | Rajesh Parikh      | None           | None             | RUPESHKUMAR SHAH<br>11/28/2022 |

**FROM** 4000.00000gram of E3412 = 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>           |
|------------------|----------------|------------------------|------------------|------------------------|--------------------|----------------|------------------|--------------------------------|
| 314              | 1.1 H2SO4 SOLN | <a href="#">EP2290</a> | 01/17/2023       | 07/17/2023             | Rajesh Parikh      | None           | None             | RUPESHKUMAR SHAH<br>01/17/2023 |

**FROM** 1000.00000ml of M5211 + 1000.00000ml of W2606 = Final Quantity: 2000.000 ml

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## Extractions STANDARD PREPARATION LOG

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|------------------|-------------------|------------------------|------------------|------------------------|--------------------|----------------|------------------|--------------------------------|
| 230              | 1:1ACETONE/HEXANE | <a href="#">EP2294</a> | 01/17/2023       | 07/16/2023             | Rajesh Parikh      | None           | None             | RUPESHKUMAR SHAH<br>01/17/2023 |

**FROM** 8000.00000ml of E3455 + 8000.00000ml of E3456 = Final Quantity: 16000.000 ml

| <u>Recipe ID</u> | <u>NAME</u>                      | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u>         |
|------------------|----------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|------------------------------|
| 465              | 200 PPB Pest/PCB Surrogate Spike | <a href="#">PP21357</a> | 01/10/2023       | 06/08/2023             | Abdul Mirza        | None           | None             | Ankita Jodhani<br>01/12/2023 |

**FROM** 1.00000ml of P10786 + 999.00000ml of E3436 = Final Quantity: 1000.000 ml

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| <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="#">PP21413</a> | 01/16/2023       | 07/10/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                        |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of P11366 + 99.50000ml of E3454 = 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> |
|------------------|---------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 84               | Pest/PCB Surrogate Stock 20 PPM | <a href="#">PP21417</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                 |                         |                  |                        |                    |                |                  |                      |

**FROM** 1.00000ml of P10787 + 9.00000ml of E3453 = Final Quantity: 10.000 ml

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## 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="#">PP21419</a> | 01/16/2023       | 07/10/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                             |                         |                  |                        |                    |                |                  |                      |

**FROM** 1.00000ml of P11367 + 9.00000ml of E3454 = Final Quantity: 10.000 ml

| <u>Recipe ID</u> | <u>NAME</u>                                        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 202              | AR1660 1000/100 ppb working<br>solution 1st source | <a href="#">PP21420</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.10000ml of P10479 + 99.40000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

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| <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="#">PP21421</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.25000ml of E3453 + 0.75000ml of PP21420 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 204              | AR1660 500 PPB STD | <a href="#">PP21422</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21420 = Final Quantity: 1.000 ml

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| <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="#">PP21423</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.75000ml of E3453 + 0.25000ml of PP21420 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 206              | AR1660 50 PPB STD | <a href="#">PP21424</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                   |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.90000ml of E3453 + 0.10000ml of PP21422 = Final Quantity: 1.000 ml

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## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                      | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 213              | AR1221 1000 PPB WORKING SOLUTION | <a href="#">PP21425</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                  |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.10000ml of P10490 + 99.40000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1079             | AR1221 750 PPB STD | <a href="#">PP21426</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.25000ml of E3453 + 0.75000ml of PP21425 = Final Quantity: 1.000 ml

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| <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="#">PP21427</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21425 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1080             | AR1221 250 PPB STD | <a href="#">PP21428</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.75000ml of E3453 + 0.25000ml of PP21425 = Final Quantity: 1.000 ml

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## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1081             | AR1221 50 PPB STD | <a href="#">PP21429</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                   |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.90000ml of E3453 + 0.10000ml of PP21427 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>                      | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 214              | AR1232 1000 PPB WORKING SOLUTION | <a href="#">PP21430</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                  |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.10000ml of P11583 + 99.40000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

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## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1063             | AR1232 750 PPB STD | <a href="#">PP21431</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.25000ml of E3453 + 0.75000ml of PP21430 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 223              | AR1232 500 PPB STD | <a href="#">PP21432</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21430 = Final Quantity: 1.000 ml

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## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1064             | AR1232 250 PPB STD | <a href="#">PP21433</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.75000ml of E3453 + 0.25000ml of PP21430 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1065             | AR1232 50 PPB STD | <a href="#">PP21434</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                   |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.90000ml of E3453 + 0.10000ml of PP21432 = Final Quantity: 1.000 ml

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## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                 | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 215              | AR1242 1000 PPB WORKING STD | <a href="#">PP21435</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                             |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.10000ml of P11048 + 99.40000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1067             | AR1242 750 PPB STD | <a href="#">PP21436</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.25000ml of E3453 + 0.75000ml of PP21435 = Final Quantity: 1.000 ml

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## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 224              | AR1242 500 PPB STD | <a href="#">PP21437</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21435 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1068             | AR1242 250 PPB STD | <a href="#">PP21438</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.75000ml of E3453 + 0.25000ml of PP21435 = Final Quantity: 1.000 ml

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## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1069             | AR1242 50 PPB STD | <a href="#">PP21439</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                   |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.90000ml of E3453 + 0.10000ml of PP21437 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>                 | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 216              | AR1248 1000 PPB WORKING STD | <a href="#">PP21440</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                             |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.10000ml of P11053 + 99.40000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

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## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1075             | AR1248 750 PPB STD | <a href="#">PP21441</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.25000ml of E3453 + 0.75000ml of PP21440 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 225              | AR1248 500 PPB STD | <a href="#">PP21442</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21440 = Final Quantity: 1.000 ml

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## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1076             | AR1248 250 PPB STD | <a href="#">PP21443</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.75000ml of E3453 + 0.25000ml of PP21440 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1077             | AR1248 50 PPB STD | <a href="#">PP21444</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                   |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.90000ml of E3453 + 0.10000ml of PP21442 = Final Quantity: 1.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                 | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 217              | AR1254 1000 PPB WORKING STD | <a href="#">PP21445</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                             |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.10000ml of P10494 + 99.40000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1071             | AR1254 750 PPB STD | <a href="#">PP21446</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.25000ml of E3453 + 0.75000ml of PP21445 = Final Quantity: 1.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 226              | AR1254 500 PPB STD | <a href="#">PP21447</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21445 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1072             | AR1254 250 PPB STD | <a href="#">PP21448</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.75000ml of E3453 + 0.25000ml of PP21445 = Final Quantity: 1.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1073             | AR1254 50 PPB STD | <a href="#">PP21449</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                   |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.90000ml of E3453 + 0.10000ml of PP21447 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>                      | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1529             | AR1262 1000 PPB Working Solution | <a href="#">PP21450</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                  |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.10000ml of P10496 + 99.40000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3753             | AR1262 750 PPB STD | <a href="#">PP21451</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.25000ml of E3453 + 0.75000ml of PP21450 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1530             | AR1262 500 PPB STD | <a href="#">PP21452</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21450 = Final Quantity: 1.000 ml

# CHEMTECH

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## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3754             | AR1262 250 PPB STD | <a href="#">PP21453</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.75000ml of E3453 + 0.25000ml of PP21450 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3755             | AR1262 50 PPB STD | <a href="#">PP21454</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                   |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.90000ml of E3453 + 0.10000ml of PP21452 = Final Quantity: 1.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                      | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1532             | AR1268 1000 PPB Working Solution | <a href="#">PP21455</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                  |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.10000ml of P11593 + 99.40000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3820             | AR1268 750 PPB STD | <a href="#">PP21456</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.25000ml of E3453 + 0.75000ml of PP21455 = Final Quantity: 1.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1533             | AR1268 500 PPB STD | <a href="#">PP21457</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21455 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3821             | AR1268 250 PPB STD | <a href="#">PP21458</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.75000ml of E3453 + 0.25000ml of PP21455 = Final Quantity: 1.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3822             | AR1268 50 PPB STD | <a href="#">PP21459</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                   |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.90000ml of E3453 + 0.10000ml of PP21457 = 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> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 405              | AR1660 1000/100 PPB ICV STD | <a href="#">PP21460</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                             |                         |                  |                        |                    |                |                  |                      |

**FROM** 98.50000ml of E3453 + 0.50000ml of PP21417 + 1.00000ml of PP21419 = Final Quantity: 100.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## 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="#">PP21461</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21460 = 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="#">PP21462</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                                 |                         |                  |                        |                    |                |                  |                      |

**FROM** 1.00000ml of P11493 + 98.50000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                 | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3790             | AR1221 500 PPB ICV(AGILENT) | <a href="#">PP21463</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                             |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21462 = 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="#">PP21464</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                            |                         |                  |                        |                    |                |                  |                      |

**FROM** 1.00000ml of P10101 + 98.50000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## 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="#">PP21465</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21464 = 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="#">PP21466</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                            |                         |                  |                        |                    |                |                  |                      |

**FROM** 1.00000ml of P11503 + 98.50000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## 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="#">PP21467</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21466 = 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="#">PP21468</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                            |                         |                  |                        |                    |                |                  |                      |

**FROM** 1.00000ml of P11508 + 98.50000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## 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="#">PP21469</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21468 = 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="#">PP21470</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                            |                         |                  |                        |                    |                |                  |                      |

**FROM** 1.00000ml of P11515 + 98.50000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## 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="#">PP21471</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                    |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21470 = 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="#">PP21472</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
| 01/16/2023       |                                                |                         |                  |                        |                    |                |                  |                      |

**FROM** 1.00000ml of P10154 + 98.50000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## 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="#">PP21473</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
|                  |                        |                         |                  |                        |                    |                |                  | 01/16/2023           |

**FROM** 0.50000ml of E3453 + 0.50000ml of PP21472 = 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="#">PP21474</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel         |
|                  |                                             |                         |                  |                        |                    |                |                  | 01/16/2023           |

**FROM** 1.00000ml of P10092 + 98.50000ml of E3453 + 0.50000ml of PP21417 = Final Quantity: 100.000 ml

**284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900**

| <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="#">PP21475</a> | 01/16/2023       | 07/03/2023             | Ankita Jodhani     | None           | None             | Yogesh Patel<br>01/16/2023 |
| <u>FROM</u>      | 0.50000ml of E3453 + 0.50000ml of PP21474 = Final Quantity: 1.000 ml |                         |                  |                        |                    |                |                  |                            |

**CHEMICAL RECEIPT LOG BOOK**

| Supplier         | ItemCode / ItemName                      | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-3382-05 / Sand, Purified (cs/4x2.5kg) | 0000243821 | 12/31/2024      | 04/30/2020 / RAJESH     | 04/28/2020 / RAJESH         | E2865          |

| Supplier                    | ItemCode / ItemName                                    | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--------------------------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1 | 139404 | 10/23/2023      | 10/18/2022 / Rajesh     | 10/13/2022 / Rajesh         | E3412          |

| 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) | 22E1562001 | 06/08/2023      | 12/08/2022 / Rajesh     | 12/05/2022 / Rajesh         | E3436          |

| 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) | 22G0362002 | 07/03/2023      | 01/03/2023 / Rajesh     | 01/03/2023 / Rajesh         | E3453          |

| Supplier         | ItemCode / ItemName               | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|-----------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | 9005-05 / Acetone Ultra (cs/4x4L) | 22J2461015 | 07/10/2023      | 01/10/2023 / Rajesh     | 01/03/2023 / Rajesh         | E3454          |

| 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) | 22G0362002 | 07/16/2023      | 01/16/2023 / Rajesh     | 01/11/2023 / Rajesh         | E3455          |

**CHEMICAL RECEIPT LOG BOOK**

| Supplier         | ItemCode / ItemName               | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|-----------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | 9005-05 / Acetone Ultra (cs/4x4L) | 22J0461011 | 07/17/2023      | 01/17/2023 / Rajesh     | 01/11/2023 / Rajesh         | E3456          |

| 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) | 22D0862014 | 01/20/2025      | 08/22/2022 /            | 04/26/2022 / mohan          | M5211          |

| Supplier             | ItemCode / ItemName     | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------------------|-------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Agilent Technologies | PP-382-1 / Aroclor 1268 | 0006478417 | 07/16/2023      | 01/16/2023 / Ankita     | 12/03/2020 / Abdul          | P10092         |

| Supplier             | ItemCode / ItemName     | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------------------|-------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Agilent Technologies | PP-302-1 / Aroclor 1232 | CF-2197A | 07/16/2023      | 01/16/2023 / Ankita     | 12/03/2020 / Abdul          | P10101         |

| Supplier             | ItemCode / ItemName     | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------------------|-------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Agilent Technologies | PP-372-1 / Aroclor 1262 | 0006499800 | 07/16/2023      | 01/16/2023 / Ankita     | 01/12/2021 / Abdul          | P10154         |

| Supplier | ItemCode / ItemName                                              | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32039 / PCB Mix, Aroclor 1016/1260, 1000ug/mL, hexane, 1mL/ampul | A0163157 | 07/13/2023      | 01/13/2023 / Ankita     | 03/19/2021 / Abdul          | P10479         |

**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 | A0159630 | 07/13/2023      | 01/13/2023 / Ankita     | 03/19/2021 / Abdul          | P10490         |

| 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 | A0160220 | 07/13/2023      | 01/13/2023 / Ankita     | 03/19/2021 / Abdul          | P10494         |

| Supplier | ItemCode / ItemName                                       | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-----------------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32409 / PCB Stock Solution, Aroclor 1262 Std, 1mL, Hexane | A0167722 | 07/13/2023      | 01/13/2023 / Ankita     | 03/19/2021 / Ankita         | P10496         |

| 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 | A0172332 | 07/10/2023      | 01/10/2023 / Abdul      | 06/17/2021 / dhaval         | P10786         |

| 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 | A0172332 | 07/16/2023      | 01/16/2023 / Ankita     | 06/17/2021 / dhaval         | P10787         |

| 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 | A0167551 | 07/13/2023      | 01/13/2023 / Ankita     | 09/03/2021 / Abdul          | P11048         |

**CHEMICAL RECEIPT LOG BOOK**

| 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 | A0162497 | 07/13/2023      | 01/13/2023 / Ankita     | 09/03/2021 / Abdul          | P11053         |

| Supplier                 | ItemCode / ItemName       | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|---------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 20064 / Aroclor 1016/1260 | 033121 | 07/16/2023      | 01/16/2023 / Ankita     | 02/03/2022 / yogesh         | P11366         |

| Supplier                 | ItemCode / ItemName       | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|---------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 20064 / Aroclor 1016/1260 | 033121 | 07/16/2023      | 01/16/2023 / Ankita     | 02/03/2022 / yogesh         | P11367         |

| Supplier             | ItemCode / ItemName     | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------------------|-------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Agilent Technologies | PP-292-1 / Aroclor 1221 | 0006535333 | 07/16/2023      | 01/16/2023 / Ankita     | 02/21/2022 / Ankita         | P11493         |

| Supplier             | ItemCode / ItemName     | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------------------|-------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Agilent Technologies | PP-312-1 / Aroclor 1242 | 0006665550 | 07/16/2023      | 01/16/2023 / Ankita     | 02/21/2022 / Ankita         | P11503         |

| Supplier             | ItemCode / ItemName     | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------------------|-------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Agilent Technologies | PP-342-1 / Aroclor 1248 | 0006626997 | 07/16/2023      | 01/16/2023 / Ankita     | 02/21/2022 / Ankita         | P11508         |

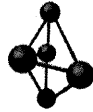
**CHEMICAL RECEIPT LOG BOOK**

| Supplier             | ItemCode / ItemName     | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------------------|-------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| Agilent Technologies | PP-352-1 / Aroclor 1254 | CS-2321 | 07/16/2023      | 01/16/2023 / Ankita     | 02/21/2022 / Ankita         | P11515         |

| Supplier | ItemCode / ItemName                                         | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32008 / PCB Mix, Aroclor 1232, 1000ug/mL, Hexane, 1mL/ampul | A0173309 | 07/13/2023      | 01/13/2023 / Ankita     | 03/18/2022 / Abdul          | P11583         |

| Supplier | ItemCode / ItemName                                       | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-----------------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32410 / PCB Stock Solution, Aroclor 1268 Std, 1mL, Hexane | A0181782 | 07/13/2023      | 01/13/2023 / Ankita     | 03/18/2022 / Abdul          | P11593         |

| Supplier         | ItemCode / ItemName | Lot #               | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|---------------------|---------------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | DIW / DI Water      | Daily Lab-Certified | 10/24/2024      | 10/24/2019 / apatel     | 10/24/2019 / apatel         | W2606          |



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT

Part Number:  
Lot Number:  
Description:

20064  
033121  
CLP PCBs - Aroclor Mix  
Aroclors 1016 & 1260  
033131  
Ambient (20 °C)  
1000  
6UTB

Expiration Date:  
Recommended Storage:  
Nominal Concentration (µg/mL):  
NIST Test ID#:

Solvent(s):  
Hexane

Lot#  
233256

5E-05 Balance Uncertainty  
0.058 Flask Uncertainty

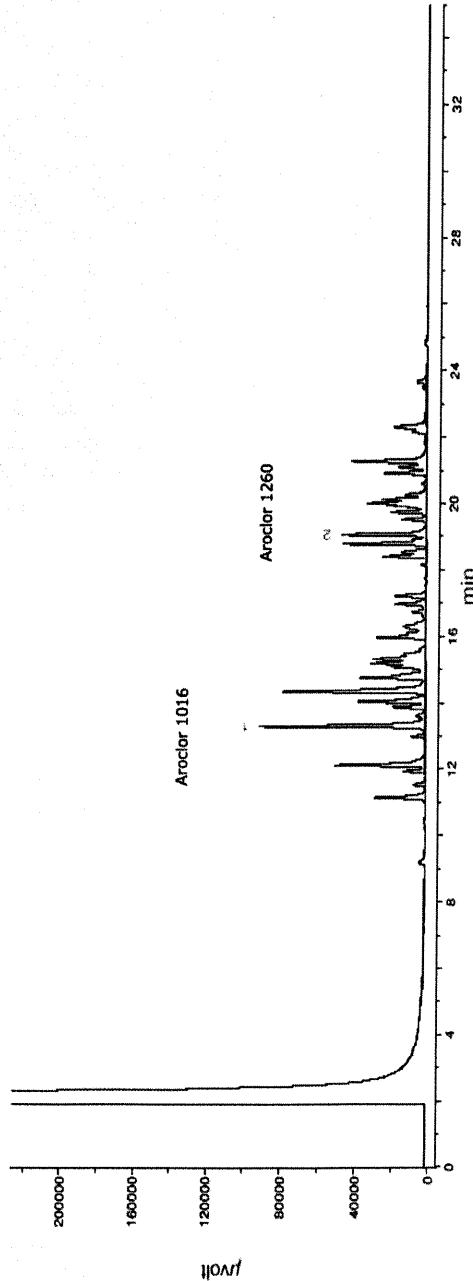
Weight(s) shown below were combined and diluted to (mL): 200.1

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

| Compound        | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Expanded Uncertainty (+/-) (µg/mL) | Actual Weight(g) | Actual Conc (µg/mL) | SDS Information                        |                              |
|-----------------|-----|------------|----------------------|------------|------------------------------------|------------------|---------------------|----------------------------------------|------------------------------|
|                 |     |            |                      |            |                                    |                  |                     | (Solvent Safety Info. On Attached pg.) |                              |
| 1. Aroclor 1016 | 15  | 020491JC   | 1000                 | 100        | 0.2                                | 0.20007          | 1000.9              | 12674-11-2                             | N/A                          |
| 2. Aroclor 1260 | 21  | 020491JC   | 1000                 | 100        | 0.2                                | 0.20035          | 1001.4              | 11096-82-5                             | 0.5mg/m3<br>ot-rat 1315mg/kg |

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

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



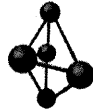
P 11364

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P 11373

y.p.  
02/03/22





Certified Reference Material CRM



CERTIFIED WEIGHT REPORT

Part Number:  
Lot Number:  
Description:

20064  
033121  
CLP PCBs - Aroclor Mix  
Aroclors 1016 & 1260  
033131  
Ambient (20 °C)  
1000  
6UTB

Expiration Date:  
Recommended Storage:  
Nominal Concentration (µg/mL):  
NIST Test ID#:

Solvent(s):  
Hexane

Lot#  
233256

5E-05 Balance Uncertainty  
0.058 Flask Uncertainty

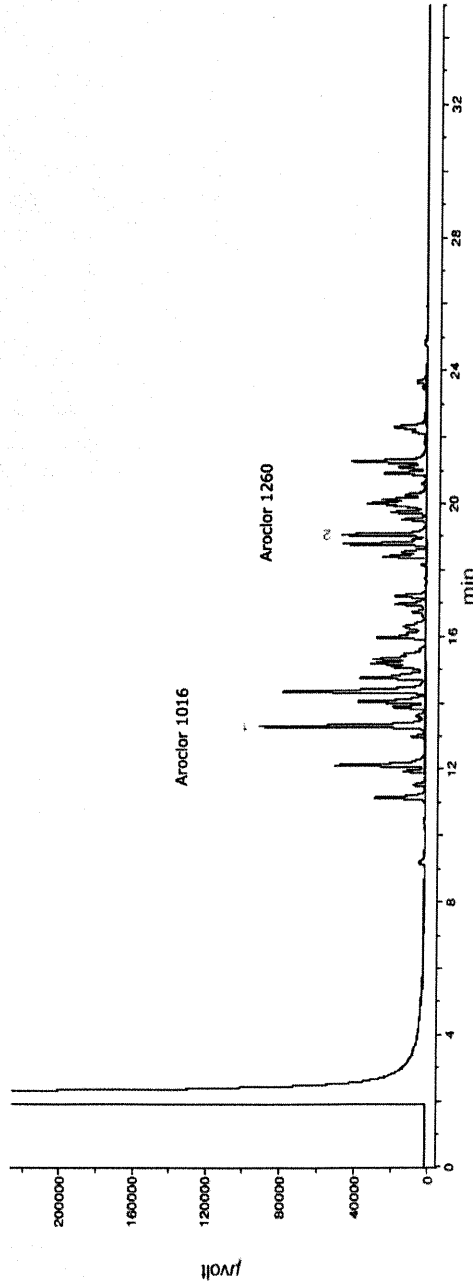
Weight(s) shown below were combined and diluted to (mL): 200.1

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

| Compound        | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Expanded Uncertainty (+/-) (µg/mL) | Actual Weight(g) | Actual Conc (µg/mL) | SDS Information                        |                              |
|-----------------|-----|------------|----------------------|------------|------------------------------------|------------------|---------------------|----------------------------------------|------------------------------|
|                 |     |            |                      |            |                                    |                  |                     | (Solvent Safety Info. On Attached pg.) |                              |
| 1. Aroclor 1016 | 15  | 020491JC   | 1000                 | 100        | 0.2                                | 0.20007          | 1000.9              | 12674-11-2                             | N/A                          |
| 2. Aroclor 1260 | 21  | 020491JC   | 1000                 | 100        | 0.2                                | 0.20035          | 1001.4              | 11096-82-5                             | 0.5mg/m3<br>ot-rat 1315mg/kg |

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

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



P 11364

↓

P 11373

y.p.  
02/03/22





CERTIFIED REFERENCE MATERIAL

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

www.restek.com

## Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

DD  
06/17/2021

Catalog No.: 32000 Lot No.: A0172332  
Description: Pesticide Surrogate Mix  
Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul  
Container Size: 2 mL Pkg Amt: > 1 mL  
Expiration Date: August 31, 2027 Storage: 10°C or colder  
Handling: Contains PCBs - sonicate prior to use. Ship: Ambient

P10783  
To - (10)  
P10792

### CERTIFIED VALUES

| Elution Order | Compound                                                                   | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2)                                                     |
|---------------|----------------------------------------------------------------------------|-----------------------------|------------------------------------------------------------------------------------------|
| 1             | 2,4,5,6-Tetrachloro-m-xylene<br>CAS # 877-09-8 (Lot 0052481)<br>Purity 98% | 200.7 µg/mL                 | +/- 1.1840 µg/mL Gravimetric<br>+/- 6.3622 µg/mL Unstressed<br>+/- 8.3106 µg/mL Stressed |
| 2             | Decachlorobiphenyl (BZ# 209)<br>CAS # 2051-24-3 (Lot 30679)<br>Purity 99%  | 200.2 µg/mL                 | +/- 1.1810 µg/mL Gravimetric<br>+/- 6.3463 µg/mL Unstressed<br>+/- 8.2897 µg/mL Stressed |
| Solvent:      | Acetone<br>CAS # 67-64-1<br>Purity 99%                                     |                             |                                                                                          |

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

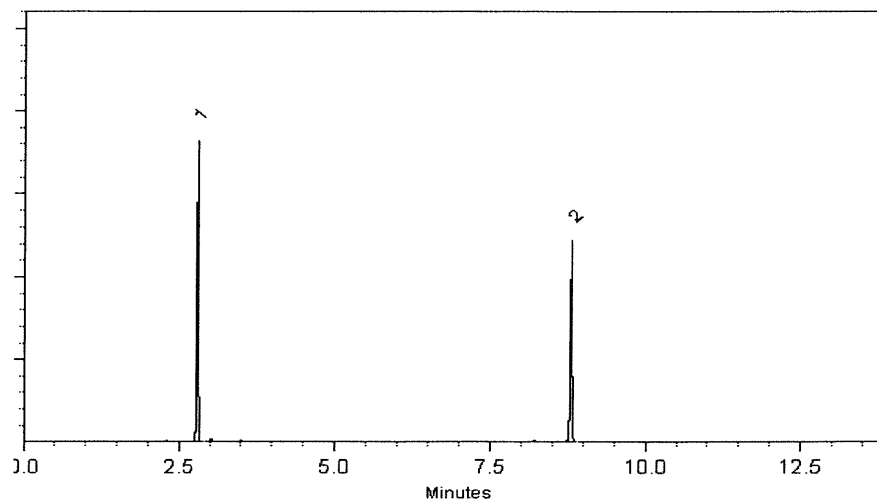
250°C

**Det. Temp:**

300°C

**Det. Type:**

ECD



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

*Sam Moodler*  
Sam Moodler - Operations Tech I

**Date Mixed:** 12-May-2021

**Balance:** B707717271

*Alexis Shelow*  
Alexis Shelow - Operations Tech I

**Date Passed:** 14-May-2021

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



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

## Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

DD  
06/17/2021

Catalog No.: 32000 Lot No.: A0172332  
Description: Pesticide Surrogate Mix  
Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul  
Container Size: 2 mL Pkg Amt: > 1 mL  
Expiration Date: August 31, 2027 Storage: 10°C or colder  
Handling: Contains PCBs - sonicate prior to use. Ship: Ambient

P10783  
To - (10)  
P10792

### CERTIFIED VALUES

| Elution Order | Compound                                                                   | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2)                                                     |
|---------------|----------------------------------------------------------------------------|-----------------------------|------------------------------------------------------------------------------------------|
| 1             | 2,4,5,6-Tetrachloro-m-xylene<br>CAS # 877-09-8 (Lot 0052481)<br>Purity 98% | 200.7 µg/mL                 | +/- 1.1840 µg/mL Gravimetric<br>+/- 6.3622 µg/mL Unstressed<br>+/- 8.3106 µg/mL Stressed |
| 2             | Decachlorobiphenyl (BZ# 209)<br>CAS # 2051-24-3 (Lot 30679)<br>Purity 99%  | 200.2 µg/mL                 | +/- 1.1810 µg/mL Gravimetric<br>+/- 6.3463 µg/mL Unstressed<br>+/- 8.2897 µg/mL Stressed |
| Solvent:      | Acetone<br>CAS # 67-64-1<br>Purity 99%                                     |                             |                                                                                          |

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

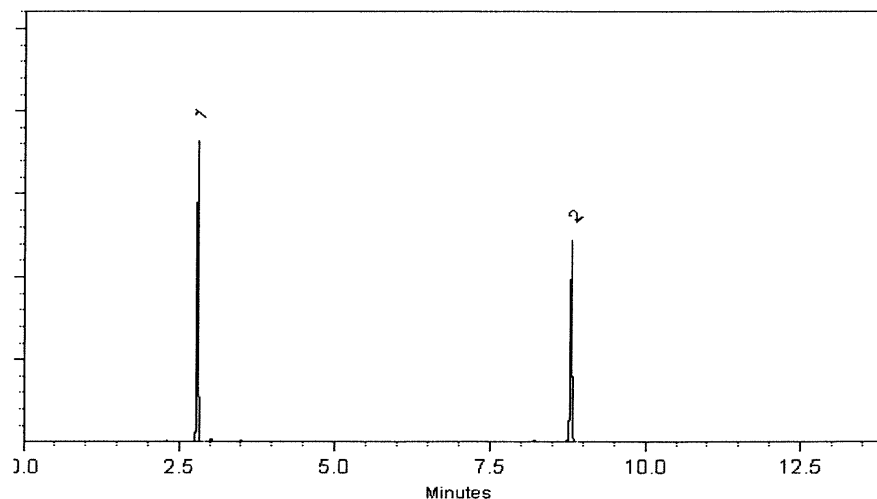
250°C

**Det. Temp:**

300°C

**Det. Type:**

ECD



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

*Sam Moodler*  
Sam Moodler - Operations Tech I

Date Mixed: 12-May-2021

Balance: B707717271

*Alexis Shelow*  
Alexis Shelow - Operations Tech I

Date Passed: 14-May-2021

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

Sand  
Purified  
Washed and Ignited



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

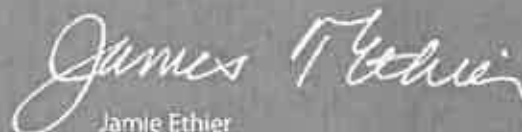
## Certificate of Analysis

| Test                      | Specification | Result |
|---------------------------|---------------|--------|
| Substances Soluble in HCl | $\leq 0.16\%$ | 0.01   |

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

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

E 2865

  
Jamie Ethier  
Vice President Global Quality

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

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



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



MIRADOR 201, COL. MIRADOR  
MONTERREY, N.L. MÉXICO  
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:** OCT/28/2021  
**LOT NUMBER :** 139404

| TEST                                                                                                          | SPECIFICATIONS | LOT VALUES  |
|---------------------------------------------------------------------------------------------------------------|----------------|-------------|
| Assay (Na <sub>2</sub> SO <sub>4</sub> )                                                                      | Min. 99.0%     | 99.8 %      |
| pH of a 5% solution at 25°C                                                                                   | 5.2 - 9.2      | 6.0         |
| 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%    | 0.002 %     |
| 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%        | 0.2 %       |
| Retained on US Standard No. 60 sieve                                                                          | Min. 94%       | 97.6 %      |
| Through US Standard No. 60 sieve                                                                              | Max. 5%        | 2.1 %       |
| Through US Standard No. 100 sieve                                                                             | Max. 10%       | 0.2 %       |
| COMMENTS                                                                                                      |                |             |
| <br>QC: PhC Irma Belmares |                |             |

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

E 3412

Recd. by RP on 10/13/22

RE-02-01, Ed. 3

Acetone  
BAKER RESI-ANALYZED® Reagent  
For Organic Residue Analysis



Material No.: 9254-03  
Batch No.: 22E1562001  
Manufactured Date: 2022-05-03  
Expiration Date: 2025-05-02  
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     | < 1.0 ppm   |
| Substances Reducing Permanganate                                        | Passes Test   | Passes Test |
| Titration Acid (μeq/g)                                                  | ≤ 0.3         | 0.1         |
| Titration Base (μeq/g)                                                  | ≤ 0.6         | < 0.1       |
| Water (H <sub>2</sub> O)                                                | ≤ 0.5 %       | 0.1 %       |
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)    | ≤ 5           | < 1         |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)    | ≤ 10          | 1           |

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

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

Recd by RP on 12/5/22

E3436

Jamie Ethier  
Vice President Global Quality

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

Avantor Performance Materials, LLC

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

Hexanes (95% n-hexane)  
BAKER RESI-ANALYZED® Reagent



Material No.: 9262-03  
Batch No.: 22G0362002  
Manufactured Date: 2022-06-17  
Expiration Date: 2023-09-16  
Revision No.: 0

## Certificate of Analysis

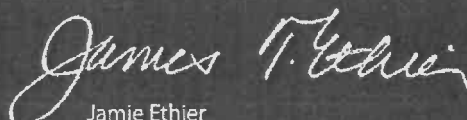
| Test                                                                            | Specification | Result      |
|---------------------------------------------------------------------------------|---------------|-------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)            | ≤ 5           | 2           |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)            | ≤ 10          | 2           |
| ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL) | ≤ 5           | 2           |
| Assay (Total Saturated C <sub>6</sub> Isomers) (by GC, corrected for water)     | ≥ 99.5 %      | 99.5 %      |
| Assay (as n-Hexane) (by GC, corrected for water)                                | ≥ 95 %        | 97 %        |
| Color (APHA)                                                                    | ≤ 10          | 5           |
| Residue after Evaporation                                                       | ≤ 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)                                                      | ≤ 0.05 %      | < 0.01 %    |

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

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

Recd. by RP on 01/03/23

E 3453

  
Jamie Ethier  
Vice President Global Quality

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

Avantor Performance Materials, LLC

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

Page 1 of 1

Acetone  
CMOS



Material No.: 9005-05  
Batch No.: 22J2461015  
Manufactured Date: 2022-10-20  
Retest Date: 2027-10-19  
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 %      | 99.7 %      |
| 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 %       | 0.2 %       |
| 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    | 3.4 ppb     |
| Trace Impurities - Chromium (Cr)                                        | ≤ 10.0 ppb    | < 1.0 ppb   |
| Trace Impurities - Cobalt (Co)                                          | ≤ 10.0 ppb    | < 1.0 ppb   |
| Trace Impurities - Copper (Cu)                                          | ≤ 10.0 ppb    | < 1.0 ppb   |
| Trace Impurities - Gallium (Ga)                                         | ≤ 10.0 ppb    | < 1.0 ppb   |
| Trace Impurities - Germanium (Ge)                                       | ≤ 10.0 ppb    | < 10.0 ppb  |
| Trace Impurities - Gold (Au)                                            | ≤ 20 ppb      | < 5 ppb     |
| Trace Impurities - Iron (Fe)                                            | ≤ 20.0 ppb    | < 1.0 ppb   |
| Trace Impurities - Lead (Pb)                                            | ≤ 10.0 ppb    | < 10.0 ppb  |
| Trace Impurities - Lithium (Li)                                         | ≤ 10.0 ppb    | < 1.0 ppb   |
| Trace Impurities - Magnesium (Mg)                                       | ≤ 20 ppb      | < 1 ppb     |
| Trace Impurities - Manganese (Mn)                                       | ≤ 10.0 ppb    | < 1.0 ppb   |

>>> Continued on page 2 >>>

Recd. by RP on 01/03/23

E 3454

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

Avantor Performance Materials, LLC

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

Acetone  
CMOS



Material No.: 9005-05  
Batch No.: 22J2461015

| Test                                                   | Specification     | Result     |
|--------------------------------------------------------|-------------------|------------|
| Trace Impurities - Molybdenum (Mo)                     | $\leq 10.0$ ppb   | < 5.0 ppb  |
| Trace Impurities - Nickel (Ni)                         | $\leq 10.0$ ppb   | < 5.0 ppb  |
| Trace Impurities - Niobium (Nb)                        | $\leq 50.0$ ppb   | < 1.0 ppb  |
| Trace Impurities - Potassium (K)                       | $\leq 10.0$ ppb   | < 10.0 ppb |
| Trace Impurities - Silicon (Si)                        | $\leq 50$ ppb     | < 10 ppb   |
| Trace Impurities - Silver (Ag)                         | $\leq 10.0$ ppb   | < 1.0 ppb  |
| Trace Impurities - Sodium (Na)                         | $\leq 10.0$ ppb   | < 5.0 ppb  |
| Trace Impurities - Strontium (Sr)                      | $\leq 10.0$ ppb   | < 1.0 ppb  |
| Trace Impurities - Tantalum (Ta)                       | $\leq 50.0$ ppb   | < 5.0 ppb  |
| Trace Impurities - Thallium (Tl)                       | $\leq 10.0$ ppb   | < 5.0 ppb  |
| Trace Impurities - Tin (Sn)                            | $\leq 20.0$ ppb   | < 10.0 ppb |
| Trace Impurities - Titanium (Ti)                       | $\leq 10.0$ ppb   | < 1.0 ppb  |
| Trace Impurities - Vanadium (V)                        | $\leq 10.0$ ppb   | < 1.0 ppb  |
| Trace Impurities - Zinc (Zn)                           | $\leq 20.0$ ppb   | 1.8 ppb    |
| Trace Impurities - Zirconium (Zr)                      | $\leq 10.0$ ppb   | < 1.0 ppb  |
| Particle Count - 0.5 $\mu$ m and greater (Rion KS42AF) | $\leq 100$ par/ml | 15 par/ml  |
| Particle Count - 1.0 $\mu$ m and greater (Rion KS42AF) | $\leq 8$ par/ml   | 4 par/ml   |

>>> Continued on page 3 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700  
Avantor Performance Materials, LLC  
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Acetone  
CMOS



Material No.: 9005-05  
Batch No.: 22J2461015

| Test | Specification | Result |
|------|---------------|--------|
|------|---------------|--------|

For Microelectronic Use

Country of Origin: USA

Packaging Site: Paris Mfg Ctr & DC

*James Ethier*  
Jamie Ethier  
Vice President Global Quality

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

Avantor Performance Materials, LLC

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

Material No.: 9262-03  
Batch No.: 22G0362002  
Manufactured Date: 2022-06-17  
Expiration Date: 2023-09-16  
Revision No.: 0

## Certificate of Analysis

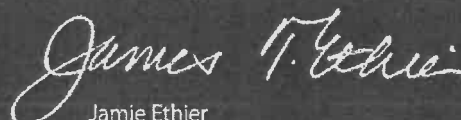
| Test                                                                            | Specification | Result      |
|---------------------------------------------------------------------------------|---------------|-------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)            | ≤ 5           | 2           |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)            | ≤ 10          | 2           |
| ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL) | ≤ 5           | 2           |
| Assay (Total Saturated C <sub>6</sub> Isomers) (by GC, corrected for water)     | ≥ 99.5 %      | 99.5 %      |
| Assay (as n-Hexane) (by GC, corrected for water)                                | ≥ 95 %        | 97 %        |
| Color (APHA)                                                                    | ≤ 10          | 5           |
| Residue after Evaporation                                                       | ≤ 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)                                                      | ≤ 0.05 %      | < 0.01 %    |

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

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

Recd by RL on 11/11/23

E 3455

  
Jamie Ethier  
Vice President Global Quality

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

Avantor Performance Materials, LLC

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

Page 1 of 1

Acetone  
CMOS



Material No.: 9005-05  
Batch No.: 22J0461011  
Manufactured Date: 2022-09-29  
Retest Date: 2027-09-28  
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         | 0.2         |
| Titration Base (μeq/g)                                                  | ≤ 0.5         | 0.1         |
| Water (H <sub>2</sub> O)                                                | ≤ 0.5 %       | 0.2 %       |
| 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    | 4.9 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 R2 on 01/11/23

>>> Continued on page 2 >>>

E 3456

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

Avantor Performance Materials, LLC

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

Acetone  
CMOS



Material No.: 9005-05  
Batch No.: 22J0461011

| 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    | < 5.0 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    | 1.8 ppb    |
| Trace Impurities – Zirconium (Zr)                 | ≤ 10.0 ppb    | < 1.0 ppb  |
| Particle Count – 0.5 µm and greater (Rion KS42AF) | ≤ 100 par/ml  | 4 par/ml   |
| Particle Count – 1.0 µm and greater (Rion KS42AF) | ≤ 8 par/ml    | 2 par/ml   |

>>> Continued on page 3 >>>

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

Avantor Performance Materials, LLC

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

Acetone  
CMOS

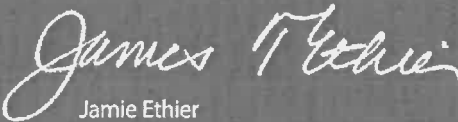


Material No.: 9005-05  
Batch No.: 22J0461011

| Test | Specification | Result |
|------|---------------|--------|
|------|---------------|--------|

For Microelectronic Use

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

  
Jamie Ethier  
Vice President Global Quality

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

Avantor Performance Materials, LLC

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

Sulfuric Acid

BAKER INSTRA-ANALYZED® Reagent

For Trace Metal Analysis

Low Selenium

avantor™



Material No.: 9673-33

Batch No.: 22D0862014

Manufactured Date: 2022-02-23

Retest Date: 2027-02-22

Revision No.: 0

## Certificate of Analysis

| Test                                                         | Specification | Result      |
|--------------------------------------------------------------|---------------|-------------|
| ACS – Assay (H <sub>2</sub> SO <sub>4</sub> )                | 95.0 – 98.0 % | 96.5 %      |
| 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    | 1.7 ppb     |
| Arsenic and 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     | < 0.3 ppb   |
| Trace Impurities – Chromium (Cr)                             | ≤ 6.0 ppb     | < 0.4 ppb   |
| Trace Impurities – Cobalt (Co)                               | ≤ 0.5 ppb     | < 0.3 ppb   |
| Trace Impurities – Copper (Cu)                               | ≤ 1.0 ppb     | < 0.1 ppb   |
| Trace Impurities – Gold (Au)                                 | ≤ 10.0 ppb    | < 0.2 ppb   |
| Heavy Metals (as Pb)                                         | ≤ 500.0 ppb   | < 100.0 ppb |
| Trace Impurities – Iron (Fe)                                 | ≤ 50.0 ppb    | 2.0 ppb     |
| Trace Impurities – Lead (Pb)                                 | ≤ 0.5 ppb     | < 0.5 ppb   |
| Trace Impurities – Magnesium (Mg)                            | ≤ 7.0 ppb     | 0.6 ppb     |
| Trace Impurities – Manganese (Mn)                            | ≤ 1.0 ppb     | < 0.4 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   | < 2.0 ppb   |
| Trace Impurities – Selenium (Se)                             | ≤ 50.0 ppb    | 12.1 ppb    |
| Trace Impurities – Silicon (Si)                              | ≤ 100.0 ppb   | 4.4 ppb     |
| Trace Impurities – Silver (Ag)                               | ≤ 1.0 ppb     | < 0.3 ppb   |

>>> Continued on page 2 >>>

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

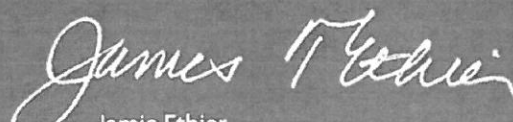


Material No.: 9673-33  
Batch No.: 22D0862014

| Test                              | Specification    | Result    |
|-----------------------------------|------------------|-----------|
| Trace Impurities – Sodium (Na)    | $\leq 500.0$ ppb | 6.2 ppb   |
| Trace Impurities – Strontium (Sr) | $\leq 5.0$ ppb   | < 0.2 ppb |
| Trace Impurities – Tin (Sn)       | $\leq 5.0$ ppb   | < 0.8 ppb |
| Trace Impurities – Zinc (Zn)      | $\leq 5.0$ ppb   | 0.6 ppb   |

For Laboratory, Research, or Manufacturing Use

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

  
Jamie Ethier  
Vice President Global Quality



# Certificate of Analysis ISO 17034

## Aroclor 1268 Standard

Product Number: PP-382-1

Page: 1 of 1

Lot Number: 0006478417

Lot Issue Date: 24-Jul-2019

Expiration Date: 31-Aug-2027

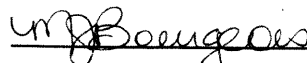
This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

| Analyte      | CAS#        | Analyte Lot | True Value        |
|--------------|-------------|-------------|-------------------|
| Aroclor 1268 | 011100-14-4 | RM00937     | 100.3 ± 0.5 µg/mL |

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

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

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

  
Monica Bourgeois  
QMS Representative

P10088  
↓  
P10092  
AR  
12/03/20



ISO 17034 Cert No.  
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026  
registered ISO 9001 Quality Management System



ISO 17025 Cert No.  
AT-1937



# Certificate of Analysis ISO 17034

## Aroclor 1232 Standard

Product Number: PP-302-1

Page: 1 of 1

Lot Number: CF-2197A

Lot Issue Date: 05-Jul-2016

Expiration Date: 31-Aug-2023

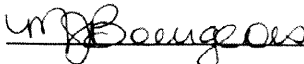
This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

| Analyte      | CAS#        | Analyte Lot | True Value        |
|--------------|-------------|-------------|-------------------|
| Aroclor 1232 | 011141-16-5 | NT01717     | 100.4 ± 0.5 µg/mL |

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

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

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

  
Monica Bourgeois  
QMS Representative

P10098  
↓  
P10102  
—  
AR  
12/03/20



ISO 17034 Cert No.  
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026  
registered ISO 9001 Quality Management System



ISO17025 Cert No.  
AT-1937



# Certificate of Analysis ISO 17034

## Aroclor 1262 Standard

Product Number: PP-372-1

Page: 1 of 1

Lot Number: 0006499800

Lot Issue Date: 04-Nov-2019

Expiration Date: 30-Nov-2023

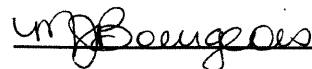
This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent Technologies ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

| Analyte      | CAS#        | Analyte Lot | True Value        |
|--------------|-------------|-------------|-------------------|
| Aroclor 1262 | 037324-23-5 | RM14263     | 100.0 ± 0.5 µg/mL |

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

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

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

  
Monica Bourgeois  
QMS Representative

P10151  
↓  
P10155  
  
AR  
01/12/2021



ISO 17034 Cert No.  
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026  
registered ISO 9001 Quality Management System



ISO 17025 Cert No.  
AT-1937



**CERTIFIED REFERENCE MATERIAL**

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

www.restek.com

# Certificate of Analysis



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

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

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

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

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

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

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

## CERTIFIED VALUES

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

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

P 10476  
↓  
P 10480  
AR  
02/19/21

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

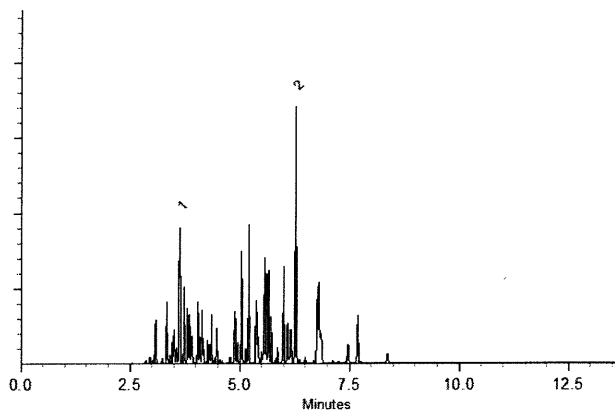
250°C

**Det. Temp:**

300°C

**Det. Type:**

ECD



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

Tom Suckar - Mix Technician

Date Mixed: 03-Aug-2020

Balance: B442140311

Justine Albertson - Operations Tech-ARM QC

Date Passed: 05-Aug-2020

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



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## Certificate of Analysis



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

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

**Catalog No. :** 32007 **Lot No.:** A0159630  
**Description :** Aroclor® 1221 Standard  
Aroclor® 1221 Standard 1,000 µg/mL, Hexane, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** July 31, 2026 **Storage:** 25°C nominal  
**Handling:** This product contains PCBs.

### CERTIFIED VALUES

| Elution Order | Compound                                                       | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2)                                                       |
|---------------|----------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------|
| 1             | Aroclor 1221<br>CAS # 11104-28-2 (Lot 8041300)<br>Purity ----% | 1,000.7 µg/mL               | +/- 5.9437 µg/mL Gravimetric<br>+/- 31.7284 µg/mL Unstressed<br>+/- 41.4406 µg/mL Stressed |

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

P-10486  
↓  
P-10490  
AR  
03/19/21

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

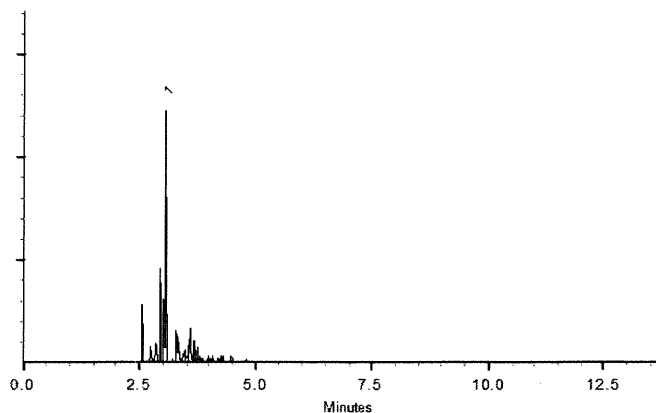
250°C

**Det. Temp:**

300°C

**Det. Type:**

ECD



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

Russ Bookhamer - Operations Technician I

Date Mixed: 06-Apr-2020

Balance: 1128360905

  
Justine Albertson - Operations Tech-ARM QC

Date Passed: 08-Apr-2020

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



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## Certificate of Analysis



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

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

**Catalog No. :** 32011 **Lot No.:** A0160220  
**Description :** Aroclor® 1254 Standard  
Aroclor® 1254 Standard 1,000 µg/mL, Hexane, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** July 31, 2026 **Storage:** 25°C nominal  
**Handling:** This product contains PCBs.

### CERTIFIED VALUES

| Elution Order | Compound                         | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |
|---------------|----------------------------------|-----------------------------|--------------------------------------|
| 1             | Aroclor 1254                     | 1,005.0 µg/mL               | +/- 5.9694 µg/mL Gravimetric         |
|               | CAS # 11097-69-1 (Lot 124-191-B) |                             | +/- 31.8658 µg/mL Unstressed         |
|               | Purity ----%                     |                             | +/- 41.6201 µg/mL Stressed           |

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

P10491  
↓  
P10495  
AR  
03/19/21

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

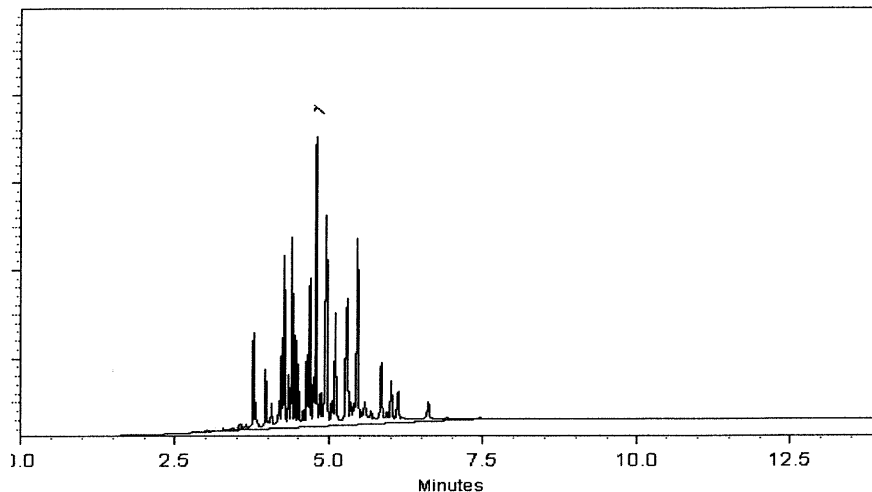
250°C

**Det. Temp:**

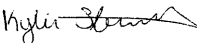
300°C

**Det. Type:**

ECD

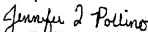


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

  
Kyle Struble - Operations Technician I

Date Mixed: 22-Apr-2020

Balance: 1128360905

  
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 28-Apr-2020

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



CERTIFIED REFERENCE MATERIAL

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Fax: (814)353-1309

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## Certificate of Analysis



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

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

Catalog No. : 32409 Lot No.: A0167722  
Description : Aroclor® 1262 Standard  
Aroclor® 1262 Standard 1,000 µg/mL, 1mL/ampul, Hexane  
Container Size : 2 mL Pkg Amt: > 1 mL  
Expiration Date : April 30, 2027 Storage: 25°C nominal  
Handling: This product contains PCBs. Ship: Ambient

### CERTIFIED VALUES

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

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

P10496  
↓  
P10500

AJ  
09/19/21

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

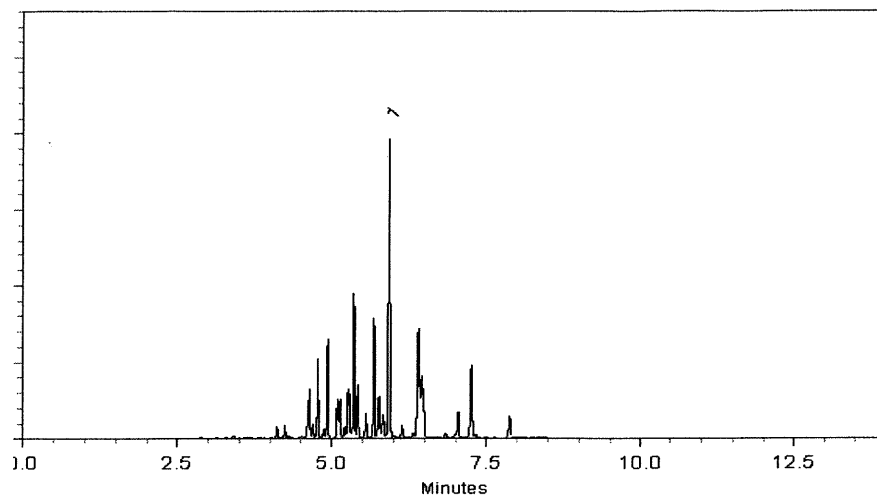
250°C

**Det. Temp:**

300°C

**Det. Type:**

ECD



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

*Sam Moodler*  
Sam Moodler - Operations Tech I

Date Mixed: 03-Jan-2021

Balance: B707717271

*Marlene Cowan*  
Marlene Cowan - Operations Tech I

Date Passed: 05-Jan-2021

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



# CERTIFIED REFERENCE MATERIAL

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

www.restek.com

## Certificate of Analysis



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

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

Catalog No. : 32009 Lot No.: A0167551  
Description : Aroclor® 1242 Standard  
Aroclor® 1242 Standard 1,000 µg/mL, Hexane, 1mL/ampul  
Container Size : 2 mL Pkg Amt: > 1 mL  
Expiration Date : March 31, 2027 Storage: 25°C nominal  
Handling: This product contains PCBs. Ship: Ambient

P11046  
To  
P11050  
AR  
09/9/2021

### CERTIFIED VALUES

| Elution Order | Compound                       | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |
|---------------|--------------------------------|-----------------------------|--------------------------------------|
| 1             | Aroclor 1242                   | 1,006.0 µg/mL               | +/- 5.9753 µg/mL Gravimetric         |
|               | CAS # 53469-21-9 (Lot 01141-A) |                             | +/- 31.8975 µg/mL Unstressed         |
|               | Purity ----%                   |                             | +/- 41.6615 µg/mL Stressed           |

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

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

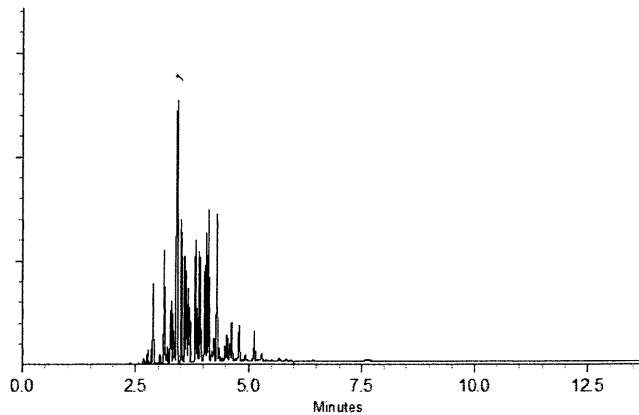
250°C

**Det. Temp:**

300°C

**Det. Type:**

ECD



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

Tom Suckar - Mix Technician

Date Mixed: 28-Dec-2020

Balance: B707717271

Justine Albertson - Operations Tech-ARM QC

Date Passed: 30-Dec-2020

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

P11046  
↓

P11050

AR  
09/9/2021



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

## Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No.: 32010 Lot No.: A0162497  
Description: Aroclor® 1248 Standard  
Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul  
Container Size: 2 mL Pkg Amt: > 1 mL  
Expiration Date: October 31, 2026 Storage: 25°C nominal  
Handling: This product contains PCBs.

P11051  
TO  
P11055  
AR  
09/19/2021

### CERTIFIED VALUES

| Elution Order | Compound                       | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) |
|---------------|--------------------------------|-----------------------------|--------------------------------------|
| 1             | Aroclor 1248                   | 1,006.0 µg/mL               | +/- 5.9753 µg/mL Gravimetric         |
|               | CAS # 12672-29-6 (Lot 9303900) |                             | +/- 31.8975 µg/mL Unstressed         |
|               | Purity ----%                   |                             | +/- 41.6615 µg/mL Stressed           |

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

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

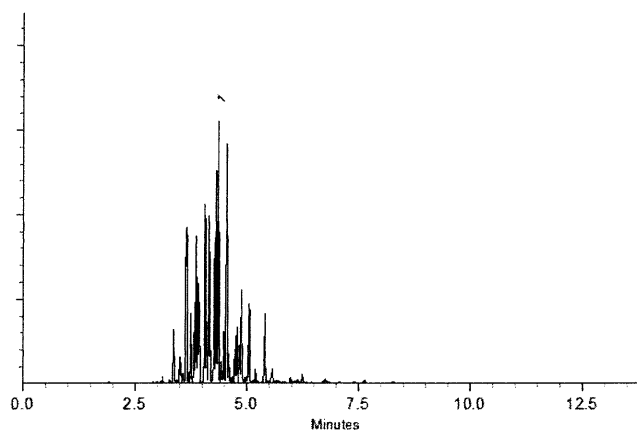
250°C

**Det. Temp:**

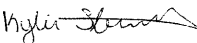
300°C

**Det. Type:**

ECD

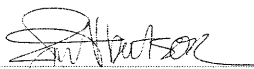


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

  
Kyle Struble - Operations Technician I

Date Mixed: 13-Jul-2020

Balance: 1128360905

  
Justine Alberson - Operations Tech-ARM QC

Date Passed: 16-Jul-2020

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

P11051  
↓  
P11055  
—  
AR  
9/7/2021



# Certificate of Analysis

P11493  
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P11494

AJ  
02/21/22

**Product Name:** Aroclor 1221 Standard

**Product Number:** PP-292-1

**Lot Issue Date:** 28-Apr-2020

**Lot Number:** 0006535333

**Expiration Date:** 31-May-2024

**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 1221 | 011104-28-2 | RM04278     | 100.2 ± 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

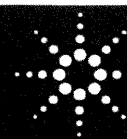
Page: 1 of 1

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



ISO 17025 Cert  
No. AT-1937

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.

P11503  
↓  
P11507A7  
02/21/22

Page: 1 of 2

CSD-QA-015.1

ISO 17034



**Agilent**

Trusted Answers

**Maintenance of Certification:**

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

**Sample lot approver:**

Monica Bourgeois  
QMS Representative



ISO 17034 Cert  
No. AR-1936

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

Page: 2 of 2

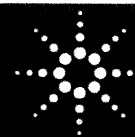
[www.agilent.com/quality/](http://www.agilent.com/quality/)

CSD-QA-015.1



ISO 17025  
Cert No. AT-

ISO 17034



Agilent

Trusted Answers

## Reference Material Certificate

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

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

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

**Description:**

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

**Traceability:**

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

**Homogeneity:**

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

**Instructions for Use:**

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

**Safety:**

Refer to the Safety Data Sheet on [www.agilent.com](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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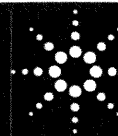
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ISO 17034



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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

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

CSD-QA-015.1



ISO 17025 Cert  
No. AT-1937



# Certificate of Analysis

## Aroclor 1254 Solution

**Product Number:** PP-352

**Page:** 1 of 1

**Lot Number:** CS-2321

**Lot Issue Date:** 04-May-2018

**Expiration Date:** 31-May-2026

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

| Analyte      | CAS#        | Analyte Lot | True Value        |
|--------------|-------------|-------------|-------------------|
| Aroclor 1254 | 011097-69-1 | RM00922     | 100.4 ± 0.5 µg/mL |

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

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

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ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.



ISO 9001  
Registered  
TUV USA, Inc.

John Russo  
President

Monica Bourgeois  
Director of QA/RA



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

## Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 32008 Lot No.: A0173309  
Description : Aroclor® 1232 Standard  
Aroclor® 1232 Standard 1,000 µg/mL, Hexane, 1mL/ampul  
Container Size : 2 mL Pkg Amt: > 1 mL  
Expiration Date : September 30, 2027 Storage: 25°C nominal  
Handling: This product contains PCBs. Ship: Ambient

### CERTIFIED VALUES

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

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

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

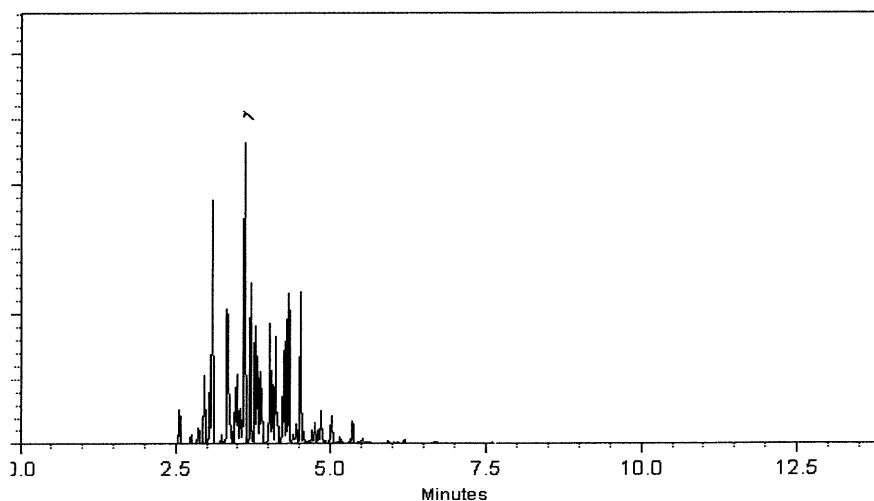
**Carrier Gas:**  
helium-constant pressure 20 psi.

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

**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD



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

*Sam Moodler*  
Sam Moodler - Operations Tech I

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

*Alexis Shelow*  
Alexis Shelow - Operations Tech I

**Date Passed:** 16-Jun-2021

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

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04/30/22



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

## Certificate of Analysis



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

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

Catalog No. : 32410 Lot No.: A0181782  
Description : Aroclor® 1268 Standard  
Aroclor® 1268 Standard 1,000 µg/mL, 1mL/ampul, Hexane  
Container Size : 2 mL Pkg Amt: > 1 mL  
Expiration Date : May 31, 2028 Storage: 25°C nominal  
Handling: This product contains PCBs. Ship: Ambient

### CERTIFIED VALUES

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

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

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UAR  
04/30/2022

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

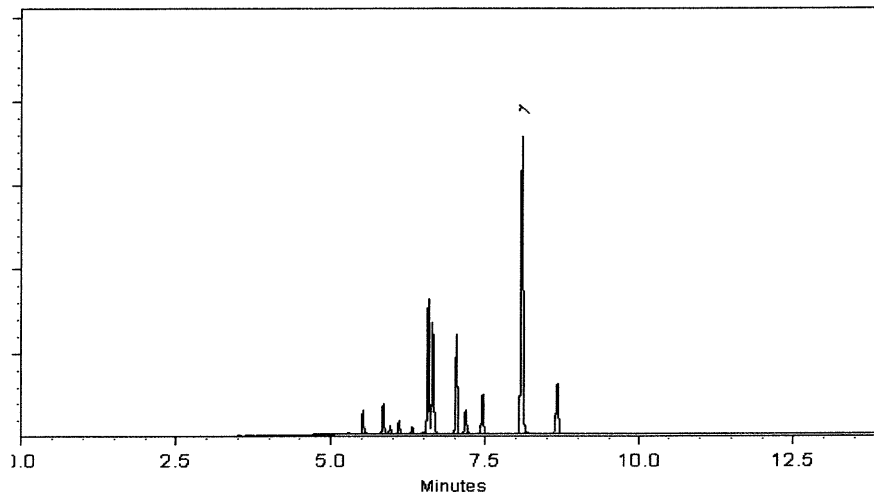
250°C

**Det. Temp:**

300°C

**Det. Type:**

ECD



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

*Penelope S. Riglin*  
Penelope Riglin - Operations Tech I

Date Mixed: 14-Feb-2022

Balance: 1128360905

*Clara Windle*  
Clara Windle - Operations Technician I

Date Passed: 17-Feb-2022

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

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P 11597  
[Signature]  
04/30/2022