

## Prep Standard - Chemical Standard Summary

**Order ID :** Q1664

**Test :** SPLP Pesticide

**Prepbatch ID :** PB167395,

**Sequence ID/Qc Batch ID:** pl033125,pl040325,

**Standard ID :**

EP2592,EP2597,PP24095,PP24217,PP24255,PP24256,PP24257,PP24258,PP24259,PP24260,PP24261,PP24262,PP  
24266,PP24267,PP24268,PP24269,PP24270,PP24271,PP24272,PP24273,PP24274,PP24275,PP24277,PP24278,PP2  
4279,PP24280,PP24281,PP24282,PP24283,PP24284,PP24285,PP24329,PP24433,

**Chemical ID :**

E3551,E3806,E3847,E3876,E3877,E3914,P12603,P12611,P13037,P13040,P13195,P13245,P13354,P13356,P13405,P  
13785,P13861,P9052,W3177,

## 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>            |
|------------------|-------------------|------------------------|------------------|------------------------|--------------------|----------------|------------------|---------------------------------|
| 230              | 1:1ACETONE/HEXANE | <a href="#">EP2592</a> | 02/27/2025       | 08/12/2025             | RUPESHKUMAR SHAH   | None           | None             | Riteshkumar Patel<br>02/27/2025 |

**FROM** 4000.00000ml of E3876 + 4000.00000ml of E3877 = Final Quantity: 8000.000 ml

| <u>Recipe ID</u> | <u>NAME</u>          | <u>NO.</u>             | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u>                      | <u>PipetteID</u> | <u>Supervised By</u>       |
|------------------|----------------------|------------------------|------------------|------------------------|--------------------|-------------------------------------|------------------|----------------------------|
| 3923             | Baked Sodium Sulfate | <a href="#">EP2597</a> | 03/28/2025       | 07/01/2025             | Rajesh Parikh      | Extraction_SC<br>ALE_2<br>(EX-SC-2) | None             | Evelyn Huang<br>03/28/2025 |

**FROM** 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                             | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 4027             | Pesticide resolution Check Mixture 8081 | <a href="#">PP24095</a> | 12/23/2024       | 06/16/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                                         |                         |                  |                        |                    |                |                  | 12/30/2024           |

**FROM** 1.00000ml of P13245 + 99.00000ml of E3847 = 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> |
|------------------|----------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 465              | 200 PPB Pest/PCB Surrogate Spike | <a href="#">PP24217</a> | 03/05/2025       | 08/25/2025             | Abdul Mirza        | None           | None             | Yogesh Patel         |
|                  |                                  |                         |                  |                        |                    |                |                  | 03/06/2025           |

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

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                     | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|---------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 84               | Pest/PCB Surrogate Stock 20 PPM | <a href="#">PP24255</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                                 |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 1.00000ml of P13785 + 9.00000ml of E3877 = 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> |
|------------------|-----------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3629             | 20 PPM PEST stock Solution 1st source(RESTEK) | <a href="#">PP24256</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                                               |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 1.00000ml of P13040 + 9.00000ml of E3877 = Final Quantity: 10.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                           | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|---------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1472             | 20 PPM Pest Stock Solution 2nd Source | <a href="#">PP24257</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                                       |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 1.00000ml of P13037 + 9.00000ml of E3877 = 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> |
|------------------|-------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1273             | 20 PPM Mirex Stock (Primary Source) | <a href="#">PP24258</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                                     |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.20000ml of P9052 + 9.80000ml of E3877 = Final Quantity: 10.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                                  | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3663             | 20 PPM MIREX Stock STD<br>(Secondary source) | <a href="#">PP24259</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                                              |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.20000ml of P13195 + 9.80000ml of E3877 = 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> |
|------------------|----------------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3630             | 100/100 PPB PEST Working<br>std.1st Source(RESTEK) | <a href="#">PP24260</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                                                    |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 98.50000ml of E3877 + 0.50000ml of PP24255 + 0.50000ml of PP24256 + 0.50000ml of PP24258 = Final Quantity: 100.000 ml



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,  
Fax : 908 789 8922

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Fax : 908 789 8922

## 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> |
|------------------|-------------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3746             | 1000/100 ppb Chlordane<br>STD-RESTEK 2ND SOURCE | <a href="#">PP24266</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                                                 |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.10000ml of P12611 + 99.40000ml of E3877 + 0.50000ml of PP24255 = 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> |
|------------------|----------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 383              | 1000/100 PPB Toxaphene STD<br>(Restek) | <a href="#">PP24267</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                                        |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.10000ml of P13405 + 99.40000ml of E3877 + 0.50000ml of PP24255 = Final Quantity: 100.000 ml



## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                                       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|---------------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3669             | 1000/100 PPB TOXAPHENE STD<br>2nd source (RESTEK) | <a href="#">PP24268</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                                                   |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.10000ml of P13861 + 99.40000ml of E3877 + 0.50000ml of PP24255 = 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> |
|------------------|---------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3631             | 75 PPB ICAL PEST<br>STD(RESTEK) | <a href="#">PP24269</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                                 |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.75000ml of E3877 + 0.25000ml of PP24260 = Final Quantity: 1.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                  | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3632             | 50 PPB ICAL PEST STD(RESTEK) | <a href="#">PP24270</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                              |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.50000ml of E3877 + 0.50000ml of PP24260 = 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> |
|------------------|------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3633             | 25 PPB ICAL PEST STD(RESTEK) | <a href="#">PP24271</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                              |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.75000ml of E3877 + 0.25000ml of PP24260 = Final Quantity: 1.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                 | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3634             | 5 PPB ICAL PEST STD(RESTEK) | <a href="#">PP24272</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                             |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.90000ml of E3877 + 0.10000ml of PP24270 = 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> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3988             | 50 PPB PEST ICV STD(RESTEK) | <a href="#">PP24273</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                             |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.50000ml of E3877 + 0.50000ml of PP24261 = Final Quantity: 1.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 528              | CHLOR 750 PPB STD | <a href="#">PP24274</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
| 03/12/2025       |                   |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.25000ml of E3877 + 0.75000ml of PP24262 = 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> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 529              | CHLOR 500 PPB STD | <a href="#">PP24275</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
| 03/12/2025       |                   |                         |                  |                        |                    |                |                  |                      |

**FROM** 0.50000ml of E3877 + 0.50000ml of PP24262 = Final Quantity: 1.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 530              | CHLOR 250 PPB STD | <a href="#">PP24277</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                   |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.75000ml of E3877 + 0.25000ml of PP24262 = 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> |
|------------------|------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3408             | CHLOR 50 PPB STD | <a href="#">PP24278</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                  |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.90000ml of E3877 + 0.10000ml of PP24275 = Final Quantity: 1.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>           | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 532              | CHLOR 500 PPB ICV STD | <a href="#">PP24279</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                       |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.50000ml of E3877 + 0.50000ml of PP24266 = 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> |
|------------------|-----------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 533              | TOX 750 PPB STD | <a href="#">PP24280</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                 |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.25000ml of E3877 + 0.75000ml of PP24267 = Final Quantity: 1.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>     | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 534              | TOX 500 PPB STD | <a href="#">PP24281</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                 |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.50000ml of E3877 + 0.50000ml of PP24267 = 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> |
|------------------|-----------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 535              | TOX 250 PPB STD | <a href="#">PP24282</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                 |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.75000ml of E3877 + 0.25000ml of PP24267 = Final Quantity: 1.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>     | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 2217             | TOX 100 PPB STD | <a href="#">PP24283</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                 |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.90000ml of E3877 + 0.10000ml of PP24267 = 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> |
|------------------|-------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3670             | TOX 500 PPB ICV std ( RESTEK) | <a href="#">PP24284</a> | 03/11/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                               |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 0.50000ml of E3877 + 0.50000ml of PP24268 = Final Quantity: 1.000 ml



## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                      | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 79               | 500 PPB Pesticide Spike Solution | <a href="#">PP24285</a> | 03/12/2025       | 08/12/2025             | Abdul Mirza        | None           | None             | Ankita Jodhani       |
|                  |                                  |                         |                  |                        |                    |                |                  | 03/12/2025           |

**FROM** 95.00000ml of E3876 + 2.50000ml of PP24257 + 2.50000ml of PP24259 = 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="#">PP24329</a> | 03/18/2025       | 08/22/2025             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                 |                         |                  |                        |                    |                |                  | 04/03/2025           |

**FROM** 1.00000ml of P13356 + 9.00000ml of W3177 = Final Quantity: 10.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>           | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 518              | Pest/PCB I.BLK 20 PPB | <a href="#">PP24433</a> | 03/31/2025       | 08/22/2025             | Abdul Mirza        | None           | None             | Yogesh Patel         |
|                  |                       |                         |                  |                        |                    |                |                  | 04/02/2025           |

**FROM** 99.90000ml of E3914 + 0.10000ml of PP24329 = Final Quantity: 100.000 ml

## CHEMICAL RECEIPT LOG BOOK

| Supplier                    | ItemCode / ItemName                                    | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--------------------------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1 | 313201 | 07/01/2025      | 01/03/2024 / Rajesh     | 07/20/2023 / Rajesh         | E3551          |

| Supplier                | ItemCode / ItemName                  | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-------------------------|--------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Agela Technologies Inc. | FS0006 / Cleanert Florisil cartridge | M06518 | 09/25/2025      | 10/01/2024 / Rajesh     | 09/25/2024 / Rajesh         | E3806          |

| Supplier         | ItemCode / ItemName                       | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|-------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 24G1962003 | 06/16/2025      | 12/16/2024 / Rajesh     | 12/13/2024 / Rajesh         | E3847          |

| Supplier         | ItemCode / ItemName                        | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|--------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9254-03 / Acetone, Ultra Resi (cs/4x4L) | 24H2762008 | 08/25/2025      | 02/25/2025 / Rajesh     | 02/12/2025 / Rajesh         | E3876          |

| Supplier         | ItemCode / ItemName                       | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|-------------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 243570 | 08/12/2025      | 02/12/2025 / Rajesh     | 02/12/2025 / Rajesh         | E3877          |

| Supplier         | ItemCode / ItemName                       | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|-------------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 243570 | 09/19/2025      | 03/19/2025 / RUPESH     | 03/13/2025 / RUPESH         | E3914          |

## CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName    | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32021 / Chlordane Std. | A0197993 | 09/11/2025      | 03/10/2025 / Abdul      | 07/03/2023 / Abdul          | P12603         |

| Supplier | ItemCode / ItemName    | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32021 / Chlordane Std. | A0193299 | 09/09/2025      | 03/10/2025 / Abdul      | 07/03/2023 / Abdul          | P12611         |

| Supplier | ItemCode / ItemName                                                                             | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32291 / Pesticide Mix, CLP method, organochlorine Std AB#1, 200ug/mL, hexane/toluene, 1mL/ampul | A0200423 | 09/10/2025      | 03/10/2025 / Abdul      | 12/26/2023 / Abdul          | P13037         |

| Supplier | ItemCode / ItemName                                                                             | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32291 / Pesticide Mix, CLP method, organochlorine Std AB#1, 200ug/mL, hexane/toluene, 1mL/ampul | A0199099 | 09/10/2025      | 03/10/2025 / Abdul      | 12/26/2023 / Abdul          | P13040         |

| Supplier                 | ItemCode / ItemName       | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|---------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 79136 / Mirex, 1000 ug/ml | 042022 | 09/10/2025      | 03/10/2025 / Abdul      | 01/17/2024 / Abdul          | P13195         |

| Supplier                 | ItemCode / ItemName                             | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|-------------------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 19161 / 8081 pesticide resolution check mixture | 013124 | 06/23/2025      | 12/23/2024 / Abdul      | 02/09/2024 / Abdul          | P13245         |

## CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName                                                                | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------------------------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32000 / Pesticide Mix, CLP method, Pesticide Surrogate Mix, 200ug/mL, Acetone, 1mL | A0206810 | 09/05/2025      | 03/05/2025 / Abdul      | 04/22/2024 / Abdul          | P13354         |

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

| Supplier | ItemCode / ItemName        | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|----------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32005 / Toxaphene Standard | A0203038 | 09/09/2025      | 03/10/2025 / Abdul      | 05/15/2024 / Abdul          | P13405         |

| Supplier | ItemCode / ItemName                                                                | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------------------------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32000 / Pesticide Mix, CLP method, Pesticide Surrogate Mix, 200ug/mL, Acetone, 1mL | A0214495 | 09/10/2025      | 03/10/2025 / Abdul      | 11/19/2024 / Ankita         | P13785         |

| Supplier | ItemCode / ItemName        | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|----------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 32005 / Toxaphene Standard | A0210240 | 09/10/2025      | 03/10/2025 / Abdul      | 12/09/2024 / Abdul          | P13861         |

| Supplier                 | ItemCode / ItemName       | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|---------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 79136 / Mirex, 1000 ug/ml | 112018 | 09/10/2025      | 03/10/2025 / Abdul      | 11/01/2019 / Stephen        | P9052          |

**CHEMICAL RECEIPT LOG BOOK**

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



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

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

## CERTIFICATE OF ANALYSIS

|                        |                                   |               |                                 |
|------------------------|-----------------------------------|---------------|---------------------------------|
| PRODUCT :              | SODIUM SULFATE CRYSTALS ANHYDROUS |               |                                 |
| QUALITY :              | ACS (CODE RMB3375)                | FORMULA :     | Na <sub>2</sub> SO <sub>4</sub> |
| SPECIFICATION NUMBER : | 6399                              | RELEASE DATE: | ABR/21/2023                     |
| LOT NUMBER :           | 313201                            |               |                                 |

| TEST                                     | SPECIFICATIONS | LOT VALUES  |
|------------------------------------------|----------------|-------------|
| Assay (Na <sub>2</sub> SO <sub>4</sub> ) | Min. 99.0%     | 99.7 %      |
| pH of a 5% solution at 25°C              | 5.2 - 9.2      | 6.1         |
| Insoluble matter                         | Max. 0.01%     | 0.005 %     |
| Loss on ignition                         | Max. 0.5%      | 0.1 %       |
| Chloride (Cl)                            | Max. 0.001%    | <0.001 %    |
| Nitrogen compounds (as N)                | Max. 5 ppm     | <5 ppm      |
| Phosphate (PO <sub>4</sub> )             | Max. 0.001%    | <0.001 %    |
| Heavy metals (as Pb)                     | Max. 5 ppm     | <5 ppm      |
| Iron (Fe)                                | Max. 0.001%    | <0.001 %    |
| Calcium (Ca)                             | Max. 0.01%     | 0.002 %     |
| Magnesium (Mg)                           | Max. 0.005%    | 0.001 %     |
| Potassium (K)                            | Max. 0.008%    | 0.003 %     |
| Extraction-concentration suitability     | Passes test    | Passes test |
| Appearance                               | Passes test    | Passes test |
| Identification                           | Passes test    | Passes test |
| Solubility and foreign matter            | Passes test    | Passes test |
| Retained on US Standard No. 10 sieve     | Max. 1%        | 0.1 %       |
| Retained on US Standard No. 60 sieve     | Min. 94%       | 97.3 %      |
| Through US Standard No. 60 sieve         | Max. 5%        | 2.5 %       |
| Through US Standard No. 100 sieve        | Max. 10%       | 0.1 %       |

### COMMENTS

QC: PhC Irma Belmares

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

Recd. by R3 on 7/24/23 E 3551

RC-02-01, Ed. 3

**Cleanert Florisil**

1g/6ml 30/pkg

固相萃取产品

LOT#: M06518

MFG#: F04074



Made in China

**CAT# FS0006**

 Agela Technologies

E 3806





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

## Certificate of Analysis

| Test                                                                            | Specification | Result      |
|---------------------------------------------------------------------------------|---------------|-------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)            | ≤ 5           | 3           |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)            | ≤ 10          | 1           |
| ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL) | ≤ 5           | 1           |
| Assay (Total Saturated C <sub>6</sub> Isomers) (by GC, corrected for water)     | ≥ 99.5 %      | 99.7 %      |
| Assay (as n-Hexane) (by GC, corrected for water)                                | ≥ 95 %        | 98 %        |
| Color (APHA)                                                                    | ≤ 10          | 5           |
| Residue after Evaporation                                                       | ≤ 1.0 ppm     | 0.1 ppm     |
| Substances Darkened by H <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 12/13/24

E3847



Jamie Croak  
Director Quality Operations, Bioscience Production

## Certificate of Analysis

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

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

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

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

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

Recd. by RP on 2/12/25

 E3877

Harout Sahagian - Quality Control Manager - Fair Lawn

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

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

\*Based on suggested storage condition.

## Certificate of Analysis

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

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

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

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

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

Recd by RS on 3/14/25



E3914

Harout Sahagian - Quality Control Manager - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.  
 If there are any questions with this certificate, please call at (800) 227-6701.

\*Based on suggested storage condition.

**RESTEK**

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

www.restek.com

**CERTIFIED REFERENCE MATERIAL**

**Certificate of Analysis**  
*chromatographic plus*



**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. :** 32021 **Lot No.:** A0193299  
**Description :** Chlordane Standard  
Chlordane Standard 1000µg/mL, Hexane, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** April 30, 2029 **Storage:** 10°C or colder  
**Ship:** Ambient

P12616  
↓  
P12615  
Five  
7/3/2023

**CERTIFIED VALUES**

| Elution Order | Compound                                                              | CAS #   | Lot #  | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|-----------------------------------------------------------------------|---------|--------|--------|-----------------------------|----------------------------------------|
| 1             | Chlordane<br>10% trans-Chlordane; 9% cis-Chlordane; 81% other isomers | 57-74-9 | 978545 | —%     | 1,010.0 µg/mL               | +/- 56.0475                            |

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

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

**Tech Tips:**

CAS #57-74-9 nomenclature is based on EPA method 8081B.

## Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

300°C

**Det. Type:**

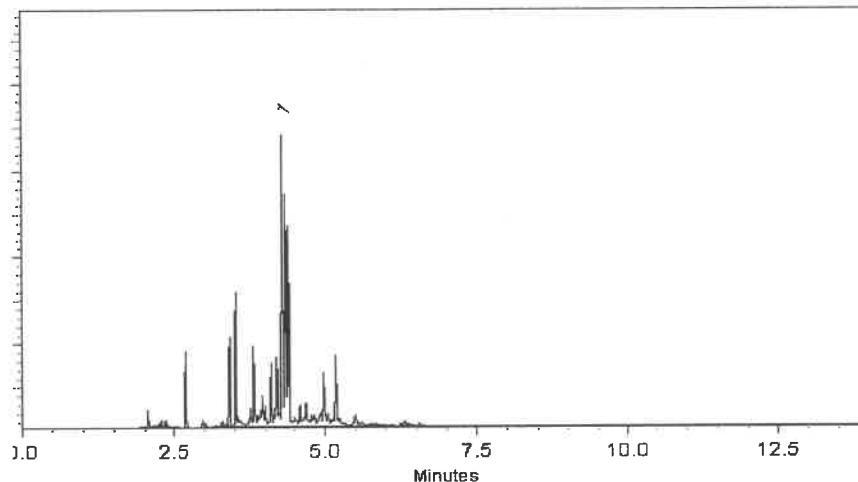
ECD

**Split Vent:**

300 ml/min.

**Inj. Vol**

0.2µl



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

*Bryan Snyder*  
Bryan Snyder - Operations Tech I

Date Mixed: 06-Jan-2023

Balance Serial # B442140311

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

Date Passed: 09-Jan-2023

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

*CRm*  
P12611  
↓  
P12615  
⑤  
*CRout*  
7/3/2023



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

www.restek.com

## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

chromatographic plus



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

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

Catalog No. : 32291 Lot No.: A0199099

Description : Organochlorine Pesticide Mix AB #1

Organochlorine Pesticide Mix AB #1 200µg/mL, Hexane/Toluene(50:50), 1mL/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : June 30, 2027 Storage: 10°C or colder

Ship: Ambient

P130397 5  
↓  
P13043 1  
✓  
12-26-2023

### CERTIFIED VALUES

| Elution Order | Compound                      | CAS #      | Lot #      | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|-------------------------------|------------|------------|--------|-----------------------------|----------------------------------------|
| 1             | alpha-BHC                     | 319-84-6   | 14434500   | 99%    | 200.0 µg/mL                 | +/- 8.9732                             |
| 2             | gamma-BHC (Lindane)           | 58-89-9    | 14184400   | 98%    | 200.1 µg/mL                 | +/- 8.9762                             |
| 3             | beta-BHC                      | 319-85-7   | BCCC6425   | 99%    | 200.3 µg/mL                 | +/- 8.9844                             |
| 4             | delta-BHC                     | 319-86-8   | 14450800   | 98%    | 200.0 µg/mL                 | +/- 8.9740                             |
| 5             | Heptachlor                    | 76-44-8    | 813251     | 99%    | 200.1 µg/mL                 | +/- 8.9754                             |
| 6             | Aldrin                        | 309-00-2   | 14389400   | 98%    | 200.0 µg/mL                 | +/- 8.9718                             |
| 7             | Heptachlor epoxide (isomer B) | 1024-57-3  | 14448800   | 99%    | 200.1 µg/mL                 | +/- 8.9754                             |
| 8             | trans-Chlordane               | 5103-74-2  | 32943      | 98%    | 199.9 µg/mL                 | +/- 8.9696                             |
| 9             | cis-Chlordane                 | 5103-71-9  | 31766      | 98%    | 200.1 µg/mL                 | +/- 8.9762                             |
| 10            | Endosulfan I                  | 959-98-8   | BCCF4060   | 99%    | 200.1 µg/mL                 | +/- 8.9754                             |
| 11            | 4,4'-DDE                      | 72-55-9    | GHYQG      | 99%    | 200.1 µg/mL                 | +/- 8.9777                             |
| 12            | Dieldrin                      | 60-57-1    | 11129900   | 98%    | 200.0 µg/mL                 | +/- 8.9718                             |
| 13            | Endrin                        | 72-20-8    | 14123200   | 98%    | 199.9 µg/mL                 | +/- 8.9696                             |
| 14            | 4,4'-DDD                      | 72-54-8    | HAN02      | 99%    | 200.1 µg/mL                 | +/- 8.9777                             |
| 15            | Endosulfan II                 | 33213-65-9 | 14374700   | 99%    | 200.0 µg/mL                 | +/- 8.9732                             |
| 16            | 4,4'-DDT                      | 50-29-3    | 230410JLMA | 98%    | 200.0 µg/mL                 | +/- 8.9718                             |

|    |                    |            |            |     |             |            |
|----|--------------------|------------|------------|-----|-------------|------------|
| 17 | Endrin aldehyde    | 7421-93-4  | 30720      | 98% | 200.1 µg/mL | +/- 8.9784 |
| 18 | Endosulfan sulfate | 1031-07-8  | BCCH9010   | 99% | 200.0 µg/mL | +/- 8.9732 |
| 19 | Methoxychlor       | 72-43-5    | 13668200   | 99% | 200.1 µg/mL | +/- 8.9777 |
| 20 | Endrin ketone      | 53494-70-5 | 1-ABS-16-7 | 98% | 200.0 µg/mL | +/- 8.9740 |

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

**Solvent:** Hexane/Toluene (50:50)  
**CAS #** 110-54-3/108-88-3  
**Purity** 99%

P13039  
↓  
P13043  
1  
JAW  
12/26/23

## Quality Confirmation Test

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

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

**Temp. Program:**  
150°C to 300°C  
@ 4°C/min. ( hold 5 min.)

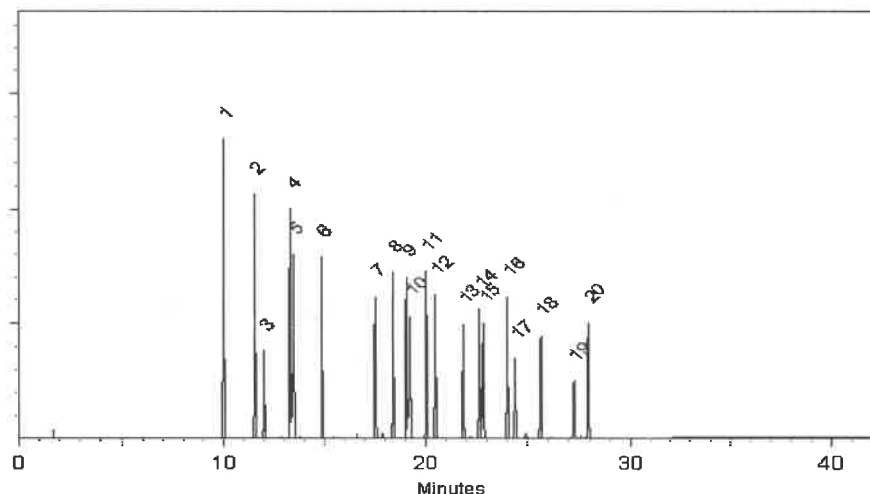
**Inj. Temp:**  
200°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD

**Split Vent:**  
Split ratio 50:1

**Inj. Vol**  
1µl



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

*Josh McCloskey*  
Josh McCloskey - Operations Technician I

**Date Mixed:** 19-Jun-2023

**Balance Serial #** 1128360905

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

**Date Passed:** 23-Jun-2023

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

**CERTIFIED WEIGHT REPORT**

|              |               |
|--------------|---------------|
| Part Number: | <u>79136</u>  |
| Lot Number:  | <u>042022</u> |
| Description: | <u>Mirex</u>  |

|                    |             |
|--------------------|-------------|
| <b>Solvent(s):</b> | <b>Lot#</b> |
| Acetone            | 81025       |

**Expiration Date:** 04/20/27

**Recommended Storage:** Refrigerate (4 °C)

**Nominal Concentration ( $\mu\text{g/mL}$ ):**

**NIST Test ID#:**

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

|       |                     |
|-------|---------------------|
| 5E-05 | Balance Uncertainty |
| 0.006 | Flask Uncertainty   |

|                |                                                                                                           |        |
|----------------|-----------------------------------------------------------------------------------------------------------|--------|
| Formulated By: | <br>Prashant Chauhan | 042022 |
| Reviewed By:   | <br>Pedro L. Rimas   | 042022 |

Reviewed By:

**Pedro L. Rentas**

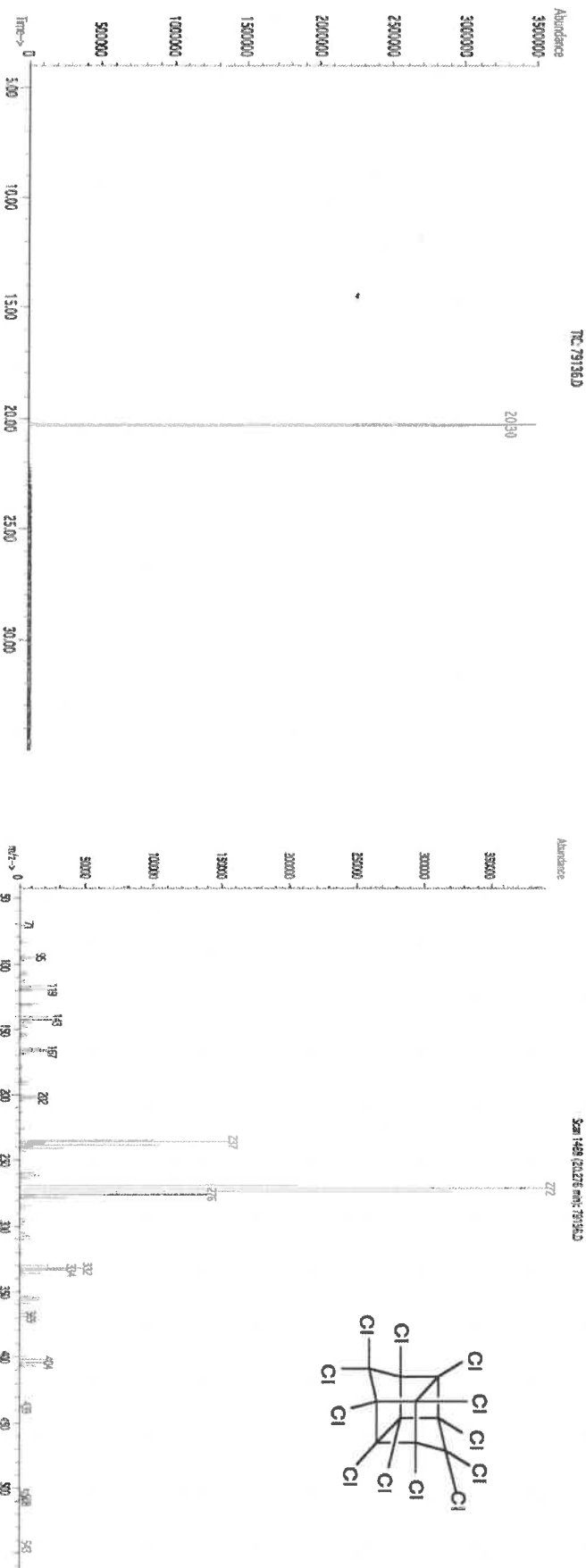
DATE \_\_\_\_\_

## SDS information

| Compound | Lot Number | Nominal Conc (ug/mL) | Purity (%) | Uncertainty Purity | Target Weight (g) | Actual Weight (g) | Actual Conc(ug/mL) (+/-) (ug/mL) | Uncertainty Actual | (Solvent Safety Info. On Attached pg.) |      |
|----------|------------|----------------------|------------|--------------------|-------------------|-------------------|----------------------------------|--------------------|----------------------------------------|------|
|          |            |                      |            |                    |                   |                   |                                  |                    | CAS#                                   | LDSO |
|          |            |                      |            |                    |                   |                   |                                  |                    | OSHA PEL (TWA)                         |      |

|    |       |     |         |      |      |     |         |         |        |      |           |     |                  |
|----|-------|-----|---------|------|------|-----|---------|---------|--------|------|-----------|-----|------------------|
| 1. | Mirex | 437 | 9492400 | 1000 | 99.4 | 0.5 | 0.05034 | 0.05040 | 1001.1 | 10.3 | 2385-85.5 | N/A | ori-fat 306mg/kg |
|----|-------|-----|---------|------|------|-----|---------|---------|--------|------|-----------|-----|------------------|

**Method GC/MSD-1.M:** Column: SPB-608 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 150°C (4min.), Temp 2 = 290°C (13.5 min.), Rate = 8°C/min., Injector B = 200°C, Detector B = 290°C. Split Ratio = 100:1, Scan Rate = 2. Analysis performed by Candice Warren.



- The certified values (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 ( $\pm$ ) 0.5% of the stated value, unless otherwise stated.

• All Standards, after opening ampule, should be stored with caps light and under appropriate laboratory conditions.

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

$P_{13} | 195$   
 $\downarrow$   
 $P_{13} | 199$   
 $\downarrow$   
 $(5)$   
 $|$



01/17/2024  
AHLN

5



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

www.restek.com

## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

chromatographic plus



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

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

**Catalog No. :** 32021 **Lot No.:** A0197993  
**Description :** Chlordane Standard  
Chlordane Standard 1000µg/mL, Hexane, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** August 31, 2029 **Storage:** 10°C or colder  
**Ship:** Ambient

P 12603  
↓  
P 12605  
[3]  
Kauf  
7/3/2023

### CERTIFIED VALUES

| Elution Order | Compound                                                              | CAS #   | Lot #  | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|-----------------------------------------------------------------------|---------|--------|--------|-----------------------------|----------------------------------------|
| 1             | Chlordane<br>10% trans-Chlordane; 9% cis-Chlordane; 81% other isomers | 57-74-9 | 978545 | ----%  | 1,005.0 µg/mL               | +/- 55.7700                            |

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

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

### Tech Tips:

CAS #57-74-9 nomenclature is based on EPA method 8081B.

## Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

300°C

**Det. Type:**

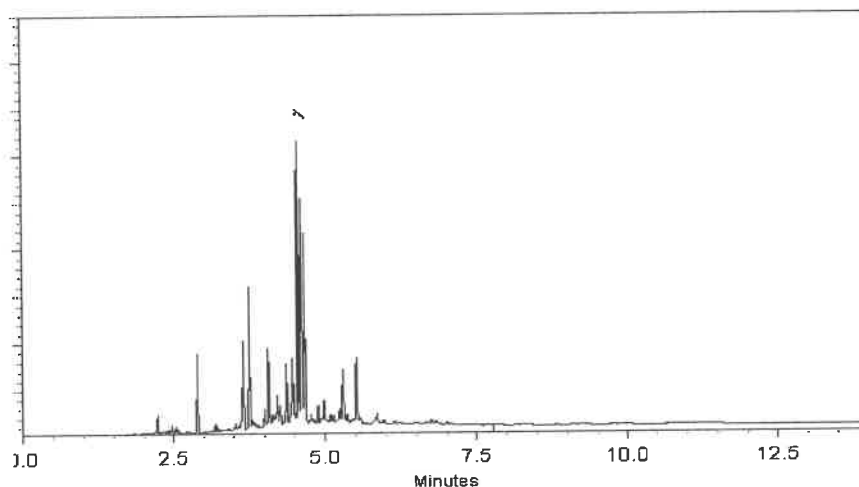
ECD

**Split Vent:**

300 ml/min.

**Inj. Vol**

0.2µl



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

  
Morgan Craighead - Mix Technician

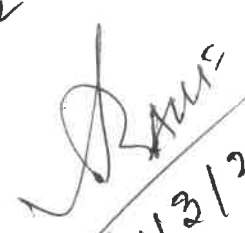
Date Mixed: 11-May-2023

Balance Serial # 1128360905

  
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 16-May-2023

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

P 12603 } (3)  
↓  
P 12605  
  
7/3/2023



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

www.restek.com

## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

chromatographic plus



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

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

Catalog No. : 32291

Lot No.: A0200423

Description : Organochlorine Pesticide Mix AB #1

Organochlorine Pesticide Mix AB #1 200µg/mL, Hexane/Toluene(50:50), 1mL/ampul

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2027

Storage: 10°C or colder

Ship: Ambient

P 13034  
↓  
P 13038  
12.26.2023

### CERTIFIED VALUES

| Elution Order | Compound                      | CAS #      | Lot #      | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|-------------------------------|------------|------------|--------|-----------------------------|----------------------------------------|
| 1             | alpha-BHC                     | 319-84-6   | 14434500   | 99%    | 200.5 µg/mL                 | +/- 8.9956                             |
| 2             | gamma-BHC (Lindane)           | 58-89-9    | 14184400   | 98%    | 199.9 µg/mL                 | +/- 8.9696                             |
| 3             | beta-BHC                      | 319-85-7   | BCCC6425   | 99%    | 200.0 µg/mL                 | +/- 8.9732                             |
| 4             | delta-BHC                     | 319-86-8   | 14450800   | 98%    | 199.9 µg/mL                 | +/- 8.9696                             |
| 5             | Heptachlor                    | 76-44-8    | 813251     | 99%    | 202.0 µg/mL                 | +/- 9.0629                             |
| 6             | Aldrin                        | 309-00-2   | 14389400   | 98%    | 200.9 µg/mL                 | +/- 9.0136                             |
| 7             | Heptachlor epoxide (isomer B) | 1024-57-3  | 14448800   | 99%    | 200.0 µg/mL                 | +/- 8.9732                             |
| 8             | trans-Chlordane               | 5103-74-2  | 34616      | 99%    | 200.5 µg/mL                 | +/- 8.9956                             |
| 9             | cis-Chlordane                 | 5103-71-9  | 31766      | 98%    | 201.4 µg/mL                 | +/- 9.0356                             |
| 10            | Endosulfan I                  | 959-98-8   | BCCF4060   | 99%    | 200.0 µg/mL                 | +/- 8.9732                             |
| 11            | 4,4'-DDE                      | 72-55-9    | GHYQG      | 99%    | 201.5 µg/mL                 | +/- 9.0405                             |
| 12            | Dieldrin                      | 60-57-1    | 14515000   | 98%    | 199.9 µg/mL                 | +/- 8.9696                             |
| 13            | Endrin                        | 72-20-8    | 14485300   | 98%    | 200.4 µg/mL                 | +/- 8.9916                             |
| 14            | 4,4'-DDD                      | 72-54-8    | HAN02      | 99%    | 200.5 µg/mL                 | +/- 8.9956                             |
| 15            | Endosulfan II                 | 33213-65-9 | 14374700   | 99%    | 200.0 µg/mL                 | +/- 8.9732                             |
| 16            | 4,4'-DDT                      | 50-29-3    | 230410JLMA | 98%    | 201.9 µg/mL                 | +/- 9.0575                             |

|    |                    |            |          |     |             |            |
|----|--------------------|------------|----------|-----|-------------|------------|
| 17 | Endrin aldehyde    | 7421-93-4  | 30720    | 98% | 201.4 µg/mL | +/- 9.0356 |
| 18 | Endosulfan sulfate | 1031-07-8  | BCCH9010 | 99% | 200.5 µg/mL | +/- 8.9956 |
| 19 | Methoxychlor       | 72-43-5    | 14563200 | 98% | 200.9 µg/mL | +/- 9.0136 |
| 20 | Endrin ketone      | 53494-70-5 | 14537700 | 98% | 199.9 µg/mL | +/- 8.9696 |

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

**Solvent:** Hexane/Toluene (50:50)  
**CAS #** 110-54-3/108-88-3  
**Purity** 99%

P13034  
P13038  
1  
5  
12/26/2023

## Quality Confirmation Test

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

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

**Temp. Program:**  
150°C to 300°C  
@ 4°C/min. ( hold 5 min.)

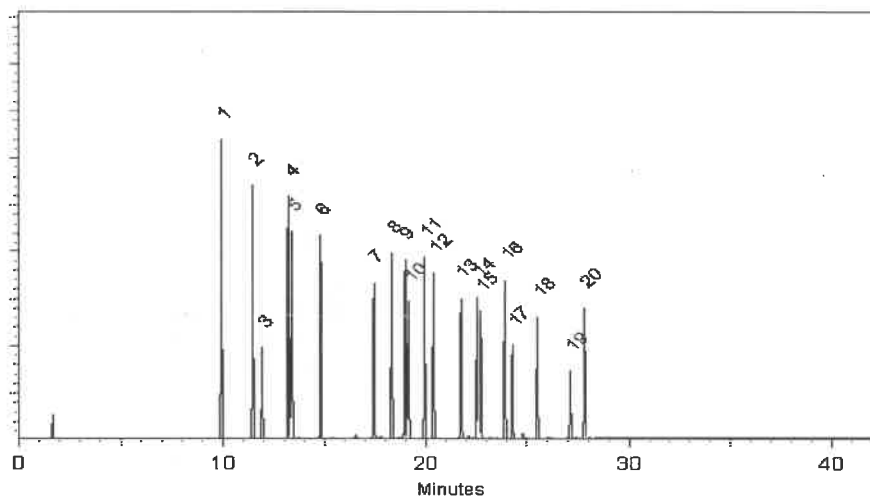
**Inj. Temp:**  
200°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD

**Split Vent:**  
Split ratio 50:1

**Inj. Vol**  
1µl



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

*Sam Moodler*  
Sam Moodler - Operations Tech I

**Date Mixed:** 31-Jul-2023

**Balance Serial #** B442140311

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

**Date Passed:** 03-Aug-2023

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



**CERTIFIED WEIGHT REPORT**

Part Number:  
Lot Number:  
Description:

**19161**  
**013124**  
**CLP Pesticides & PCBs Resolution Check Standard**

Expiration Date:  
Recommended Storage:  
Nominal Concentration (µg/mL):

**9 components**  
**013129**  
**Refrigerate (4 °C)**

**Solvent(s):**  
**Hexane**  
**Toluene**  
**273615**  
**28508**  
**(50%)**  
**(50%)**

NIST Test ID#:

**6UTB**

**5E-05**  
**Balance Uncertainty**  
**Pipet Uncertainty**

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

**100.0**

**0.021**

**Balance Uncertainty**  
**Pipet Uncertainty**

|                                      |  |        |
|--------------------------------------|--|--------|
| Formulated By: <i>Lawrence Barry</i> |  | 013124 |
| Reviewed By: <i>Pedro L. Rentes</i>  |  | 013124 |
| DATE                                 |  | DATE   |

**Compound**

|                                 |       |        |       |      |       |        |      |      |            |                  |                   |
|---------------------------------|-------|--------|-------|------|-------|--------|------|------|------------|------------------|-------------------|
| 1. trans-Chlordane              | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 101.3  | 1.0  | 0.02 | 5103-74-2  | 0.5mg/m3 (skin)  | or-rat 500mg/kg   |
| 2. Endosulfan I                 | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 101.3  | 1.0  | 0.02 | 959-98-8   | 0.1mg/m3 (skin)  | or-rat 18mg/kg    |
| 3. 4,4'-DDE                     | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 201.6  | 2.0  | 0.03 | 72-55-9    | N/A              | or-rat 880mg/kg   |
| 4. Dieldrin                     | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 202.8  | 2.0  | 0.03 | 60-57-1    | 0.25mg/m3 (skin) | or-rat 36300ug/kg |
| 5. Endosulfan sulfate           | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 204.2  | 2.0  | 0.03 | 1031-07-8  | N/A              | or-rat 18mg/kg    |
| 6. Endrin ketone                | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 202.6  | 2.0  | 0.03 | 53494-70-5 | N/A              | N/A               |
| 7. 4,4'-Methoxychlor            | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 1000.7 | 10.0 | 0.09 | 72-43-5    | 10mg/m3          | or-rat 6000mg/kg  |
| 8. 2,4,5,6-Tetrachloro-m-xylene | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 202.6  | 2.0  | 0.03 | 877-09-8   | N/A              | N/A               |
| 9. Decachlorobiphenyl (209)     | 19361 | 013124 | 0.010 | 1.00 | 0.004 | 202.0  | 2.0  | 0.03 | 2051-24-3  | N/A              | N/A               |

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## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

*chromatographic plus*



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

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

**Catalog No. :** 32000 **Lot No.:** A0206810

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

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

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

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

P13348  
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P13357  
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DAUF  
04/25/2024

### CERTIFIED VALUES

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

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

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

### Tech Tips:

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

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

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

## Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

300°C

**Det. Type:**

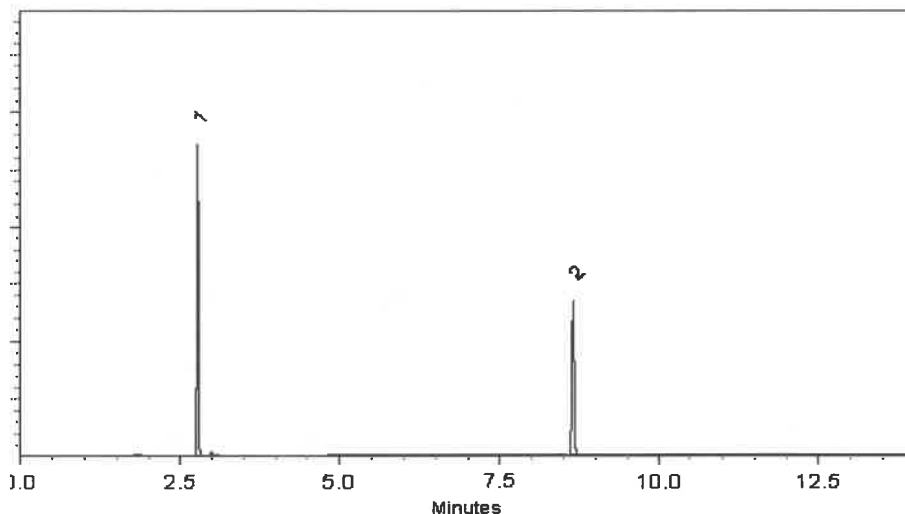
ECD

**Split Vent:**

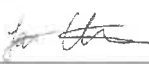
10 ml/min.

**Inj. Vol**

1µl

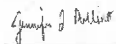


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

  
Laith Clemente - Operations Technician I

Date Mixed: 22-Jan-2024

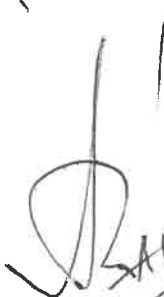
Balance Serial # 1128360905

  
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Jan-2024

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

P 13348  
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SAUF  
04/25/2025





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## CERTIFIED REFERENCE MATERIAL

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

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

**Catalog No. :** 32000 **Lot No.:** A0206810

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

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

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

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

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DAUF  
04/25/2024

### CERTIFIED VALUES

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

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

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

### Tech Tips:

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

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

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

## Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

300°C

**Det. Type:**

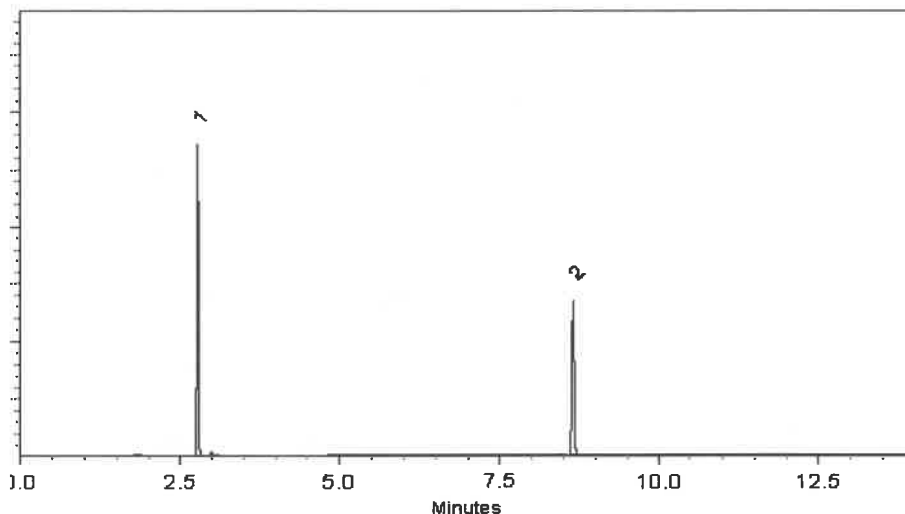
ECD

**Split Vent:**

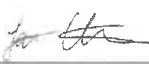
10 ml/min.

**Inj. Vol**

1µl

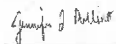


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

  
Laith Clemente - Operations Technician I

Date Mixed: 22-Jan-2024

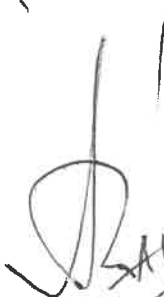
Balance Serial # 1128360905

  
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Jan-2024

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

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### 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. :** 32005 **Lot No.:** A0203038

**Description :** Toxaphene Standard  
Toxaphene Standard 1000 µg/mL, Hexane, 1mL/ampul

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

**Expiration Date :** January 31, 2028 **Storage:** 10°C or colder  
**Ship:** Ambient

P13402  
P13406  
5/22/2024

### CERTIFIED VALUES

| Elution Order | Compound  | CAS #     | Lot #   | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|-----------|-----------|---------|--------|-----------------------------|----------------------------------------|
| 1             | Toxaphene | 8001-35-2 | 1051817 | ---%   | 1,009.0 µg/mL               | +/- 55.9920                            |

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

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

## Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

300°C

**Det. Type:**

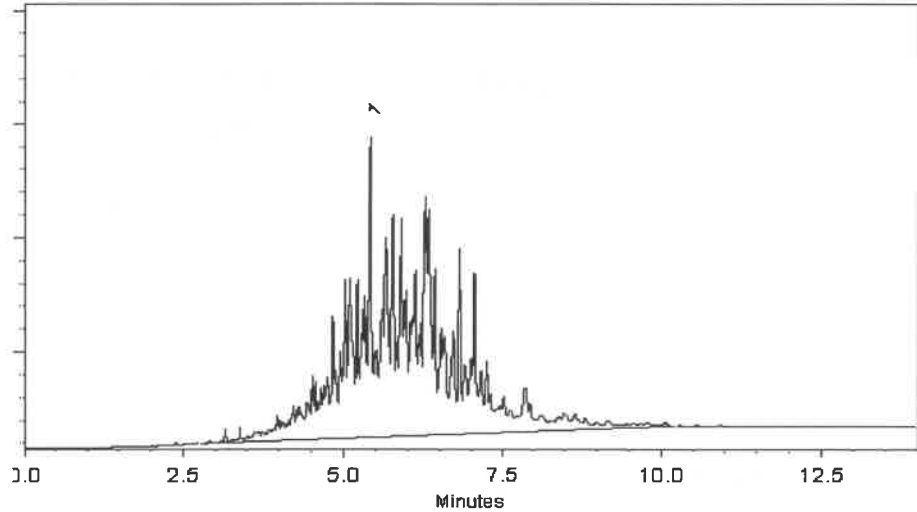
ECD

**Split Vent:**

300 ml/min.

**Inj. Vol**

0.2µl

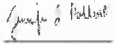


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

  
Dakota Parson - Operations Technician I

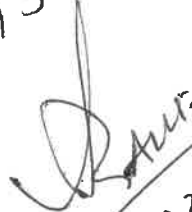
Date Mixed: 10-Oct-2023

Balance Serial # 1128353505

  
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 16-Oct-2023

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

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5/22/2024



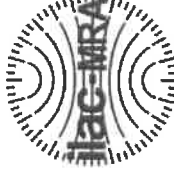
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CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis

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

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

**Catalog No. :** 32000 **Lot No.:** A0214495

**Description :** Pesticide Surrogate Mix

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

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

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

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

P19785  
AJ  
11/19/24  
P19789

### CERTIFIED VALUES

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

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

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

### Tech Tips:

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

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

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

## Quality Confirmation Test

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

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

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

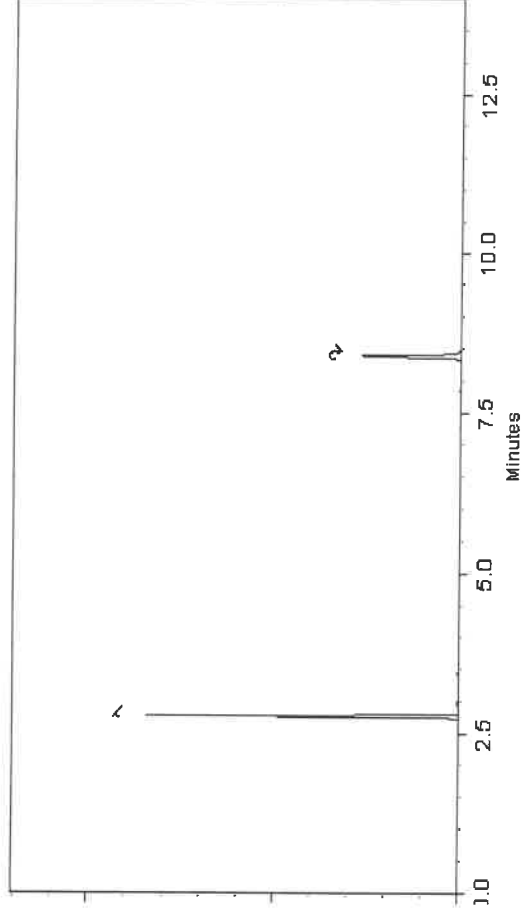
**Inj. Temp:**  
250°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD

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

**Inj. Vol**  
1µl



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

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

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

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

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

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



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

chromatographic plus



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

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

**Catalog No. :** 32005 **Lot No.:** A0210240

**Description :** Toxaphene Standard  
Toxaphene Standard 1000 µg/mL, Hexane, 1mL/ampul

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

**Expiration Date :** July 31, 2028 **Storage:** 10°C or colder

**Ship:** Ambient

## CERTIFIED VALUES

| Elution Order | Compound  | CAS #     | Lot #   | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|-----------|-----------|---------|--------|-----------------------------|----------------------------------------|
| 1             | Toxaphene | 8001-35-2 | 1051817 | ----%  | 1,009.3 µg/mL               | +/- 56.0105                            |

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

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

P13861  
P13862

12/9/2024

## Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

helium-constant pressure 20 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

300°C

**Det. Type:**

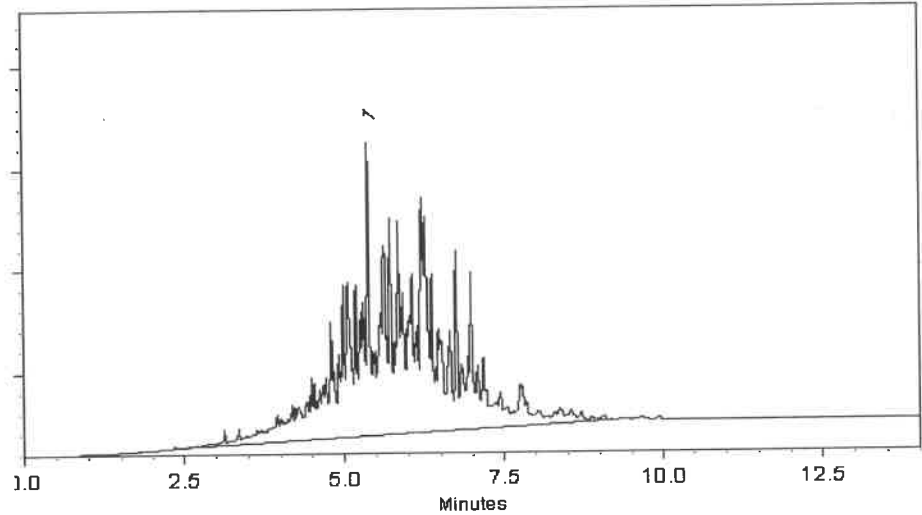
ECD

**Split Vent:**

300 ml/min.

**Inj. Vol**

0.2µl



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

  
Amanda Miller - Operations Tech III - ARM QC

Date Mixed: 11-Apr-2024

Balance Serial # B442140311

  
Christie Mills - Operations Lead Tech - ARM QC

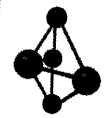
Date Passed: 26-Apr-2024

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

P13861 } ②  
P13862 }

  
12/9/2024





CERTIFIED WEIGHT REPORT

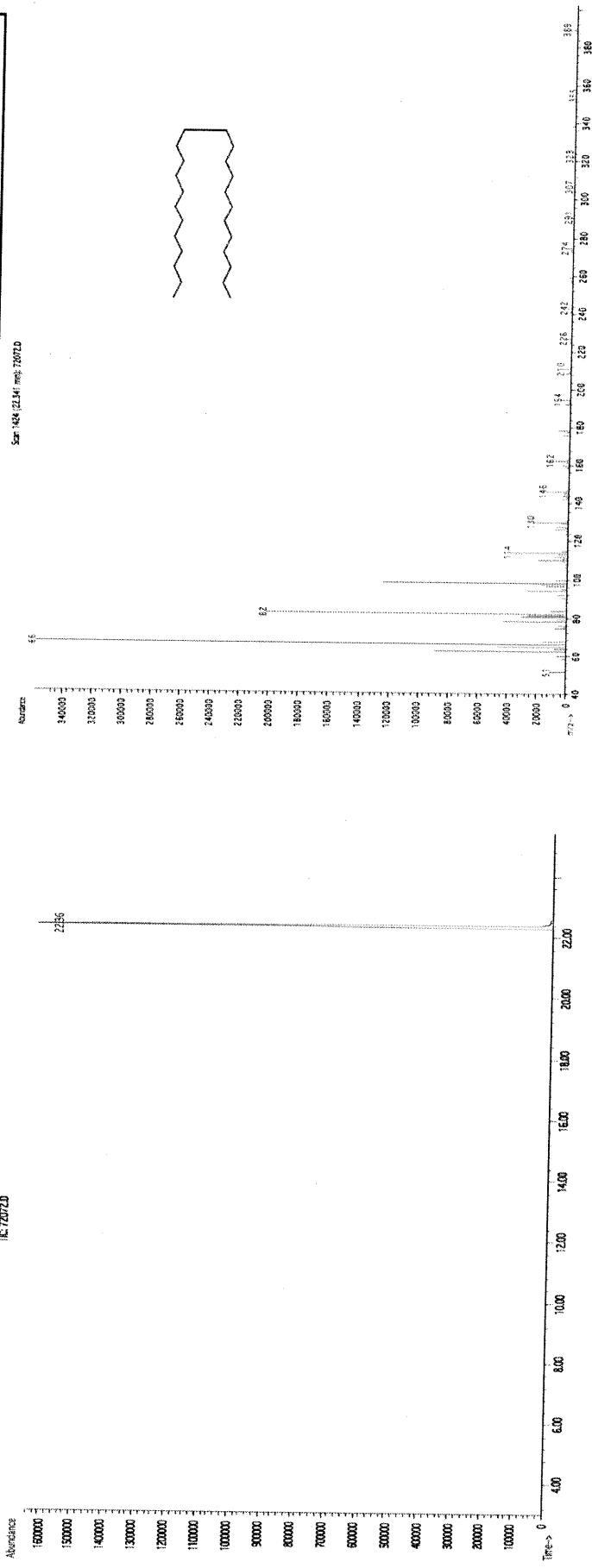
Part Number: 72072  
Lot Number: 112018  
Description: n-Tetracosane-d50  
Expiration Date: 112028  
Recommended Storage: Ambient (20 °C)  
Nominal Concentration (µg/mL): 1000  
NIST Test ID#: 2684186  
Weight(s) shown below were combined and diluted to (mL): 200.0

Solvent(s): Lot#  
Methylene chloride 102669  
Received by  
SG on 11/11/19  
p9044-p9053  
5E-05 Balance Uncertainty  
0.058 Flask Uncertainty

|                |                  |        |      |
|----------------|------------------|--------|------|
| Formulated By: | Prashant Chauhan | 112018 | DATE |
| Reviewed By:   | Pedro Rentas     | 112018 | DATE |

| Compound                                                                                                                                                                                                                                                     | RM#  | Lot Number        | Nominal Conc (µg/mL) | Purity (%) | Uncertainty | Target Weight (g) | Actual Weight (g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|----------------------|------------|-------------|-------------------|-------------------|---------------------|------------------------------------|--------------------------------------------------------|
| 1. n-Tetracosane-d50                                                                                                                                                                                                                                         | 2072 | PR-17753/09216TC1 | 1000                 | 98         | 0.2         | 0.20411           | 0.20415           | 1000.2              | 4.2                                | 18416-32-3 N/A                                         |
| Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren. |      |                   |                      |            |             |                   |                   |                     |                                    |                                                        |

TC 720720



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



## Run 40, "P72072 L112018 [1000µg/mL in MeCl2]"

Run Length: 35.00 min, 20999 points at 10 points/second.

Created: Thu, Nov 22, 2018 at 7:23:18 AM.

Sampled: Sequence "112018-GC4M1", Method "GC4-M1".

Analyzed using Method "GC4-M1".

### Comments

GC4-M1 Analysis by Melissa Stonier

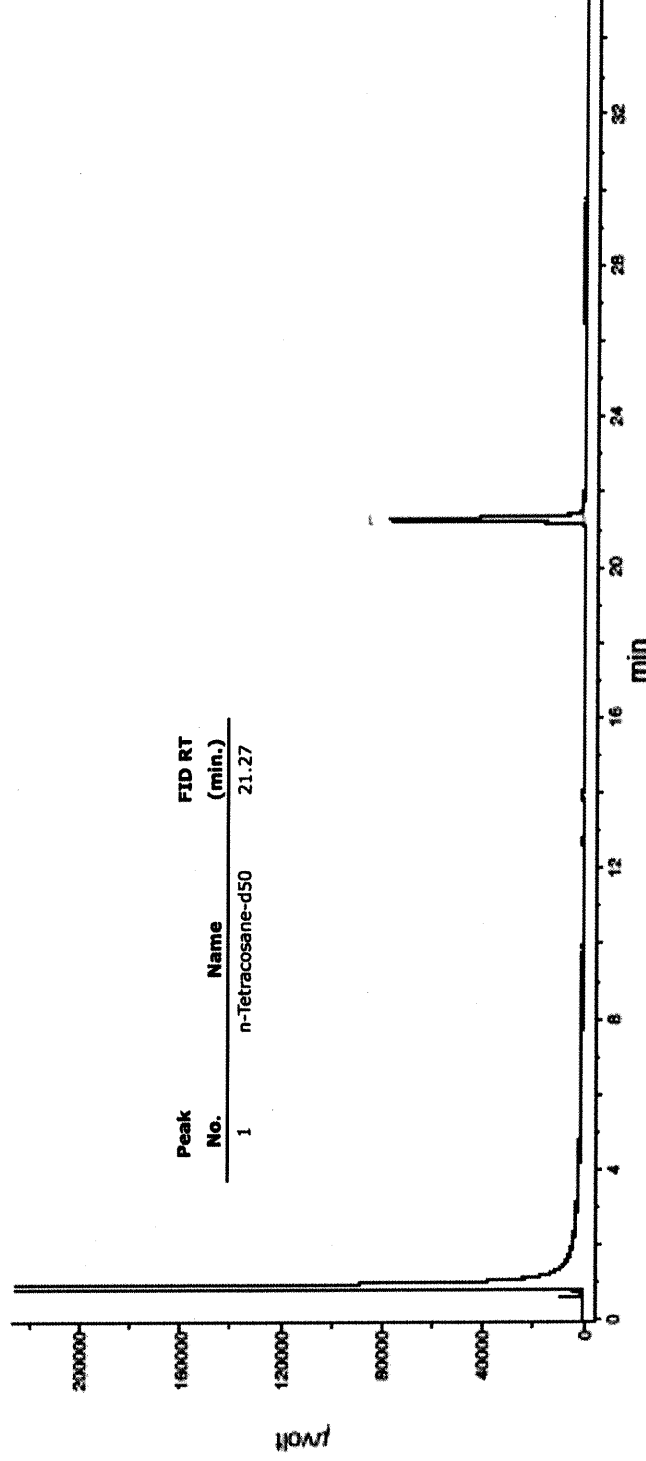
Column ID SPB5 L#60062-01A : 30 meter x 0.53mm x 1.5µm Film Thickness

Flow rates: Total Flow = 300 mL/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL, Hydrogen (detector) = 30 mL, Air (detector) = 360 mL

Oven Temp 1 = 50°C (1 min), Rate = 10°C/min, Oven Temp 2 = 300°C (9 min), Total Run Time = 35 Minutes.

Injector Temp = 200°C, FID Temp = 300°C, FID Signal = eDAQ Channel 1.

Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 µL, Range = 3



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



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

## Certificate of Analysis

| Test                                                                            | Specification  | Result      |
|---------------------------------------------------------------------------------|----------------|-------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)            | $\leq 5$       | 3           |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)            | $\leq 10$      | 1           |
| ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL) | $\leq 5$       | 1           |
| Assay (Total Saturated C <sub>6</sub> Isomers) (by GC, corrected for water)     | $\geq 99.5 \%$ | 99.7 %      |
| Assay (as n-Hexane) (by GC, corrected for water)                                | $\geq 95 \%$   | 98 %        |
| Color (APHA)                                                                    | $\leq 10$      | 5           |
| Residue after Evaporation                                                       | $\leq 1.0$ ppm | 0.1 ppm     |
| Substances Darkened by H <sub>2</sub> SO <sub>4</sub>                           | Passes Test    | Passes Test |
| Water (by KF, coulometric)                                                      | $\leq 0.05 \%$ | < 0.01 %    |

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

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

Jamie Croak  
Director Quality Operations, Bioscience Production