

## Prep Standard - Chemical Standard Summary

**Order ID :** Q3661

**Test :** EPH\_F2

**Prepbatch ID :** PB170727,

**Sequence ID/Qc Batch ID:** FE112525AL,FE112625AL,

**Standard ID :**

EP2659,EP2663,PP24768,PP24769,PP24770,PP24771,PP24772,PP24773,PP24774,PP25005,PP25012,

**Chemical ID :**

E3875,E3951,E3956,E3979,E3980,E3982,E3986,P12364,P13280,P13281,P13620,P13690,P14033,P14034,P14035,P14036,P14037,P14127,P14128,P14129,P14130,P14131,P14132,P14133,P14134,P14135,P14136,P14151,P14152,P14153,P14154,P14155,P14195,P14196,P14197,P14198,P14199,P14200,P14201,P14202,P14203,P14204,W3234,

## 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> |
|------------------|--------------------------------|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 2017             | 1:1 ACETONE/METHYLENE CHLORIDE | <a href="#">EP2659</a> | 11/03/2025       | 04/16/2026             | RUPESHKUMAR SHAH   | None           | None             | Riteshkumar Patel    |
|                  |                                |                        |                  |                        |                    |                |                  | 11/03/2025           |

**FROM** 8000.00000ml of E3980 + 8000.00000ml of E3982 = Final Quantity: 16000.000 ml

| <u>Recipe ID</u> | <u>NAME</u>          | <u>NO.</u>             | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u>      | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------|------------------------|------------------|------------------------|--------------------|---------------------|------------------|----------------------|
| 3923             | Baked Sodium Sulfate | <a href="#">EP2663</a> | 11/20/2025       | 05/20/2026             | RUPESHKUMAR SHAH   | Extraction_SC ALE_2 | None             | Riteshkumar Patel    |
|                  |                      |                        |                  |                        |                    | (EX-SC-2)           |                  | 11/20/2025           |

**FROM** 4000.00000gram of E3875 = Final Quantity: 4000.000 gram



| <u>Recipe ID</u>                                                                                                                     | <u>NAME</u>                               | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u>      |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|---------------------------|
| 781                                                                                                                                  | 100 PPM Aliphatic HC Working STD (Restek) | <a href="#">PP24768</a> | 08/01/2025       | 02/01/2026             | Yogesh Patel       | None           | None             | Abdul Mirza<br>08/19/2025 |
| <b><u>FROM</u></b> 0.25000ml of P13620 + 0.25000ml of P13690 + 1.25000ml of P12364 + 23.25000ml of E3956 = Final Quantity: 25.000 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>          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|-------------------------------|
| 2900                                                                                                                                                          | 100 PPM Aliphatic HC STD<br>(Absolute) | <a href="#">PP24769</a> | 08/01/2025       | 02/01/2026             | Yogesh Patel       | None           | None             | Abdul Mirza<br><br>08/19/2025 |
| <b><u>FROM</u></b> 0.22000ml of P13690 + 0.25000ml of P13620 + 1.25000ml of P13280 + 1.25000ml of P13281 + 22.00000ml of E3956 = Final<br>Quantity: 25.000 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> |
|------------------|-------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 783              | 50 PPM Aliphatic HC STD | <a href="#">PP24770</a> | 08/01/2025       | 02/01/2026             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                         |                         |                  |                        |                    |                |                  | 08/19/2025           |

**FROM** 0.50000ml of W3234 + 0.50000ml of PP24768 = 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> |
|------------------|-------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 784              | 20 PPM Aliphatic HC STD | <a href="#">PP24771</a> | 08/01/2025       | 02/01/2026             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                         |                         |                  |                        |                    |                |                  | 08/19/2025           |

**FROM** 0.80000ml of W3234 + 0.20000ml of PP24768 = 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> |
|------------------|-------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 785              | 10 PPM Aliphatic HC STD | <a href="#">PP24772</a> | 08/01/2025       | 02/01/2026             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                         |                         |                  |                        |                    |                |                  | 08/19/2025           |

**FROM** 0.90000ml of W3234 + 0.10000ml of PP24768 = 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> |
|------------------|------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 786              | 5 PPM Aliphatic HC STD | <a href="#">PP24773</a> | 08/01/2025       | 02/01/2026             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                        |                         |                  |                        |                    |                |                  | 08/19/2025           |

**FROM** 0.90000ml of W3234 + 0.10000ml of PP24770 = 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> |
|------------------|----------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 2901             | 20 PPM Aliphatic HC STD ICV (Absolute) | <a href="#">PP24774</a> | 08/01/2025       | 02/01/2026             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                                        |                         |                  |                        |                    |                |                  | 08/19/2025           |

**FROM** 0.80000ml of W3234 + 0.20000ml of PP24769 = 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> |
|------------------|------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 1330             | 100 PPM NJEPH Spike Solution | <a href="#">PP25005</a> | 10/22/2025       | 04/22/2026             | Abdul Mirza        | None           | None             | Yogesh Patel         |
|                  |                              |                         |                  |                        |                    |                |                  | 11/04/2025           |

**FROM** 5.00000ml of P14127 + 5.00000ml of P14128 + 5.00000ml of P14129 + 5.00000ml of P14130 + 5.00000ml of P14131 + 5.00000ml of P14132 + 5.00000ml of P14133 + 5.00000ml of P14134 + 5.00000ml of P14135 + 5.00000ml of P14136 + 5.00000ml of P14195 + 5.00000ml of P14196 + 5.00000ml of P14197 + 5.00000ml of P14198 + 5.00000ml of P14199 + 5.00000ml of P14200 + 5.00000ml of P14201 + 5.00000ml of P14202 + 5.00000ml of P14203 + 5.00000ml of P14204 = 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>       |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 1339             | 100 PPM NJEPH Surrogate Spike                                                                                                                                                                                                                                                 | <a href="#">PP25012</a> | 10/27/2025       | 04/27/2026             | Abdul Mirza        | None           | None             | Yogesh Patel<br>11/04/2025 |
| <u>FROM</u>      | 1.00000ml of P14033 + 1.00000ml of P14034 + 1.00000ml of P14035 + 1.00000ml of P14036 + 1.00000ml of P14037 + 1.00000ml of P14151 + 1.00000ml of P14152 + 1.00000ml of P14153 + 1.00000ml of P14154 + 1.00000ml of P14155 + 490.00000ml of E3979 = Final Quantity: 500.000 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 | 417203 | 07/28/2026      | 07/28/2025 / RUPESH     | 01/29/2025 / Rajesh         | E3875          |

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

| Supplier         | ItemCode / ItemName                       | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|-------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 25C0362005 | 04/30/2026      | 07/16/2025 / RUPESH     | 07/16/2025 / RUPESH         | E3956          |

| 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) | 24L1062001 | 10/04/2027      | 10/15/2025 / RITESHKUMAR | 09/29/2025 / Riteshkumar    | E3979          |

| Supplier         | ItemCode / ItemName                                         | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|-------------------------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L) | 25C1262005 | 04/16/2026      | 10/10/2025 / RUPESH     | 10/10/2025 / RUPESH         | E3980          |

| 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) | 24L1062001 | 10/04/2027      | 10/31/2025 / RUPESH     | 10/31/2025 / RUPESH         | E3982          |

## CHEMICAL RECEIPT LOG BOOK

| Supplier         | ItemCode / ItemName                                         | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|-------------------------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L) | 25C1262005 | 04/16/2026      | 11/14/2025 / RUPESH     | 11/05/2025 / RUPESH         | E3986          |

| Supplier | ItemCode / ItemName                                  | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30540 / Custom NJEPH Aliphatics Calibration Standard | A0190424 | 02/01/2026      | 08/01/2025 / yogesh     | 03/16/2023 / Yogesh         | P12364         |

| Supplier                 | ItemCode / ItemName                                       | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|-----------------------------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 95899 / NJ EPH Aliphatic n-Hydrocarbons-Revised, 1000 PPM | 040524 | 02/01/2026      | 08/01/2025 / yogesh     | 04/11/2024 / yogesh         | P13280         |

| Supplier                 | ItemCode / ItemName                                       | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|-----------------------------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 95899 / NJ EPH Aliphatic n-Hydrocarbons-Revised, 1000 PPM | 040524 | 02/01/2026      | 08/01/2025 / yogesh     | 04/11/2024 / yogesh         | P13281         |

| Supplier | ItemCode / ItemName                 | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31098 / 1-Chlorooctadecane Standard | A0213283 | 02/01/2026      | 08/01/2025 / yogesh     | 10/16/2024 / yogesh         | P13620         |

| Supplier | ItemCode / ItemName          | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31097 / o-Terphenyl Standard | A0216631 | 02/01/2026      | 08/01/2025 / yogesh     | 10/16/2024 / yogesh         | P13690         |

## CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName                       | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31098 /<br>1-Chlorooctadecane<br>Standard | A0225485 | 04/27/2026      | 10/27/2025 /<br>Abdul   | 06/02/2025 /<br>Rahul       | P14033         |

| Supplier | ItemCode / ItemName                       | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31098 /<br>1-Chlorooctadecane<br>Standard | A0225485 | 04/27/2026      | 10/27/2025 /<br>Abdul   | 06/02/2025 /<br>Rahul       | P14034         |

| Supplier | ItemCode / ItemName                       | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31098 /<br>1-Chlorooctadecane<br>Standard | A0225485 | 04/27/2026      | 10/27/2025 /<br>Abdul   | 06/02/2025 /<br>Rahul       | P14035         |

| Supplier | ItemCode / ItemName                       | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31098 /<br>1-Chlorooctadecane<br>Standard | A0225485 | 04/27/2026      | 10/27/2025 /<br>Abdul   | 06/02/2025 /<br>Rahul       | P14036         |

| Supplier | ItemCode / ItemName                       | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31098 /<br>1-Chlorooctadecane<br>Standard | A0225485 | 04/27/2026      | 10/27/2025 /<br>Abdul   | 06/02/2025 /<br>Rahul       | P14037         |

| Supplier | ItemCode / ItemName                                 | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-----------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30542 / Custom NJEPH<br>Aliphatics Matrix Spike Mix | A0226411 | 04/22/2026      | 10/22/2025 /<br>Abdul   | 09/16/2025 /<br>Abdul       | P14127         |

## CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName                              | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0226411 | 07/31/2032      | 10/22/2025 / Abdul      | 09/16/2025 / Abdul          | P14128         |

| Supplier | ItemCode / ItemName                              | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0226411 | 04/22/2026      | 10/22/2025 / Abdul      | 09/16/2025 / Abdul          | P14129         |

| Supplier | ItemCode / ItemName                              | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0226411 | 04/22/2026      | 10/22/2025 / Abdul      | 09/16/2025 / Abdul          | P14130         |

| Supplier | ItemCode / ItemName                              | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0226411 | 04/22/2026      | 10/22/2025 / Abdul      | 09/16/2025 / Abdul          | P14131         |

| Supplier | ItemCode / ItemName                              | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0226411 | 04/22/2026      | 10/22/2025 / Abdul      | 09/16/2025 / Abdul          | P14132         |

| Supplier | ItemCode / ItemName                              | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0226411 | 04/22/2026      | 10/22/2025 / Abdul      | 09/16/2025 / Abdul          | P14133         |

## CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName                              | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0226411 | 04/22/2026      | 10/22/2025 / Abdul      | 09/16/2025 / Abdul          | P14134         |

| Supplier | ItemCode / ItemName                              | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0226411 | 04/22/2026      | 10/22/2025 / Abdul      | 09/16/2025 / Abdul          | P14135         |

| Supplier | ItemCode / ItemName                              | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0226411 | 04/22/2026      | 10/22/2025 / Abdul      | 09/16/2025 / Abdul          | P14136         |

| Supplier | ItemCode / ItemName          | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31097 / o-Terphenyl Standard | A0216631 | 04/27/2026      | 10/27/2025 / Abdul      | 09/24/2025 / Abdul          | P14151         |

| Supplier | ItemCode / ItemName          | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31097 / o-Terphenyl Standard | A0216631 | 04/27/2026      | 10/27/2025 / Abdul      | 09/24/2025 / Abdul          | P14152         |

| Supplier | ItemCode / ItemName          | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31097 / o-Terphenyl Standard | A0216631 | 04/27/2026      | 10/27/2025 / Abdul      | 09/24/2025 / Abdul          | P14153         |

## CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName          | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31097 / o-Terphenyl Standard | A0216631 | 04/27/2026      | 10/27/2025 / Abdul      | 09/24/2025 / Abdul          | P14154         |

| Supplier | ItemCode / ItemName          | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31097 / o-Terphenyl Standard | A0216631 | 04/27/2026      | 10/27/2025 / Abdul      | 09/24/2025 / Abdul          | P14155         |

| Supplier | ItemCode / ItemName                             | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0231145 | 04/22/2026      | 10/22/2025 / Abdul      | 10/21/2025 / Abdul          | P14195         |

| Supplier | ItemCode / ItemName                             | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0231145 | 04/22/2026      | 10/22/2025 / Abdul      | 10/21/2025 / Abdul          | P14196         |

| Supplier | ItemCode / ItemName                             | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0231145 | 04/22/2026      | 10/22/2025 / Abdul      | 10/21/2025 / Abdul          | P14197         |

| Supplier | ItemCode / ItemName                             | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0231145 | 04/22/2026      | 10/22/2025 / Abdul      | 10/21/2025 / Abdul          | P14198         |

## CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName                             | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0231145 | 04/22/2026      | 10/22/2025 / Abdul      | 10/21/2025 / Abdul          | P14199         |

| Supplier | ItemCode / ItemName                             | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0231145 | 04/22/2026      | 10/22/2025 / Abdul      | 10/21/2025 / Abdul          | P14200         |

| Supplier | ItemCode / ItemName                             | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0231145 | 04/22/2026      | 10/22/2025 / Abdul      | 10/21/2025 / Abdul          | P14201         |

| Supplier | ItemCode / ItemName                             | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0231145 | 04/22/2026      | 10/22/2025 / Abdul      | 10/21/2025 / Abdul          | P14202         |

| Supplier | ItemCode / ItemName                             | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0231145 | 04/22/2026      | 10/22/2025 / Abdul      | 10/21/2025 / Abdul          | P14203         |

| Supplier | ItemCode / ItemName                             | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0231145 | 04/22/2026      | 10/22/2025 / Abdul      | 10/21/2025 / Abdul          | P14204         |

**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) | 25C0362005 | 04/30/2026      | 07/28/2025 /<br>jignesh    | 07/25/2025 /<br>jignesh        | W3234             |



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

MIRADOR 201, COL. MIRADOR  
MONTERREY, N.L. MÉXICO  
CP 64070  
TEL +52 81 13 52 67 67  
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: | MAY/23/2024                     |
| LOT NUMBER :          | 417203                            |               |                                 |

| TEST                                     | SPECIFICATIONS | LOT VALUES  |
|------------------------------------------|----------------|-------------|
| Assay (Na <sub>2</sub> SO <sub>4</sub> ) | Min. 99.0%     | 99.8 %      |
| pH of a 5% solution at 25°C              | 5.2 - 9.2      | 6.2         |
| Insoluble matter                         | Max. 0.01%     | 0.001 %     |
| 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%     | 0.001 %     |
| Magnesium (Mg)                           | Max. 0.005%    | 0.001 %     |
| Potassium (K)                            | Max. 0.008%    | 0.001 %     |
| Extraction-concentration suitability     | Passes test    | Passes test |
| Appearance                               | Passes test    | Passes test |
| Identification                           | Passes test    | Passes test |
| Solubility and foreign matter            | Passes test    | Passes test |
| Retained on US Standard No. 10 sieve     | Max. 1%        | 0.2 %       |
| Retained on US Standard No. 60 sieve     | Min. 94%       | 96.2 %      |
| Through US Standard No. 60 sieve         | Max. 5%        | 3.5 %       |
| 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.

RE-02-01, Ed. 3

E 3875



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

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

*Received on 1/12/25.*

**E3951**

Internal ID #: 793

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

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

 **avantors**<sup>™</sup>



Material No.: 9262-03

Batch No.: 25C0362005

Manufactured Date: 2025-01-29

Expiration Date: 2026-04-30

Revision No.: 0

## Certificate of Analysis

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

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

*Received on 7/16/25*

**E3956**



Jamie Croak  
Director Quality Operations, Bioscience Production

Acetone  
BAKER RESI-ANALYZED® Reagent  
For Organic Residue Analysis

 **avantors**™



Material No.: 9254-03

Batch No.: 24L1062001

Manufactured Date: 2024-10-04

Expiration Date: 2027-10-04

Revision No.: 0

## Certificate of Analysis

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

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E3979



Jamie Croak  
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC

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



Material No.: 9266-A4  
Batch No.: 25C1262005  
Manufactured Date: 2025-01-15  
Expiration Date: 2026-04-16  
Revision No.: 0

## Certificate of Analysis

| Test                                                                                       | Specification  | Result     |
|--------------------------------------------------------------------------------------------|----------------|------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)                       | $\leq 5$       | 1          |
| ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)                        | $\leq 10$      | 1          |
| Assay ( $\text{CH}_2\text{Cl}_2$ ) (by GC, exclusive of preservative, corrected for water) | $\geq 99.8\%$  | 100.0 %    |
| Color (APHA)                                                                               | $\leq 10$      | 5          |
| Residue after Evaporation                                                                  | $\leq 1.0$ ppm | 0.1 ppm    |
| Titration Acid ( $\mu\text{eq/g}$ )                                                        | $\leq 0.3$     | $< 0.1$    |
| Chloride (Cl)                                                                              | $\leq 10$ ppm  | $< 5$ ppm  |
| Water (by KF, coulometric)                                                                 | $\leq 0.02\%$  | $< 0.01\%$ |

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

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

REC. on 10/10/25  
RJ

E3980

Jamie Croak  
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials, LLC

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

Acetone  
BAKER RESI-ANALYZED® Reagent  
For Organic Residue Analysis

 **avantors**™



Material No.: 9254-03

Batch No.: 24L1062001

Manufactured Date: 2024-10-04

Expiration Date: 2027-10-04

Revision No.: 0

## Certificate of Analysis

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

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

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

*Received on 10/29/25*

**E3982**

*J. Croak*

Jamie Croak  
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC

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



Material No.: 9266-A4  
Batch No.: 25C1262005  
Manufactured Date: 2025-01-15  
Expiration Date: 2026-04-16  
Revision No.: 0

## Certificate of Analysis

| Test                                                                                       | Specification  | Result     |
|--------------------------------------------------------------------------------------------|----------------|------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)                       | $\leq 5$       | 1          |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)                       | $\leq 10$      | 1          |
| Assay ( $\text{CH}_2\text{Cl}_2$ ) (by GC, exclusive of preservative, corrected for water) | $\geq 99.8\%$  | 100.0%     |
| Color (APHA)                                                                               | $\leq 10$      | 5          |
| Residue after Evaporation                                                                  | $\leq 1.0$ ppm | 0.1 ppm    |
| Titration Acid ( $\mu\text{eq/g}$ )                                                        | $\leq 0.3$     | $< 0.1$    |
| Chloride (Cl)                                                                              | $\leq 10$ ppm  | $< 5$ ppm  |
| Water (by KF, coulometric)                                                                 | $\leq 0.02\%$  | $< 0.01\%$ |

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

Received on 11/5/25

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

E3986

Jamie Croak  
Director Quality Operations, Bioscience Production

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



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

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## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

chromatographic plus



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

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

**Catalog No. :** 30542 **Lot No.:** A0226411

**Description :** NJEPH Aliphatics Matrix Spike Mix  
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** July 31, 2032 **Storage:** 10°C or colder

**Handling:** Sonicate prior to use. **Ship:** Ambient

P14127  
P14141  
15  
9/16/25

### CERTIFIED VALUES

| Elution Order | Compound                 | CAS #      | Lot #      | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|--------------------------|------------|------------|--------|-----------------------------|----------------------------------------|
| 1             | n-Nonane (C9)            | 111-84-2   | SHBP9752   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 2             | n-Decane (C10)           | 124-18-5   | SHBS1019   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 3             | n-Dodecane (C12)         | 112-40-3   | SHBP7054   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 4             | n-Tetradecane (C14)      | 629-59-4   | STBL2522   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 5             | n-Hexadecane (C16)       | 544-76-3   | SHBR0670   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 6             | n-Octadecane (C18)       | 593-45-3   | UE5NG      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 7             | n-Eicosane (C20)         | 112-95-8   | MKCN8767   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 8             | n-Heneicosane (C21)      | 629-94-7   | MKCP1960   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 9             | n-Docosane (C22)         | 629-97-0   | MKCQ3729   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 10            | n-Tetracosane (C24)      | 646-31-1   | UH5GN      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 11            | n-Hexacosane (C26)       | 630-01-3   | MKCV0107   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 12            | n-Octacosane (C28)       | 630-02-4   | BCCM2091   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 13            | n-Triacontane (C30)      | 638-68-6   | MKCW9459   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 14            | n-Dotriacontane (C32)    | 544-85-4   | BCBW0661   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 15            | n-Tetratriacontane (C34) | 14167-59-0 | 6JNHB      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 16            | n-Hexatriacontane (C36)  | 630-06-8   | U30H007    | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 17            | n-Octatriacontane (C38)  | 7194-85-6  | 0000207852 | 96%    | 200.0 µg/mL                 | +/- 5.1667                             |



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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. :** 30542 **Lot No.:** A0226411

**Description :** NJEPH Aliphatics Matrix Spike Mix  
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** July 31, 2032 **Storage:** 10°C or colder

**Handling:** Sonicate prior to use. **Ship:** Ambient

P14127  
P14141  
15  
9/16/25

### CERTIFIED VALUES

| Elution Order | Compound                 | CAS #      | Lot #      | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|--------------------------|------------|------------|--------|-----------------------------|----------------------------------------|
| 1             | n-Nonane (C9)            | 111-84-2   | SHBP9752   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 2             | n-Decane (C10)           | 124-18-5   | SHBS1019   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 3             | n-Dodecane (C12)         | 112-40-3   | SHBP7054   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 4             | n-Tetradecane (C14)      | 629-59-4   | STBL2522   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 5             | n-Hexadecane (C16)       | 544-76-3   | SHBR0670   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 6             | n-Octadecane (C18)       | 593-45-3   | UE5NG      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 7             | n-Eicosane (C20)         | 112-95-8   | MKCN8767   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 8             | n-Heneicosane (C21)      | 629-94-7   | MKCP1960   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 9             | n-Docosane (C22)         | 629-97-0   | MKCQ3729   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 10            | n-Tetracosane (C24)      | 646-31-1   | UH5GN      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 11            | n-Hexacosane (C26)       | 630-01-3   | MKCV0107   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 12            | n-Octacosane (C28)       | 630-02-4   | BCCM2091   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 13            | n-Triacontane (C30)      | 638-68-6   | MKCW9459   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 14            | n-Dotriacontane (C32)    | 544-85-4   | BCBW0661   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 15            | n-Tetratriacontane (C34) | 14167-59-0 | 6JNHB      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 16            | n-Hexatriacontane (C36)  | 630-06-8   | U30H007    | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 17            | n-Octatriacontane (C38)  | 7194-85-6  | 0000207852 | 96%    | 200.0 µg/mL                 | +/- 5.1667                             |



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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. :** 30542 **Lot No.:** A0226411

**Description :** NJEPH Aliphatics Matrix Spike Mix  
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** July 31, 2032 **Storage:** 10°C or colder

**Handling:** Sonicate prior to use. **Ship:** Ambient

P14127  
P14141  
15  
9/16/25

### CERTIFIED VALUES

| Elution Order | Compound                 | CAS #      | Lot #      | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|--------------------------|------------|------------|--------|-----------------------------|----------------------------------------|
| 1             | n-Nonane (C9)            | 111-84-2   | SHBP9752   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 2             | n-Decane (C10)           | 124-18-5   | SHBS1019   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 3             | n-Dodecane (C12)         | 112-40-3   | SHBP7054   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 4             | n-Tetradecane (C14)      | 629-59-4   | STBL2522   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 5             | n-Hexadecane (C16)       | 544-76-3   | SHBR0670   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 6             | n-Octadecane (C18)       | 593-45-3   | UE5NG      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 7             | n-Eicosane (C20)         | 112-95-8   | MKCN8767   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 8             | n-Heneicosane (C21)      | 629-94-7   | MKCP1960   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 9             | n-Docosane (C22)         | 629-97-0   | MKCQ3729   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 10            | n-Tetracosane (C24)      | 646-31-1   | UH5GN      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 11            | n-Hexacosane (C26)       | 630-01-3   | MKCV0107   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 12            | n-Octacosane (C28)       | 630-02-4   | BCCM2091   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 13            | n-Triacontane (C30)      | 638-68-6   | MKCW9459   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 14            | n-Dotriacontane (C32)    | 544-85-4   | BCBW0661   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 15            | n-Tetratriacontane (C34) | 14167-59-0 | 6JNHB      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 16            | n-Hexatriacontane (C36)  | 630-06-8   | U30H007    | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 17            | n-Octatriacontane (C38)  | 7194-85-6  | 0000207852 | 96%    | 200.0 µg/mL                 | +/- 5.1667                             |



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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. :** 30542 **Lot No.:** A0226411

**Description :** NJEPH Aliphatics Matrix Spike Mix  
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** July 31, 2032 **Storage:** 10°C or colder

**Handling:** Sonicate prior to use. **Ship:** Ambient

P14127  
P14141  
15  
9/16/25

### CERTIFIED VALUES

| Elution Order | Compound                 | CAS #      | Lot #      | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|--------------------------|------------|------------|--------|-----------------------------|----------------------------------------|
| 1             | n-Nonane (C9)            | 111-84-2   | SHBP9752   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 2             | n-Decane (C10)           | 124-18-5   | SHBS1019   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 3             | n-Dodecane (C12)         | 112-40-3   | SHBP7054   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 4             | n-Tetradecane (C14)      | 629-59-4   | STBL2522   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 5             | n-Hexadecane (C16)       | 544-76-3   | SHBR0670   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 6             | n-Octadecane (C18)       | 593-45-3   | UE5NG      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 7             | n-Eicosane (C20)         | 112-95-8   | MKCN8767   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 8             | n-Heneicosane (C21)      | 629-94-7   | MKCP1960   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 9             | n-Docosane (C22)         | 629-97-0   | MKCQ3729   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 10            | n-Tetracosane (C24)      | 646-31-1   | UH5GN      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 11            | n-Hexacosane (C26)       | 630-01-3   | MKCV0107   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 12            | n-Octacosane (C28)       | 630-02-4   | BCCM2091   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 13            | n-Triacontane (C30)      | 638-68-6   | MKCW9459   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 14            | n-Dotriacontane (C32)    | 544-85-4   | BCBW0661   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 15            | n-Tetratriacontane (C34) | 14167-59-0 | 6JNHB      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 16            | n-Hexatriacontane (C36)  | 630-06-8   | U30H007    | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 17            | n-Octatriacontane (C38)  | 7194-85-6  | 0000207852 | 96%    | 200.0 µg/mL                 | +/- 5.1667                             |



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**Catalog No. :** 30542 **Lot No.:** A0226411

**Description :** NJEPH Aliphatics Matrix Spike Mix  
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** July 31, 2032 **Storage:** 10°C or colder

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P14127  
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|---------------|--------------------------|------------|------------|--------|-----------------------------|----------------------------------------|
| 1             | n-Nonane (C9)            | 111-84-2   | SHBP9752   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 2             | n-Decane (C10)           | 124-18-5   | SHBS1019   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 3             | n-Dodecane (C12)         | 112-40-3   | SHBP7054   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 4             | n-Tetradecane (C14)      | 629-59-4   | STBL2522   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 5             | n-Hexadecane (C16)       | 544-76-3   | SHBR0670   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 6             | n-Octadecane (C18)       | 593-45-3   | UE5NG      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 7             | n-Eicosane (C20)         | 112-95-8   | MKCN8767   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 8             | n-Heneicosane (C21)      | 629-94-7   | MKCP1960   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 9             | n-Docosane (C22)         | 629-97-0   | MKCQ3729   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 10            | n-Tetracosane (C24)      | 646-31-1   | UH5GN      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 11            | n-Hexacosane (C26)       | 630-01-3   | MKCV0107   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 12            | n-Octacosane (C28)       | 630-02-4   | BCCM2091   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 13            | n-Triacontane (C30)      | 638-68-6   | MKCW9459   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 14            | n-Dotriacontane (C32)    | 544-85-4   | BCBW0661   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 15            | n-Tetratriacontane (C34) | 14167-59-0 | 6JNHB      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 16            | n-Hexatriacontane (C36)  | 630-06-8   | U30H007    | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 17            | n-Octatriacontane (C38)  | 7194-85-6  | 0000207852 | 96%    | 200.0 µg/mL                 | +/- 5.1667                             |



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**Catalog No. :** 30542 **Lot No.:** A0226411

**Description :** NJEPH Aliphatics Matrix Spike Mix  
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** July 31, 2032 **Storage:** 10°C or colder

**Handling:** Sonicate prior to use. **Ship:** Ambient

P14127  
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| Elution Order | Compound                 | CAS #      | Lot #      | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|--------------------------|------------|------------|--------|-----------------------------|----------------------------------------|
| 1             | n-Nonane (C9)            | 111-84-2   | SHBP9752   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 2             | n-Decane (C10)           | 124-18-5   | SHBS1019   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 3             | n-Dodecane (C12)         | 112-40-3   | SHBP7054   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 4             | n-Tetradecane (C14)      | 629-59-4   | STBL2522   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 5             | n-Hexadecane (C16)       | 544-76-3   | SHBR0670   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 6             | n-Octadecane (C18)       | 593-45-3   | UE5NG      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 7             | n-Eicosane (C20)         | 112-95-8   | MKCN8767   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 8             | n-Heneicosane (C21)      | 629-94-7   | MKCP1960   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 9             | n-Docosane (C22)         | 629-97-0   | MKCQ3729   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 10            | n-Tetracosane (C24)      | 646-31-1   | UH5GN      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 11            | n-Hexacosane (C26)       | 630-01-3   | MKCV0107   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 12            | n-Octacosane (C28)       | 630-02-4   | BCCM2091   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 13            | n-Triacontane (C30)      | 638-68-6   | MKCW9459   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 14            | n-Dotriacontane (C32)    | 544-85-4   | BCBW0661   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 15            | n-Tetratriacontane (C34) | 14167-59-0 | 6JNHB      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 16            | n-Hexatriacontane (C36)  | 630-06-8   | U30H007    | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 17            | n-Octatriacontane (C38)  | 7194-85-6  | 0000207852 | 96%    | 200.0 µg/mL                 | +/- 5.1667                             |



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**Catalog No. :** 30542 **Lot No.:** A0226411

**Description :** NJEPH Aliphatics Matrix Spike Mix  
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** July 31, 2032 **Storage:** 10°C or colder

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|---------------|--------------------------|------------|------------|--------|-----------------------------|----------------------------------------|
| 1             | n-Nonane (C9)            | 111-84-2   | SHBP9752   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 2             | n-Decane (C10)           | 124-18-5   | SHBS1019   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 3             | n-Dodecane (C12)         | 112-40-3   | SHBP7054   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 4             | n-Tetradecane (C14)      | 629-59-4   | STBL2522   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 5             | n-Hexadecane (C16)       | 544-76-3   | SHBR0670   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 6             | n-Octadecane (C18)       | 593-45-3   | UE5NG      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 7             | n-Eicosane (C20)         | 112-95-8   | MKCN8767   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 8             | n-Heneicosane (C21)      | 629-94-7   | MKCP1960   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 9             | n-Docosane (C22)         | 629-97-0   | MKCQ3729   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 10            | n-Tetracosane (C24)      | 646-31-1   | UH5GN      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 11            | n-Hexacosane (C26)       | 630-01-3   | MKCV0107   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 12            | n-Octacosane (C28)       | 630-02-4   | BCCM2091   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 13            | n-Triacontane (C30)      | 638-68-6   | MKCW9459   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 14            | n-Dotriacontane (C32)    | 544-85-4   | BCBW0661   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 15            | n-Tetratriacontane (C34) | 14167-59-0 | 6JNHB      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 16            | n-Hexatriacontane (C36)  | 630-06-8   | U30H007    | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 17            | n-Octatriacontane (C38)  | 7194-85-6  | 0000207852 | 96%    | 200.0 µg/mL                 | +/- 5.1667                             |



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**Catalog No. :** 30542 **Lot No.:** A0226411

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NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

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P14127  
P14141  
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| Elution Order | Compound                 | CAS #      | Lot #      | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|--------------------------|------------|------------|--------|-----------------------------|----------------------------------------|
| 1             | n-Nonane (C9)            | 111-84-2   | SHBP9752   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 2             | n-Decane (C10)           | 124-18-5   | SHBS1019   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 3             | n-Dodecane (C12)         | 112-40-3   | SHBP7054   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 4             | n-Tetradecane (C14)      | 629-59-4   | STBL2522   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 5             | n-Hexadecane (C16)       | 544-76-3   | SHBR0670   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 6             | n-Octadecane (C18)       | 593-45-3   | UE5NG      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 7             | n-Eicosane (C20)         | 112-95-8   | MKCN8767   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 8             | n-Heneicosane (C21)      | 629-94-7   | MKCP1960   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 9             | n-Docosane (C22)         | 629-97-0   | MKCQ3729   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 10            | n-Tetracosane (C24)      | 646-31-1   | UH5GN      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 11            | n-Hexacosane (C26)       | 630-01-3   | MKCV0107   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 12            | n-Octacosane (C28)       | 630-02-4   | BCCM2091   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 13            | n-Triacontane (C30)      | 638-68-6   | MKCW9459   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 14            | n-Dotriacontane (C32)    | 544-85-4   | BCBW0661   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 15            | n-Tetratriacontane (C34) | 14167-59-0 | 6JNHB      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 16            | n-Hexatriacontane (C36)  | 630-06-8   | U30H007    | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
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|---------------|--------------------------|------------|------------|--------|-----------------------------|----------------------------------------|
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| 2             | n-Decane (C10)           | 124-18-5   | SHBS1019   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 3             | n-Dodecane (C12)         | 112-40-3   | SHBP7054   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 4             | n-Tetradecane (C14)      | 629-59-4   | STBL2522   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 5             | n-Hexadecane (C16)       | 544-76-3   | SHBR0670   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 6             | n-Octadecane (C18)       | 593-45-3   | UE5NG      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 7             | n-Eicosane (C20)         | 112-95-8   | MKCN8767   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 8             | n-Heneicosane (C21)      | 629-94-7   | MKCP1960   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 9             | n-Docosane (C22)         | 629-97-0   | MKCQ3729   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 10            | n-Tetracosane (C24)      | 646-31-1   | UH5GN      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 11            | n-Hexacosane (C26)       | 630-01-3   | MKCV0107   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 12            | n-Octacosane (C28)       | 630-02-4   | BCCM2091   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 13            | n-Triacontane (C30)      | 638-68-6   | MKCW9459   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 14            | n-Dotriacontane (C32)    | 544-85-4   | BCBW0661   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 15            | n-Tetratriacontane (C34) | 14167-59-0 | 6JNHB      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 16            | n-Hexatriacontane (C36)  | 630-06-8   | U30H007    | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
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**Description :** NJEPH Aliphatics Matrix Spike Mix  
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** July 31, 2032 **Storage:** 10°C or colder

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P14127  
P14141  
15  
9/16/25

### CERTIFIED VALUES

| Elution Order | Compound                 | CAS #      | Lot #      | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|--------------------------|------------|------------|--------|-----------------------------|----------------------------------------|
| 1             | n-Nonane (C9)            | 111-84-2   | SHBP9752   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 2             | n-Decane (C10)           | 124-18-5   | SHBS1019   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 3             | n-Dodecane (C12)         | 112-40-3   | SHBP7054   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 4             | n-Tetradecane (C14)      | 629-59-4   | STBL2522   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 5             | n-Hexadecane (C16)       | 544-76-3   | SHBR0670   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 6             | n-Octadecane (C18)       | 593-45-3   | UE5NG      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 7             | n-Eicosane (C20)         | 112-95-8   | MKCN8767   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 8             | n-Heneicosane (C21)      | 629-94-7   | MKCP1960   | 99%    | 200.3 µg/mL                 | +/- 5.1753                             |
| 9             | n-Docosane (C22)         | 629-97-0   | MKCQ3729   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 10            | n-Tetracosane (C24)      | 646-31-1   | UH5GN      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 11            | n-Hexacosane (C26)       | 630-01-3   | MKCV0107   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 12            | n-Octacosane (C28)       | 630-02-4   | BCCM2091   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 13            | n-Triacontane (C30)      | 638-68-6   | MKCW9459   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 14            | n-Dotriacontane (C32)    | 544-85-4   | BCBW0661   | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 15            | n-Tetratriacontane (C34) | 14167-59-0 | 6JNHB      | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 16            | n-Hexatriacontane (C36)  | 630-06-8   | U30H007    | 99%    | 200.0 µg/mL                 | +/- 5.1667                             |
| 17            | n-Octatriacontane (C38)  | 7194-85-6  | 0000207852 | 96%    | 200.0 µg/mL                 | +/- 5.1667                             |



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

www.restek.com

# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis



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

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

**Catalog No. :** 30540 **Lot No.:** A0190424

**Description :** NJEPH Aliphatics Calibration Standard

Aliphatics Calibration Standard 2000µg/mL, Hexane/Carbon Disulfide (80:20), 1mL/ampul

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

**Expiration Date :** November 30, 2029 **Storage:** 25°C nominal

**Handling:** Sonicate prior to use. **Ship:** Ambient

P12361  
↓  
P12370 } Y.P.  
031/6/23

### CERTIFIED VALUES

| Elution Order | Compound                                                              | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2)      |                                                |
|---------------|-----------------------------------------------------------------------|-----------------------------|-------------------------------------------|------------------------------------------------|
| 1             | n-Nonane (C9)<br>CAS # 111-84-2<br>Purity 99%<br>(Lot SHBN5361)       | 2,014.0 µg/mL               | +/- 11.8193<br>+/- 50.0027<br>+/- 59.9491 | µg/mL<br>Gravimetric<br>Unstressed<br>Stressed |
| 2             | n-Decane (C10)<br>CAS # 124-18-5<br>Purity 99%<br>(Lot SHBN8619)      | 2,014.7 µg/mL               | +/- 11.8232<br>+/- 50.0193<br>+/- 59.9689 | µg/mL<br>Gravimetric<br>Unstressed<br>Stressed |
| 3             | Naphthalene<br>CAS # 91-20-3<br>Purity 99%<br>(Lot MKCH0219)          | 2,015.3 µg/mL               | +/- 11.8271<br>+/- 50.0358<br>+/- 59.9888 | µg/mL<br>Gravimetric<br>Unstressed<br>Stressed |
| 4             | n-Dodecane (C12)<br>CAS # 112-40-3<br>Purity 99%<br>(Lot SHBN7174)    | 2,008.0 µg/mL               | +/- 11.7841<br>+/- 49.8538<br>+/- 59.7705 | µg/mL<br>Gravimetric<br>Unstressed<br>Stressed |
| 5             | 2-Methylnaphthalene<br>CAS # 91-57-6<br>Purity 96%<br>(Lot STBK0259)  | 2,007.0 µg/mL               | +/- 11.7784<br>+/- 49.8299<br>+/- 59.7419 | µg/mL<br>Gravimetric<br>Unstressed<br>Stressed |
| 6             | n-Tetradecane (C14)<br>CAS # 629-59-4<br>Purity 99%<br>(Lot STBK2282) | 2,016.7 µg/mL               | +/- 11.8349<br>+/- 50.0689<br>+/- 60.0284 | µg/mL<br>Gravimetric<br>Unstressed<br>Stressed |
| 7             | n-Hexadecane (C16)<br>CAS # 544-76-3<br>Purity 98%<br>(Lot SHBM4146)  | 2,014.9 µg/mL               | +/- 11.8244<br>+/- 50.0246<br>+/- 59.9753 | µg/mL<br>Gravimetric<br>Unstressed<br>Stressed |

|                                                 |                                                            |                  |               |     |         |       |             |
|-------------------------------------------------|------------------------------------------------------------|------------------|---------------|-----|---------|-------|-------------|
| 8                                               | n-Octadecane (C18)<br>CAS # 593-45-3<br>Purity 97%         | (Lot VZKOJ)      | 2,004.7 µg/mL | +/- | 11.7645 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 49.7710 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 59.6712 | µg/mL | Stressed    |
| 9                                               | n-Eicosane (C20)<br>CAS # 112-95-8<br>Purity 99%           | (Lot MKCF7888)   | 2,018.0 µg/mL | +/- | 11.8428 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 50.1020 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 60.0681 | µg/mL | Stressed    |
| 10                                              | n-Heneicosane (C21)<br>CAS # 629-94-7<br>Purity 99%        | (Lot MKCL3226)   | 2,000.7 µg/mL | +/- | 11.7410 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 49.6717 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 59.5522 | µg/mL | Stressed    |
| 11                                              | n-Docosane (C22)<br>CAS # 629-97-0<br>Purity 99%           | (Lot MKCL8918)   | 2,005.3 µg/mL | +/- | 11.7684 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 49.7876 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 59.6911 | µg/mL | Stressed    |
| 12                                              | n-Tetracosane (C24)<br>CAS # 646-31-1<br>Purity 99%        | (Lot MKCN2863)   | 2,018.0 µg/mL | +/- | 11.8428 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 50.1020 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 60.0681 | µg/mL | Stressed    |
| 13                                              | n-Hexacosane (C26)<br>CAS # 630-01-3<br>Purity 99%         | (Lot MKCD4540)   | 2,014.0 µg/mL | +/- | 11.8193 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 50.0027 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 59.9491 | µg/mL | Stressed    |
| 14                                              | n-Octacosane (C28)<br>CAS # 630-02-4<br>Purity 99%         | (Lot BCCG0084)   | 2,002.0 µg/mL | +/- | 11.7489 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 49.7048 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 59.5919 | µg/mL | Stressed    |
| 15                                              | n-Triacontane (C30)<br>CAS # 638-68-6<br>Purity 97%        | (Lot MKCQ9436)   | 2,011.1 µg/mL | +/- | 11.8025 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 49.9316 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 59.8637 | µg/mL | Stressed    |
| 16                                              | n-Dotriacontane (C32)<br>CAS # 544-85-4<br>Purity 99%      | (Lot BCBW0661)   | 2,012.0 µg/mL | +/- | 11.8075 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 49.9531 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 59.8895 | µg/mL | Stressed    |
| 17                                              | n-Tetratriacontane (C34)<br>CAS # 14167-59-0<br>Purity 99% | (Lot OML4N)      | 2,006.7 µg/mL | +/- | 11.7762 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 49.8207 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 59.7308 | µg/mL | Stressed    |
| 18                                              | n-Hexatriacontane (C36)<br>CAS # 630-06-8<br>Purity 99%    | (Lot Z27H018)    | 2,017.3 µg/mL | +/- | 11.8388 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 50.0855 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 60.0483 | µg/mL | Stressed    |
| 19                                              | n-Octatriacontane (C38)<br>CAS # 7194-85-6<br>Purity 96%   | (Lot 0000145137) | 2,017.3 µg/mL | +/- | 11.8385 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 50.0842 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 60.0467 | µg/mL | Stressed    |
| 20                                              | n-Tetracontane (C40)<br>CAS # 4181-95-7<br>Purity 99%      | (Lot BSBME)      | 2,008.7 µg/mL | +/- | 11.7880 | µg/mL | Gravimetric |
|                                                 |                                                            |                  |               | +/- | 49.8703 | µg/mL | Unstressed  |
|                                                 |                                                            |                  |               | +/- | 59.7903 | µg/mL | Stressed    |
| <b>Solvent:</b> Hexane/Carbon disulfide (80:20) |                                                            |                  |               |     |         |       |             |
|                                                 | CAS # 110-54-3/75-15-0                                     |                  |               |     |         |       |             |
|                                                 | Purity 99%                                                 |                  |               |     |         |       |             |

**Column:**  
30m x 0.25mm x 0.25µm  
Pxx-5 (cat.#10223)

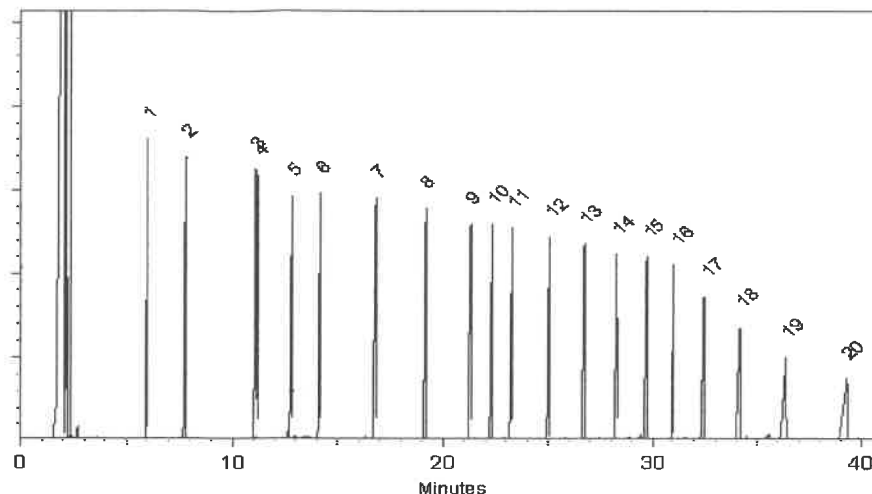
**Carrier Gas:**  
hydrogen-constant pressure 10 psi.

**Temp. Program:**  
40°C (hold 2 min.) to 330°C  
@ 10°C/min. (hold 10 min.)

**Inj. Temp:**  
250°C

**Det. Temp:**  
330°C

**Det. Type:**  
FID



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

  
Morgan Craighead - Mix Technician

Date Mixed: 10-Oct-2022      Balance: 1128360905

  
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 20-Oct-2022

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at [www.restek.com/Contact-Us](http://www.restek.com/Contact-Us) for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

| Label Conditions                                          | Standard Conditions | Non-Standard Conditions |
|-----------------------------------------------------------|---------------------|-------------------------|
| 25°C Nominal (Room Temperature)                           | < 60°C              | ≥ 60°C up to 7 days     |
| 10°C or colder (Refrigerate)                              | < 40°C              | ≥ 40°C up to 7 days     |
| 0°C or colder (Freezer)<br>-20°C or colder (Deep Freezer) | < 25°C              | ≥ 25°C up to 7 days     |

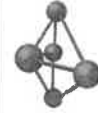
- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at [www.restek.com/Contact-Us](http://www.restek.com/Contact-Us).
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

### Manufacturing Notes:

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

### Handling Notes:

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



CERTIFIED WEIGHT REPORT

Part Number: 95999

Lot Number: 040524

Description: NJ EPH Aliphatic n-Hydrocarbons - Revised  
20 components

Expiration Date: 040534

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test ID#: 6UTB

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

CAUTION: Sonicate Before Use

Solvent(s):  
Cyclohexane

Lot#  
28930

|                |                 |        |      |
|----------------|-----------------|--------|------|
| Formulated By: | Anthony Mahoney | 040524 | DATE |
| Reviewed By:   | Pedro L. Rentas | 040524 | DATE |

P13278  
2  
P13287  
Y.P.  
04/11/24

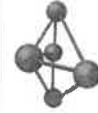
5E-05 Balance Uncertainty  
0.001 Flask Uncertainty

CAUTION: Sonicate Before Use

| Compound               |        |           |                   |                      |                      |            |                    |         |                  |                  |                                   |                      |                                        |                | SDS Information        |                   |  |
|------------------------|--------|-----------|-------------------|----------------------|----------------------|------------|--------------------|---------|------------------|------------------|-----------------------------------|----------------------|----------------------------------------|----------------|------------------------|-------------------|--|
| (RM#)                  | Lot    | Dil.      | Initial Vol. (mL) | Initial Conc.(µg/mL) | Nominal Conc (µg/mL) | Purity (%) | Purity Uncertainty | Pipette | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) (+/-) (µg/mL) | Expanded Uncertainty | (Solvent Safety Info. On Attached pg.) |                |                        |                   |  |
|                        |        |           |                   |                      |                      |            |                    |         |                  |                  |                                   |                      | CAS#                                   | OSHA PEL (TWA) |                        |                   |  |
|                        |        |           |                   |                      |                      |            |                    |         |                  |                  |                                   |                      |                                        | LD50           |                        |                   |  |
| 1. 2-Methylnaphthalene | (0214) | MKB3783V  | NA                | NA                   | NA                   | 1000       | 97                 | 0.2     | NA               | 0.02579          | 0.02594                           | 1005.7               | 5.7                                    | 91-57-6        | N/A                    | or-rat 1630mg/kg  |  |
| 2. Naphthalene         | (0222) | MKB28680V | NA                | NA                   | NA                   | 1000       | 100                | 0.2     | NA               | 0.02502          | 0.02511                           | 1003.7               | 5.7                                    | 91-20-3        | 10 ppm (50mg/m3(8H)    | or-rat 490mg/kg   |  |
| 3. n-Nonane            | 95708  | 120222    | 1.00              | 25.00                | 1000.7               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 1000.0               | 4.2                                    | 111-84-2       | 200 ppm (1050mg/m3(8H) | ivr-mus 218mg/kg  |  |
| 4. n-Decane            | 95708  | 120222    | 1.00              | 25.00                | 1000.9               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 1000.2               | 4.2                                    | 124-18-5       | N/A                    | N/A               |  |
| 5. n-Dodecane          | 95708  | 120222    | 1.00              | 25.00                | 1000.7               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 1000.0               | 4.2                                    | 112-40-3       | N/A                    | ivr-mus 3494mg/kg |  |
| 6. n-Tetradecane       | 95708  | 120222    | 1.00              | 25.00                | 1002.1               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 1001.3               | 4.2                                    | 629-59-4       | N/A                    | N/A               |  |
| 7. n-Hexadecane        | 95708  | 120222    | 1.00              | 25.00                | 1000.5               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 999.7                | 4.2                                    | 544-76-3       | N/A                    | N/A               |  |
| 8. n-Octadecane        | 95708  | 120222    | 1.00              | 25.00                | 1001.0               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 1000.3               | 4.1                                    | 593-45-3       | N/A                    | N/A               |  |
| 9. n-Eicosane          | 95708  | 120222    | 1.00              | 25.00                | 1001.0               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 1000.3               | 4.2                                    | 112-95-8       | N/A                    | N/A               |  |
| 10. n-Henelcosane      | 95708  | 120222    | 1.00              | 25.00                | 1002.4               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 1001.6               | 4.2                                    | 628-94-7       | N/A                    | N/A               |  |
| 11. n-Docosane         | 95708  | 120222    | 1.00              | 25.00                | 1001.9               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 1001.2               | 4.2                                    | 629-97-0       | N/A                    | N/A               |  |
| 12. n-Tetracosane      | 95708  | 120222    | 1.00              | 25.00                | 1000.8               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 1000.1               | 4.2                                    | 646-31-1       | N/A                    | N/A               |  |
| 13. n-Hexacosane       | 95708  | 120222    | 1.00              | 25.00                | 1001.2               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 1000.4               | 4.2                                    | 630-01-3       | N/A                    | N/A               |  |
| 14. n-Octacosane       | 95708  | 120222    | 1.00              | 25.00                | 1000.5               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 999.8                | 4.2                                    | 630-02-4       | N/A                    | N/A               |  |
| 15. n-Triacontane      | 95708  | 120222    | 1.00              | 25.00                | 1000.5               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 999.8                | 4.2                                    | 638-68-6       | N/A                    | N/A               |  |
| 16. n-Dotriacontane    | 95708  | 120222    | 1.00              | 25.00                | 1000.5               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 999.8                | 4.3                                    | 544-85-4       | N/A                    | ivr-mus 100mg/kg  |  |
| 17. n-Tetraacontane    | 95708  | 120222    | 1.00              | 25.00                | 1000.4               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 999.7                | 4.2                                    | 14167-59-0     | N/A                    | N/A               |  |
| 18. n-Hexatriacontane  | 95708  | 120222    | 1.00              | 25.00                | 1000.4               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 1000.8               | 4.2                                    | 630-08-8       | N/A                    | N/A               |  |
| 19. n-Octatriacontane  | 95708  | 120222    | 1.00              | 25.00                | 1001.5               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 999.6                | 4.3                                    | 7194-85-6      | N/A                    | N/A               |  |
| 20. n-Tetracontane     | 95708  | 120222    | 1.00              | 25.00                | 1000.3               | 1000       | NA                 | NA      | 0.013            | NA               | NA                                | 999.9                | 4.3                                    | 4181-95-7      | N/A                    | N/A               |  |

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





**CERTIFIED WEIGHT REPORT**

Part Number: **95999**

Lot Number: **040524**

Description: **NJ EPH Aliphatic n-Hydrocarbons - Revised**  
20 components

Expiration Date: **040534**

Recommended Storage: **Ambient (20 °C)**

Nominal Concentration (µg/mL): **1000**

NIST Test ID#: **6UTB**

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

**CAUTION: Sonicate Before Use**

Solvent(s):  
Cyclohexane

Lot#  
28930

P13278  
2  
P13287  
Y.P.  
04/11/24

5E-05 Balance Uncertainty  
0.001 Flask Uncertainty

|                |                 |        |      |
|----------------|-----------------|--------|------|
| Formulated By: | Anthony Mahoney | 040524 | DATE |
| Reviewed By:   | Pedro L. Rentas | 040524 | DATE |

| Compound |                     | Part Number | (RM#)     | Lot Number | DIL Factor | Initial Vol. (mL) | Initial Conc (µg/mL) | Nominal Conc (µg/mL) | Purity (%) | Purity Uncertainty | Pipette | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information                        |                                                     |
|----------|---------------------|-------------|-----------|------------|------------|-------------------|----------------------|----------------------|------------|--------------------|---------|------------------|------------------|---------------------|------------------------------------|----------------------------------------|-----------------------------------------------------|
|          |                     |             |           |            |            |                   |                      |                      |            |                    |         |                  |                  |                     |                                    | (Solvent Safety Info. On Attached pg.) |                                                     |
|          |                     |             |           |            |            |                   |                      |                      |            |                    |         |                  |                  |                     |                                    | CAS#                                   |                                                     |
|          |                     |             |           |            |            |                   |                      |                      |            |                    |         |                  |                  |                     |                                    | OSHA PEL (TWA)                         |                                                     |
|          |                     |             |           |            |            |                   |                      |                      |            |                    |         |                  |                  |                     |                                    | LD50                                   |                                                     |
| 1.       | 2-Methylnaphthalene | (0214)      | MKBF3783V | NA         | NA         | NA                | NA                   | 1000                 | 97         | 0.2                | NA      | 0.02579          | 0.02594          | 1005.7              | 5.7                                | 91-57-6                                | N/A                                                 |
| 2.       | Naphthalene         | (0222)      | MKB28680V | NA         | NA         | NA                | NA                   | 1000                 | 100        | 0.2                | NA      | 0.02502          | 0.02511          | 1003.7              | 5.7                                | 91-20-3                                | 10 ppm (50mg/m <sup>3</sup> 8H) orl-rat 1630mg/kg   |
| 3.       | n-Nonane            | 95708       | 120222    | 1.00       | 25.00      | 1000.7            | 1000.7               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 1000.0              | 4.2                                | 111-84-2                               | 200 ppm (1050mg/m <sup>3</sup> 8H) orl-rat 490mg/kg |
| 4.       | n-Decane            | 95708       | 120222    | 1.00       | 25.00      | 1000.9            | 1000.9               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 1000.2              | 4.2                                | 124-18-5                               | ivn-mus 218mg/kg                                    |
| 5.       | n-Dodecane          | 95708       | 120222    | 1.00       | 25.00      | 1000.7            | 1000.7               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 1000.0              | 4.2                                | 112-40-3                               | N/A                                                 |
| 6.       | n-Tetradecane       | 95708       | 120222    | 1.00       | 25.00      | 1002.1            | 1002.1               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 1001.3              | 4.2                                | 629-59-4                               | ivn-mus 3494mg/kg                                   |
| 7.       | n-Hexadecane        | 95708       | 120222    | 1.00       | 25.00      | 1000.5            | 1000.5               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 999.7               | 4.2                                | 544-76-3                               | N/A                                                 |
| 8.       | n-Octadecane        | 95708       | 120222    | 1.00       | 25.00      | 1001.0            | 1001.0               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 1000.3              | 4.1                                | 583-45-3                               | N/A                                                 |
| 9.       | n-Eicosane          | 95708       | 120222    | 1.00       | 25.00      | 1001.0            | 1001.0               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 1000.3              | 4.2                                | 112-95-8                               | N/A                                                 |
| 10.      | n-Henicosane        | 95708       | 120222    | 1.00       | 25.00      | 1002.4            | 1002.4               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 1001.6              | 4.2                                | 629-94-7                               | N/A                                                 |
| 11.      | n-Docosane          | 95708       | 120222    | 1.00       | 25.00      | 1001.9            | 1001.9               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 1001.2              | 4.2                                | 629-97-0                               | N/A                                                 |
| 12.      | n-Tetracosane       | 95708       | 120222    | 1.00       | 25.00      | 1000.8            | 1000.8               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 1000.1              | 4.2                                | 646-31-1                               | N/A                                                 |
| 13.      | n-Hexacosane        | 95708       | 120222    | 1.00       | 25.00      | 1001.2            | 1001.2               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 1000.4              | 4.2                                | 630-01-3                               | N/A                                                 |
| 14.      | n-Octacosane        | 95708       | 120222    | 1.00       | 25.00      | 1000.5            | 1000.5               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 999.8               | 4.2                                | 630-02-4                               | N/A                                                 |
| 15.      | n-Triacontane       | 95708       | 120222    | 1.00       | 25.00      | 1000.5            | 1000.5               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 999.8               | 4.2                                | 638-68-6                               | N/A                                                 |
| 16.      | n-Dotriacontane     | 95708       | 120222    | 1.00       | 25.00      | 1000.5            | 1000.5               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 999.8               | 4.3                                | 544-85-4                               | ivn-mus 100mg/kg                                    |
| 17.      | n-Tetraacontane     | 95708       | 120222    | 1.00       | 25.00      | 1000.4            | 1000.4               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 999.7               | 4.2                                | 14167-59-0                             | N/A                                                 |
| 18.      | n-Hexatriacontane   | 95708       | 120222    | 1.00       | 25.00      | 1001.5            | 1001.5               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 1000.8              | 4.2                                | 630-06-8                               | N/A                                                 |
| 19.      | n-Octatriacontane   | 95708       | 120222    | 1.00       | 25.00      | 1000.3            | 1000.3               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 999.6               | 4.3                                | 7184-86-6                              | N/A                                                 |
| 20.      | n-Tetracontane      | 95708       | 120222    | 1.00       | 25.00      | 1000.6            | 1000.6               | 1000                 | NA         | 0.013              | NA      | NA               | NA               | 999.9               | 4.3                                | 4181-95-7                              | N/A                                                 |

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





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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. :** 31098 **Lot No.:** A0213283

**Description :** 1-Chlorooctadecane Standard

1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** July 31, 2031 **Storage:** 10°C or colder

**Ship:** Ambient

P13595  
↓  
P13624 } Y.P.  
10/16/24

### CERTIFIED VALUES

| Elution Order | Compound           | CAS #     | Lot #    | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|--------------------|-----------|----------|--------|-----------------------------|----------------------------------------|
| 1             | 1-Chlorooctadecane | 3386-33-2 | 15018900 | 99%    | 10,058.0 µg/mL              | +/- 565.0578                           |

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

**Solvent:** Methylene chloride  
**CAS #** 75-09-2  
**Purity** 99%

## Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

hydrogen-constant pressure 10 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

330°C

**Det. Type:**

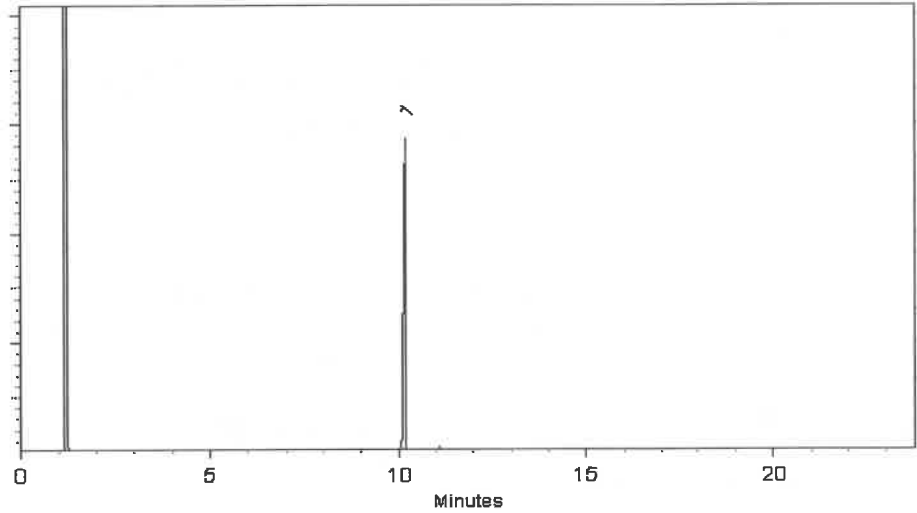
FID

**Split Vent:**

10 ml/min.

**Inj. Vol**

1µl



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

Stacey Wanner - Operations Technician I

**Date Mixed:** 28-Jun-2024

**Balance Serial #** B345965662

Dillan Murphy - Operations Technician I

**Date Passed:** 01-Jul-2024

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

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

### Manufacturing Notes:

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

### Handling Notes:

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





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## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

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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. :** 31097 **Lot No.:** A0216631  
**Description :** o-Terphenyl Standard  
o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** April 30, 2028 **Storage:** 10°C or colder  
**Handling:** Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.  
↓  
P13694 } 10/16/24

### CERTIFIED VALUES

| Elution Order | Compound    | CAS #   | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|-------------|---------|-------|--------|-----------------------------|----------------------------------------|
| 1             | o-Terphenyl | 84-15-1 | GKSSA | 99%    | 10,065.0 µg/mL              | +/- 453.3336                           |

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

**Solvent:** Methylene chloride  
**CAS #** 75-09-2  
**Purity** 99%

## Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

hydrogen-constant pressure 10 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

330°C

**Det. Type:**

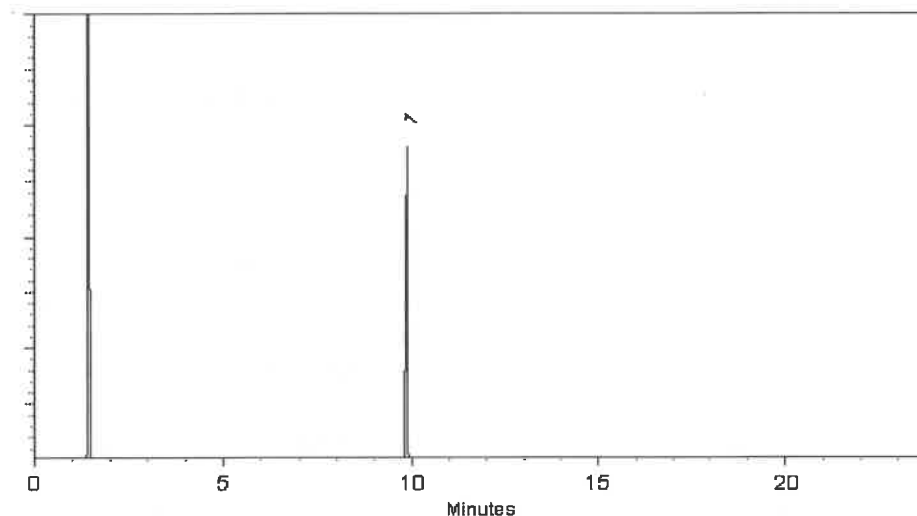
FID

**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.

Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-2024

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

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

### Manufacturing Notes:

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

### Handling Notes:

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

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

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

**Catalog No. :** 31098 **Lot No.:** A0225485  
**Description :** 1-Chlorooctadecane Standard  
1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** June 30, 2032 **Storage:** 10°C or colder  
**Ship:** Ambient

P14028  
↓  
P14042 } RC/  
6/2/25

## CERTIFIED VALUES

| Elution Order | Compound           | CAS #     | Lot #    | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|--------------------|-----------|----------|--------|-----------------------------|----------------------------------------|
| 1             | 1-Chlorooctadecane | 3386-33-2 | 15711200 | 99%    | 10,006.8 µg/mL              | +/- 562.1814                           |

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

**Solvent:** Methylene chloride  
**CAS #** 75-09-2  
**Purity** 99%

# Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

hydrogen-constant pressure 10 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

330°C

**Det. Type:**

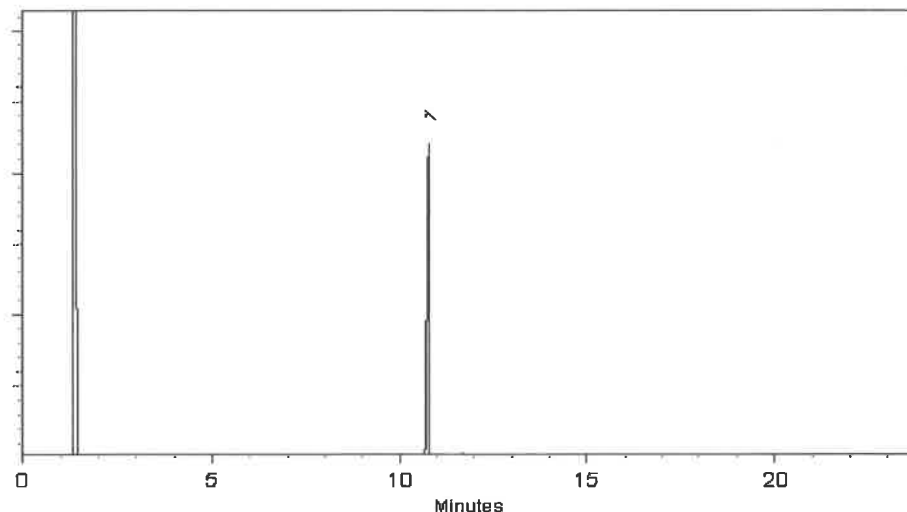
FID

**Split Vent:**

10 ml/min.

**Inj. Vol**

1µl



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*Sam Moodler*

Sam Moodler - Operations Tech I

Date Mixed: 08-May-2025

Balance Serial # 1128360905

*Brittany Federinko*

Brittany Federinko - Operations Tech II

Date Passed: 13-May-2025

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



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P14028  
↓  
P14042  
RC/  
6/2/25

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**Det. Temp:**

330°C

**Det. Type:**

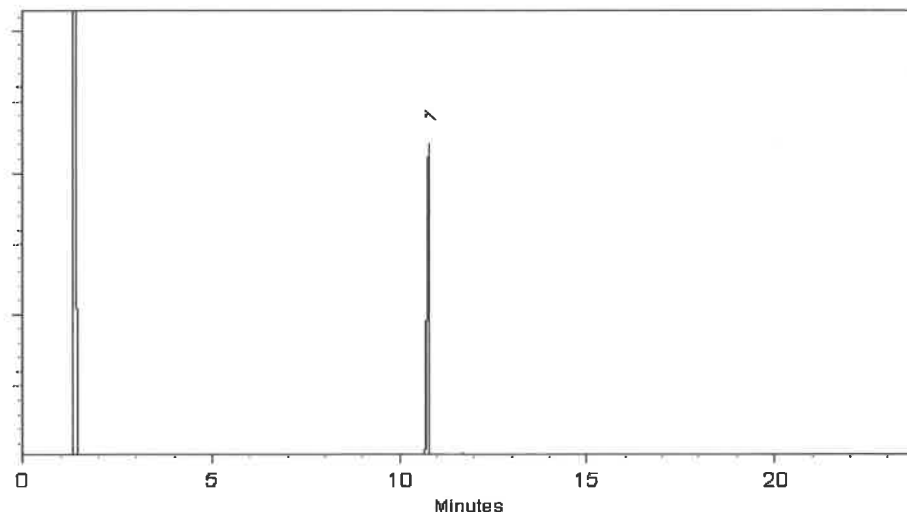
FID

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1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** June 30, 2032 **Storage:** 10°C or colder  
**Ship:** Ambient

P14028  
↓  
P14042  
RC/  
6/2/25

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|---------------|--------------------|-----------|----------|--------|-----------------------------|----------------------------------------|
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**CAS #** 75-09-2  
**Purity** 99%

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hydrogen-constant pressure 10 psi.

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**Inj. Temp:**

250°C

**Det. Temp:**

330°C

**Det. Type:**

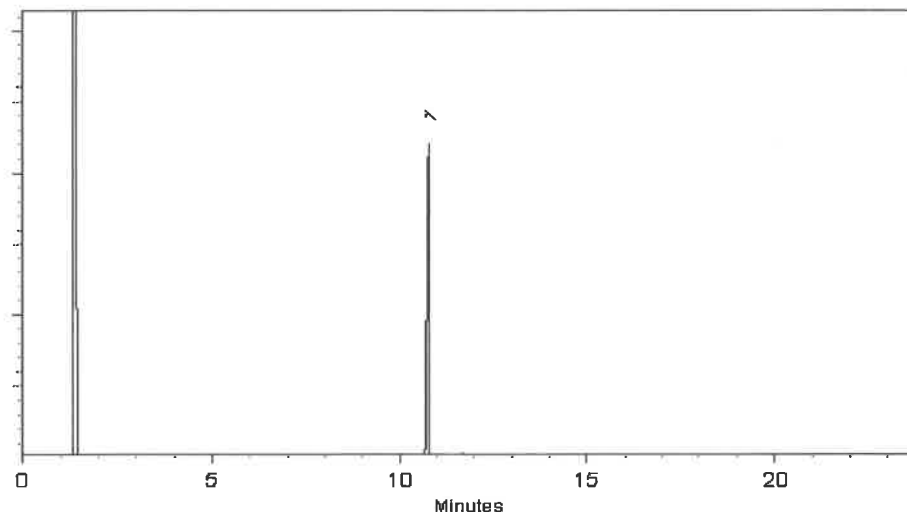
FID

**Split Vent:**

10 ml/min.

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1µl



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Sam Moodler - Operations Tech I

Date Mixed: 08-May-2025

Balance Serial # 1128360905

*Brittany Federinko*

Brittany Federinko - Operations Tech II

Date Passed: 13-May-2025

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1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride,  
1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** June 30, 2032 **Storage:** 10°C or colder  
**Ship:** Ambient

P14028  
↓  
P14042  
RC/  
6/2/25

## CERTIFIED VALUES

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|---------------|--------------------|-----------|----------|--------|-----------------------------|----------------------------------------|
| 1             | 1-Chlorooctadecane | 3386-33-2 | 15711200 | 99%    | 10,006.8 µg/mL              | +/- 562.1814                           |

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

**Solvent:** Methylene chloride  
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**Column:**

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

**Carrier Gas:**

hydrogen-constant pressure 10 psi.

**Temp. Program:**

75°C (hold 1 min.) to 330°C  
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250°C

**Det. Temp:**

330°C

**Det. Type:**

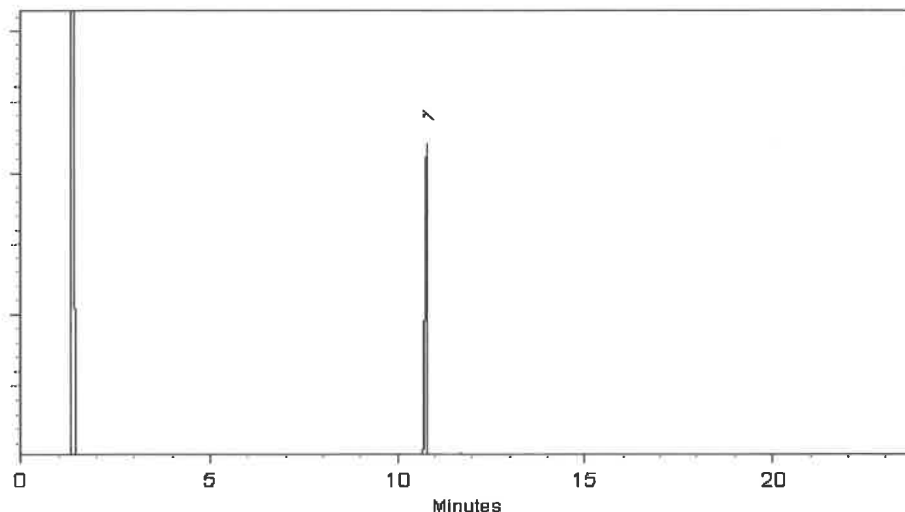
FID

**Split Vent:**

10 ml/min.

**Inj. Vol**

1µl



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*Sam Moodler*

Sam Moodler - Operations Tech I

Date Mixed: 08-May-2025

Balance Serial # 1128360905

*Brittany Federinko*

Brittany Federinko - Operations Tech II

Date Passed: 13-May-2025

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Registered Quality System  
Certificate #FM 80397



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

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CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

*chromatographic plus*



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

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**Catalog No. :** 31098 **Lot No.:** A0225485

**Description :** 1-Chlorooctadecane Standard

1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** June 30, 2032 **Storage:** 10°C or colder

**Ship:** Ambient

P14028  
↓  
P14042 } RC/  
6/2/25

## CERTIFIED VALUES

| Elution Order | Compound           | CAS #     | Lot #    | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|--------------------|-----------|----------|--------|-----------------------------|----------------------------------------|
| 1             | 1-Chlorooctadecane | 3386-33-2 | 15711200 | 99%    | 10,006.8 µg/mL              | +/- 562.1814                           |

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

**Solvent:** Methylene chloride  
**CAS #** 75-09-2  
**Purity** 99%

# Quality Confirmation Test

**Column:**

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

**Carrier Gas:**

hydrogen-constant pressure 10 psi.

**Temp. Program:**

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

**Inj. Temp:**

250°C

**Det. Temp:**

330°C

**Det. Type:**

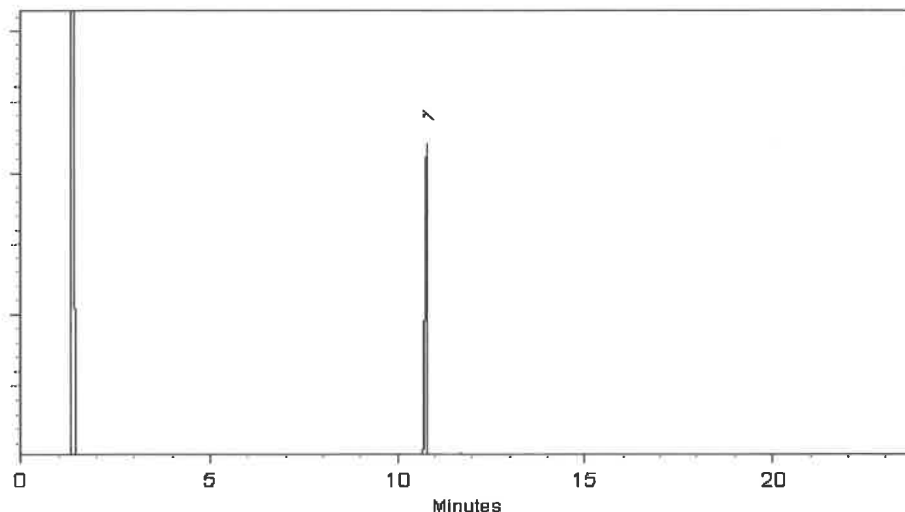
FID

**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.

*Sam Moodler*

Sam Moodler - Operations Tech I

Date Mixed: 08-May-2025

Balance Serial # 1128360905

*Brittany Federinko*

Brittany Federinko - Operations Tech II

Date Passed: 13-May-2025

Manufactured under Restek's ISO 9001:2015  
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**Catalog No. :** 30543 **Lot No.:** A0231145

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2031 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P14195 } (40)  
↓  
P14234  
↓  
RAU  
10/21/25

#### CERTIFIED VALUES

| Elution Order | Compound               | CAS #    | Lot #        | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|------------------------|----------|--------------|--------|-----------------------------|----------------------------------------|
| 1             | 1,2,3-Trimethylbenzene | 526-73-8 | 8776.10-39   | 98%    | 200.7 µg/mL                 | +/- 9.0431                             |
| 2             | Naphthalene            | 91-20-3  | STBK9311     | 99%    | 200.8 µg/mL                 | +/- 9.0474                             |
| 3             | 2-Methylnaphthalene    | 91-57-6  | STBL3028     | 99%    | 200.4 µg/mL                 | +/- 9.0294                             |
| 4             | Acenaphthylene         | 208-96-8 | 214935V18H   | 95%    | 200.6 µg/mL                 | +/- 9.0402                             |
| 5             | Acenaphthene           | 83-32-9  | MKCV8166     | 99%    | 200.0 µg/mL                 | +/- 9.0114                             |
| 6             | Fluorene               | 86-73-7  | 10246250     | 98%    | 201.1 µg/mL                 | +/- 9.0608                             |
| 7             | Phenanthrene           | 85-01-8  | MKCV8193     | 99%    | 200.4 µg/mL                 | +/- 9.0294                             |
| 8             | Anthracene             | 120-12-7 | MKCW9141     | 99%    | 201.2 µg/mL                 | +/- 9.0655                             |
| 9             | Fluoranthene           | 206-44-0 | A0458721     | 99%    | 200.8 µg/mL                 | +/- 9.0474                             |
| 10            | Pyrene                 | 129-00-0 | BCCL8032     | 99%    | 200.8 µg/mL                 | +/- 9.0474                             |
| 11            | Benz(a)anthracene      | 56-55-3  | I80012022BAA | 99%    | 200.8 µg/mL                 | +/- 9.0474                             |
| 12            | Chrysene               | 218-01-9 | RP250926RSR  | 99%    | 200.4 µg/mL                 | +/- 9.0294                             |
| 13            | Benzo(b)fluoranthene   | 205-99-2 | 022013B      | 99%    | 200.8 µg/mL                 | +/- 9.0474                             |
| 14            | Benzo(k)fluoranthene   | 207-08-9 | 012022K      | 99%    | 201.2 µg/mL                 | +/- 9.0655                             |
| 15            | Benzo(a)pyrene         | 50-32-8  | NQLXA        | 98%    | 200.7 µg/mL                 | +/- 9.0431                             |
| 16            | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17-YMK-40-2  | 99%    | 200.8 µg/mL                 | +/- 9.0474                             |



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**Catalog No. :** 30543 **Lot No.:** A0231145

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2031 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P14195 } (40)  
↓  
P14234  
1  
RAU  
10/21/25

#### CERTIFIED VALUES

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**Catalog No. :** 30543 **Lot No.:** A0231145

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2031 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P14195 } (40)  
↓  
P14234  
↓  
RAU  
10/21/25

#### CERTIFIED VALUES

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**Catalog No. :** 30543 **Lot No.:** A0231145

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

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P14195 } (40)  
↓  
P14234  
↓  
RAU  
10/21/25

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↓  
P14234  
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P14195 } (40)  
↓  
P14234  
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P14195 } (40)  
↓  
P14234  
↓  
RAU  
10/21/25

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| 4             | Acenaphthylene         | 208-96-8 | 214935V18H   | 95%    | 200.6 µg/mL                 | +/- 9.0402                             |
| 5             | Acenaphthene           | 83-32-9  | MKCV8166     | 99%    | 200.0 µg/mL                 | +/- 9.0114                             |
| 6             | Fluorene               | 86-73-7  | 10246250     | 98%    | 201.1 µg/mL                 | +/- 9.0608                             |
| 7             | Phenanthrene           | 85-01-8  | MKCV8193     | 99%    | 200.4 µg/mL                 | +/- 9.0294                             |
| 8             | Anthracene             | 120-12-7 | MKCW9141     | 99%    | 201.2 µg/mL                 | +/- 9.0655                             |
| 9             | Fluoranthene           | 206-44-0 | A0458721     | 99%    | 200.8 µg/mL                 | +/- 9.0474                             |
| 10            | Pyrene                 | 129-00-0 | BCCL8032     | 99%    | 200.8 µg/mL                 | +/- 9.0474                             |
| 11            | Benz(a)anthracene      | 56-55-3  | I80012022BAA | 99%    | 200.8 µg/mL                 | +/- 9.0474                             |
| 12            | Chrysene               | 218-01-9 | RP250926RSR  | 99%    | 200.4 µg/mL                 | +/- 9.0294                             |
| 13            | Benzo(b)fluoranthene   | 205-99-2 | 022013B      | 99%    | 200.8 µg/mL                 | +/- 9.0474                             |
| 14            | Benzo(k)fluoranthene   | 207-08-9 | 012022K      | 99%    | 201.2 µg/mL                 | +/- 9.0655                             |
| 15            | Benzo(a)pyrene         | 50-32-8  | NQLXA        | 98%    | 200.7 µg/mL                 | +/- 9.0431                             |
| 16            | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17-YMK-40-2  | 99%    | 200.8 µg/mL                 | +/- 9.0474                             |



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

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## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

chromatographic plus



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

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

**Catalog No. :** 30543 **Lot No.:** A0231145

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2031 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P14195 } (40)  
↓  
P14234  
↓  
RAU  
10/21/25

### CERTIFIED VALUES

| Elution Order | Compound               | CAS #    | Lot #        | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|------------------------|----------|--------------|--------|-----------------------------|----------------------------------------|
| 1             | 1,2,3-Trimethylbenzene | 526-73-8 | 8776.10-39   | 98%    | 200.7 µg/mL                 | +/- 9.0431                             |
| 2             | Naphthalene            | 91-20-3  | STBK9311     | 99%    | 200.8 µg/mL                 | +/- 9.0474                             |
| 3             | 2-Methylnaphthalene    | 91-57-6  | STBL3028     | 99%    | 200.4 µg/mL                 | +/- 9.0294                             |
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### chromatographic plus



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

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



Material No.: 9262-03

Batch No.: 25C0362005

Manufactured Date: 2025-01-29

Expiration Date: 2026-04-30

Revision No.: 0

W3234 JB  
OP4H1. 07/28/2025

## Certificate of Analysis

| Test                                                                           | Specification | Result      |
|--------------------------------------------------------------------------------|---------------|-------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)           | <= 5          | 1           |
| ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)            | <= 10         | 6           |
| ECD-Sensitive Impurities (as EthyleneDibromide) - Single Impurity Peak (ng/mL) | <= 5          | 5           |
| Assay (Total Saturated C <sub>6</sub> Isomers) (by GC, corrected for water)    | >= 99.5 %     | 100.0 %     |
| Assay (as n-Hexane) (by GC, corrected for water)                               | >= 95 %       | 100 %       |
| Color (APHA)                                                                   | <= 10         | 10          |
| 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: United States  
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Croak  
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC