

Prep Standard - Chemical Standard Summary

Order ID : Q1985

Test : SVOC-SIMGroup1

Prepbatch ID : PB167952,

Sequence ID/Qc Batch ID: bn051425,bn051425,BN051525,

Standard ID :

EP2609,EP2610,EP2611,SP6740,SP6756,SP6757,SP6758,SP6767,SP6768,SP6774,SP6775,SP6776,SP6777,SP6778,SP6779,SP6780,SP6781,

Chemical ID :

1ul/100ul

sample,E3551,E3657,E3874,E3902,E3904,E3915,E3926,E3930,M6157,S10104,S 11496,S11650,S11788,S11832,S12115,S12195,S12216,S12271,S12486,S12533,S12577,S12651,S12792,S12974,W3112,



| <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> |
|------------------|--|------------------------|------------------|------------------------|--------------------|-------------------------------------|------------------|-------------------------------------|
| 1874 | 10 N SODIUM HYDROXIDE SOLN | EP2609 | 05/07/2025 | 11/07/2025 | RUPESHKUMAR SHAH | Extraction_SC ALE_2 (EX-SC-2) | None | Riteshkumar Patel 05/07/2025 |
| <u>FROM</u> | 1000.00000ml of W3112 + 400.00000gram of E3657 = Final Quantity: 1000.000 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> |
|------------------|---|------------------------|------------------|------------------------|--------------------|---------------------------------|------------------|-------------------------------------|
| 314 | 1.1 H2SO4 SOLN | EP2610 | 05/07/2025 | 11/07/2025 | RUPESHKUMAR SHAH | Extraction_SCALE_2 (EX-SC-2) | None | Riteshkumar Patel 05/07/2025 |
| <u>FROM</u> | 1000.00000ml of M6157 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml | | | | | | | |

Extractions STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------|------------------------|------------------|------------------------|--------------------|-------------------------------------|------------------|-------------------------------------|
| 3923 | Baked Sodium Sulfate | EP2611 | 05/09/2025 | 07/01/2025 | RUPESHKUMAR SHAH | Extraction_SC ALE_2 (EX-SC-2) | None | Riteshkumar Patel 05/09/2025 |

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|---------------------------|------------------------|------------------|------------------------|--------------------|----------------|------------------|--------------------------------|
| 3493 | Internal Standard 0.4 PPM | SP6740 | 02/13/2025 | 07/30/2025 | Rahul Chavli | None | None | Yogesh Patel 02/28/2025 |

FROM 0.10000ml of S12651 + 4.90000ml of E3874 = Final Quantity: 5.000 ml

SVOC 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> |
|------------------|------------------------|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3492 | 8270-SIM-Spike 0.4 PPM | SP6756 | 03/24/2025 | 07/29/2025 | Rahul Chavli | None | None | mohammad ahmed |
| | | | | | | | | 04/07/2025 |

FROM 0.00160ml of S11650 + 0.02000ml of S11788 + 0.04000ml of S12486 + 0.04000ml of S12533 + 0.04000ml of S12974 + 99.85840ml of E3902 = 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> |
|------------------|----------------------|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3895 | 50 ug/ml DFTTP 8270E | SP6757 | 03/31/2025 | 09/30/2025 | Rahul Chavli | None | None | Jagrut Upadhyay |
| | | | | | | | | 04/01/2025 |

FROM 1.00000ml of S12577 + 19.00000ml of E3904 = Final Quantity: 20.000 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> |
|--|----------------------------|------------------------|------------------|------------------------|--------------------|----------------|------------------|------------------------------|
| 3491 | 8270-SIM-Surrogate 0.4 PPM | SP6758 | 04/03/2025 | 07/24/2025 | Rahul Chavli | None | None | mohammad ahmed 04/07/2025 |
| <u>FROM</u> 0.00800ml of S12195 + 0.01600ml of S12216 + 0.04000ml of S11832 + 199.93600ml of E3915 = Final Quantity: 200.000 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> |
|---|---|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3355 | 8270-SIM MDL-3.2PPM CALIBRATION STOCK SOL- 2ND | SP6767 | 04/10/2025 | 07/24/2025 | Jagrut Upadhyay | None | None | Sohil Jodhani |
| <p><u>SOURCE</u></p> <p>0.00630ml of S12195 + 0.01280ml of S12216 + 0.03200ml of S11788 + 0.03200ml of S11832 + 0.06400ml of S12486 + 0.06400ml of S12533 + 0.06400ml of S12974 + 19.72490ml of E3926 = Final Quantity: 20.000 ml</p> | | | | | | | | |



| <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> |
|---|--|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3356 | 8270-SIM MDL-0.4PPM CALIBRATION SOL ICV-2ND | SP6768 | 04/10/2025 | 07/24/2025 | Jagrut Upadhyay | None | None | Sohil Jodhani |
| SOURCE 0.87500ml of E3926 + 0.01000ml of SP6740 + 0.12500ml of SP6767 = Final Quantity: 1.010 ml | | | | | | | | |
| FROM | | | | | | | | |

| <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> |
|--|--|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 3339 | 8270 sim calibration stock 10ppm (CPI) | SP6774 | 04/28/2025 | 06/21/2025 | Jagrut Upadhyay | None | None | Rahul Chavli 05/16/2025 |
| <u>FROM</u> 0.03350ml of S10104 + 0.05000ml of S11496 + 0.12500ml of S11832 + 0.12500ml of S12115 + 0.25000ml of S12271 + 0.25000ml of S12792 + 24.16650ml of E3926 = Final Quantity: 25.000 ml | | | | | | | | |

SVOC 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> |
|------------------|--|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3361 | 8270-SIM MDL-5PPM CALIBRATION SOLUTION | SP6775 | 04/28/2025 | 06/21/2025 | Jagrut Upadhyay | None | None | Rahul Chavli |
| | | | | | | | | 05/16/2025 |

FROM 0.50000ml of E3926 + 0.01000ml of SP6740 + 0.50000ml of SP6774 = Final Quantity: 1.010 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> |
|------------------|--|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3341 | 8270-SIM MDL-3.2PPM CALIBRATION SOLUTION | SP6776 | 04/28/2025 | 06/21/2025 | Jagrut Upadhyay | None | None | Rahul Chavli |
| | | | | | | | | 05/16/2025 |

FROM 0.68000ml of E3926 + 0.01000ml of SP6740 + 0.32000ml of SP6774 = Final Quantity: 1.010 ml

SVOC 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> |
|------------------|--|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3344 | 8270-SIM MDL-1.6PPM CALIBRATION SOLUTION | SP6777 | 04/28/2025 | 06/21/2025 | Jagrut Upadhyay | None | None | Rahul Chavli |
| | | | | | | | | 05/16/2025 |

FROM 0.84000ml of E3926 + 0.01000ml of SP6740 + 0.16000ml of SP6774 = Final Quantity: 1.010 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> |
|------------------|--|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3342 | 8270-SIM MDL-0.8PPM CALIBRATION SOLUTION | SP6778 | 04/28/2025 | 06/21/2025 | Jagrut Upadhyay | None | None | Rahul Chavli |
| | | | | | | | | 05/16/2025 |

FROM 0.92000ml of E3926 + 0.01000ml of SP6740 + 0.08000ml of SP6774 = Final Quantity: 1.010 ml

SVOC 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> |
|------------------|--|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3343 | 8270-SIM MDL-0.4PPM CALIBRATION SOLUTION | SP6779 | 04/28/2025 | 06/21/2025 | Jagrut Upadhyay | None | None | Rahul Chavli |
| | | | | | | | | 05/16/2025 |

FROM 0.96000ml of E3926 + 0.01000ml of SP6740 + 0.04000ml of SP6774 = Final Quantity: 1.010 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> |
|------------------|--|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3345 | 8270-SIM MDL-0.2PPM CALIBRATION SOLUTION | SP6780 | 04/28/2025 | 06/21/2025 | Jagrut Upadhyay | None | None | Rahul Chavli |
| | | | | | | | | 05/16/2025 |

FROM 0.50000ml of E3926 + 0.01000ml of SP6740 + 0.50000ml of SP6779 = Final Quantity: 1.010 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> |
|--|---|------------------------|------------------|------------------------|--------------------|----------------|------------------|--------------------------------|
| 3346 | 8270-SIM MDL-0.1PPM CALIBRATION SOLUTION | SP6781 | 04/28/2025 | 06/21/2025 | Jagrut Upadhyay | None | None | Rahul Chavli 05/16/2025 |
| <u>FROM</u> 0.75000ml of E3926 + 0.01000ml of SP6740 + 0.25000ml of SP6779 = Final Quantity: 1.010 ml | | | | | | | | |

CHEMICAL RECEIPT LOG BOOK

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

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|------------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | PC19510-5 / Sodium Hydroxide Pellets 2.5 Kg, Pk of 4 | 23B1556310 | 12/31/2025 | 12/04/2023 / Rajesh | 12/01/2023 / Rajesh | E3657 |

| 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) | 25A0262002 | 07/30/2025 | 01/30/2025 / Rajesh | 01/20/2025 / Rajesh | E3874 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|--|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9254-03 / Acetone, Ultra Resi (cs/4x4L) | 24H2762008 | 09/18/2025 | 03/18/2025 / RUPESH | 02/12/2025 / RUPESH | E3902 |

| 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) | 24K1762005 | 01/07/2026 | 03/13/2025 / | 12/27/2024 / RUPESH | E3904 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|--|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9254-03 / Acetone, Ultra Resi (cs/4x4L) | 24H2762008 | 09/26/2025 | 03/26/2025 / Rajesh | 03/19/2025 / RUPESH | E3915 |

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) | 25A0262002 | 10/08/2025 | 04/08/2025 / Rajesh | 02/07/2025 / Rajesh | E3926 |

| 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) | 25A0262002 | 02/20/2026 | 05/02/2025 / RUPESH | 03/09/2025 / RUPESH | E3930 |

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

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-------------------|---|--------|-----------------|-------------------------|-----------------------------|----------------|
| CPI International | Z-112090-04 / CLP Acid Surrogate Solution, 7500 mg/L, 1ml | 440246 | 07/30/2025 | 01/30/2025 / anahy | 12/09/2021 / Christian | S10104 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-------------------|---|--------|-----------------|-------------------------|-----------------------------|----------------|
| CPI International | Z-110094-02 / CLP Base/Neutral Surrogate Solution, 5000 mg/L, 1ml | 506889 | 10/28/2025 | 04/28/2025 / Jagrut | 08/11/2023 / Yogesh | S11496 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|---|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek | 555872 / Custom Standard, pentachlorophenol Std [CS 5328-5] | A0201728 | 07/29/2025 | 01/29/2025 / anahy | 11/09/2023 / Yogesh | S11650 |

CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|---|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek | 31853 / 1,4-Dioxane, 2000 ug/ml , Solvent: Methylene Chloride | A0196453 | 09/10/2025 | 03/10/2025 / anahy | 11/21/2023 / Rahul | S11788 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|---|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek | 33913 / SOM01.0 SIM Analysis Standard (Surrogate), 2000 PPM | A0201976 | 07/24/2025 | 01/24/2025 / anahy | 11/21/2023 / rahul | S11832 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-------------------|--|--------|-----------------|-------------------------|-----------------------------|----------------|
| CPI International | z-010223-01 / 1,4-Dioxane Solution, 2,000mg/L, 1ml | 454157 | 10/28/2025 | 04/28/2025 / Jagrut | 03/08/2024 / Rahul | S12115 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek | 31087 / Acid Surrogate 10,000ug/ml, methanol, 5ml/ ampul | A0206206 | 09/18/2025 | 03/18/2025 / anahy | 03/15/2024 / Rahul | S12195 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|---|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek | 31086 / Base Neutral Surrogate 5000ug/ml, CH ₂ Cl ₂ , 5ml | A0206381 | 09/18/2025 | 03/18/2025 / anahy | 03/15/2024 / Rahul | S12216 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-------------------|--|--------|-----------------|-------------------------|-----------------------------|----------------|
| CPI International | z-110381-01 / 8270 Calibration Solution, 76-1, 500 & 1,000 mg/L, 1ml | 520963 | 10/28/2025 | 04/28/2025 / Jagrut | 05/24/2024 / Rahul | S12271 |

CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|---|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek | 555223 / Custom 8270 Plus Std #1 [2nd lot at \$100 per ampul if requested - contact ARM with Request] | A0214021 | 09/10/2025 | 03/10/2025 / anahy | 07/23/2024 / RAHUL | S12486 |

[CS 4978-1]

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek | 555224 / Custom 8270 Plus Std #2 [2nd lot at \$85 per ampul if requested - contact ARM with Request] | A0214017 | 09/10/2025 | 03/10/2025 / anahy | 07/23/2024 / RAHUL | S12533 |

[CS 4978-2]

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek | 31615 / SV Mixture, GC/MS Tuning Mixture, CH ₂ Cl ₂ , 1mL, | A0212955 | 06/30/2027 | 03/31/2025 / Rahul | 08/01/2024 / Rahul | S12577 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek | 31206 / SV Mix, CLP method, Internal Std, 2000ug/mL, CH ₂ Cl ₂ , 1mL | A0212266 | 08/07/2025 | 02/07/2025 / anahy | 09/20/2024 / anahy | S12651 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-------------------|--|--------|-----------------|-------------------------|-----------------------------|----------------|
| CPI International | Z-110816-01 / Custom 8270 Mix, 4-79, 1000 mg/L, 1 mL, (Maximum Expiration: 180 Days) | 414127 | 06/21/2025 | 04/28/2025 / Jagrut | 05/24/2024 / Rahul | S12792 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek | 31850 / 8270 SV Mix, 8270 Mega Mix 1mL, 1000ug/mL, CH ₂ Cl ₂ [New Solvent 100% CH ₂ Cl ₂] | A0219438 | 09/10/2025 | 03/10/2025 / anahy | 12/11/2024 / anahy | S12974 |

CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|---------------------|---------------------|-----------------|----------------------------|--------------------------------|-------------------|
| Seidler Chemical | DIW / DI Water | Daily Lab-Certified | 07/03/2029 | 07/03/2024 / lwona | 07/03/2024 / lwona | W3112 |



5580 Skylane Blvd
Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

Date Received: _____

Certificate of Analysis

Rev 0

Page 1 of 1

Catalog No.: Lot No.: **Storage:** **Solvent:** **Exp. Date:** **Description:**
Z-112090 440246 $\leq -10^{\circ}\text{C}$ Methylene Chloride 2/16/2026 CLP Acid Surrogate Solution, 7,500 mg/L, 1 mL
-04

| Compound | CAS No. | Purity (%) | Compound Lot No. | Concentration, mg/L |
|-------------------------------|------------|------------|------------------|---------------------|
| 2-chlorophenol-d ₄ | 93951-73-6 | 99.3 | 248.12.7P | 7487 \pm 17.2 |
| 2-fluorophenol | 367-12-4 | 99.8 | 10.7.3.3P | 7513 \pm 17.26 |
| phenol-d ₆ | 13127-88-3 | 99.9 | 949.120.8P | 7481 \pm 17.19 |
| 2,4,6-tribromophenol | 118-79-6 | 99.8 | 12.1.6P | 7469 \pm 17.17 |

Received on

02/25/21

by
CG

S9236
to

S9240

*Not a certified value

Manufactured by o2si smart solutions, Accredited to ISO 9001:2008 by NSF and ISO/IEC 17025:2005 (Certification No. 3031.01) and ISO Guide 34:2009 (Certification No. 3031.02) by A2LA

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetrically.

Certified By: _____

Erica Castiglione
Chemist



**PRODUCTOS
QUÍMICOS
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MIRADOR 201, COL. MIRADOR
MONTERREY, N.L. MEXICO
CP 64070
TEL +52 81 13 52 57 57
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CERTIFICATE OF ANALYSIS

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

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

COMMENTS

QC: PhC Irma Belmares

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

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

RC-02-01, Ed. 3



Certificate of Analysis

Sodium Hydroxide (Pellets)

Material: 0583
Grade: ACS GRADE
Batch Number: 23B1556310

Chemical Formula: NaOH
Molecular Weight: 40
CAS #: 1310-73-2
Appearance:

Manufacture Date: 12/14/2022
Expiration Date: 12/31/2025

Storage: Room Temperature

Pellets

| TEST | SPECIFICATION | ANALYSIS | DISPOSITION |
|--------------------|------------------------|---------------------|-------------|
| Calcium | $\leq 0.005 \%$ | $< 0.005 \%$ | PASS |
| Chloride | $\leq 0.005 \%$ | 0.002 % | PASS |
| Heavy Metals | $\leq 0.002 \%$ | $< 0.002 \%$ | PASS |
| Iron | $\leq 0.001 \%$ | $< 0.001 \%$ | PASS |
| Magnesium | $\leq 0.002 \%$ | $< 0.002 \%$ | PASS |
| Mercury | $\leq 0.1 \text{ ppm}$ | $< 0.1 \text{ ppm}$ | PASS |
| Nickel | $\leq 0.001 \%$ | $< 0.001 \%$ | PASS |
| Nitrogen Compounds | $\leq 0.001 \%$ | $< 0.001 \%$ | PASS |
| Phosphate | $\leq 0.001 \%$ | $< 0.001 \%$ | PASS |
| Potassium | $\leq 0.02 \%$ | $< 0.02 \%$ | PASS |
| Purity | $\geq 97.0 \%$ | 99.2 % | PASS |
| Sodium Carbonate | $\leq 1.0 \%$ | 0.5 % | PASS |
| Sulfate | $\leq 0.003 \%$ | $< 0.003 \%$ | PASS |

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon
VWR Chemicals, LLC.
28600 Fountain Parkway, Solon OH 44139 USA

Additional Information

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.



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



Material No.: 9266-A4
Batch No.: 25A0262002
Manufactured Date: 2024-11-21
Expiration Date: 2026-02-20
Revision No.: 0

Certificate of Analysis

| Test | Specification | Result |
|--|----------------|------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | ≤ 5 | 1 |
| ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL) | ≤ 10 | 4 |
| Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water) | $\geq 99.8\%$ | 99.9% |
| Color (APHA) | ≤ 10 | 10 |
| Residue after Evaporation | ≤ 1.0 ppm | 0.8 ppm |
| Titration Acid ($\mu\text{eq/g}$) | ≤ 0.3 | < 0.1 |
| Chloride (Cl) | ≤ 10 ppm | < 5 ppm |
| Water (by KF, coulometric) | $\leq 0.02\%$ | $< 0.01\%$ |

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

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

E 3874

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

 avantor

Material No.: 9254-03

Batch No.: 24H2762008

Manufactured Date: 2024-04-18

Expiration Date: 2027-04-18

Revision No.: 0

Certificate of Analysis

| Test | Specification | Result |
|---|---------------|-------------|
| Assay ((CH ₃) ₂ CO) (by GC, corrected for water) | >= 99.4 % | 100.0 % |
| Color (APHA) | <= 10 | 5 |
| Residue after Evaporation | <= 1.0 ppm | 0.0 ppm |
| Substances Reducing Permanganate | Passes Test | Passes Test |
| Titration Acid (µeq/g) | <= 0.3 | 0.2 |
| Titration Base (µeq/g) | <= 0.6 | <0.1 |
| Water (H ₂ O) | <= 0.5 % | <0.1 % |
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | <= 5 | 1 |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL) | <= 10 | 1 |

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E3902

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

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Acetone

BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

Avantor™



Material No.: 9254-03

Batch No.: 24H2762008

Manufactured Date: 2024-04-18

Expiration Date: 2027-04-18

Revision No.: 0

Certificate of Analysis

| Test | Specification | Result |
|---|---------------|-------------|
| Assay ((CH ₃) ₂ CO) (by GC, corrected for water) | >= 99.4 % | 100.0 % |
| Color (APHA) | <= 10 | 5 |
| Residue after Evaporation | <= 1.0 ppm | 0.0 ppm |
| Substances Reducing Permanganate | Passes Test | Passes Test |
| Titration Acid (µeq/g) | <= 0.3 | 0.2 |
| Titration Base (µeq/g) | <= 0.6 | <0.1 |
| Water (H ₂ O) | <= 0.5 % | <0.1 % |
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | <= 5 | 1 |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL) | <= 10 | 1 |

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Recd. by RS on 3/19/25

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E3915

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)

avantor



Material No.: 9266-A4
Batch No.: 25A0262002
Manufactured Date: 2024-11-21
Expiration Date: 2026-02-20
Revision No.: 0

Certificate of Analysis

| Test | Specification | Result |
|--|----------------|------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | ≤ 5 | 1 |
| ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL) | ≤ 10 | 4 |
| Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water) | $\geq 99.8\%$ | 99.9% |
| Color (APHA) | ≤ 10 | 10 |
| Residue after Evaporation | ≤ 1.0 ppm | 0.8 ppm |
| Titration Acid ($\mu\text{eq/g}$) | ≤ 0.3 | < 0.1 |
| Chloride (Cl) | ≤ 10 ppm | < 5 ppm |
| Water (by KF, coulometric) | $\leq 0.02\%$ | $< 0.01\%$ |

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

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

E 3926

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

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

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



Material No.: 9266-A4
Batch No.: 25A0262002
Manufactured Date: 2024-11-21
Expiration Date: 2026-02-20
Revision No.: 0

Certificate of Analysis

| Test | Specification | Result |
|--|----------------|---------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | ≤ 5 | 1 |
| ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL) | ≤ 10 | 4 |
| Assay (CH ₂ Cl ₂) (by GC, exclusive of preservative, corrected for water) | $\geq 99.8\%$ | 99.9% |
| Color (APHA) | ≤ 10 | 10 |
| Residue after Evaporation | ≤ 1.0 ppm | 0.8 ppm |
| Titration Acid (μ eq/g) | ≤ 0.3 | <0.1 |
| Chloride (Cl) | ≤ 10 ppm | <5 ppm |
| Water (by KF, coulometric) | $\leq 0.02\%$ | <0.01% |

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

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

E3930

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

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

avantor™



M6157
MS

Material No.: 9673-33

Batch No.: 24I1262013

Manufactured Date: 2024-08-07

Retest Date: 2029-08-06

Revision No.: 0

Certificate of Analysis

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

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

Avantor Performance Materials LLC

Sulfuric Acid

BAKER INSTRA-ANALYZED® Reagent

For Trace Metal Analysis

Low Selenium

 **avantors**™



Material No.: 9673-33

Batch No.: 2411262013

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

For Laboratory, Research, or Manufacturing Use

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Croak

Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC



5580 Skyline Blvd
Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

Date Received: _____

Certificate of Analysis

Page 1 of 1

| Catalog No.: Lot No.: | Storage: | Solvent: | Exp. Date: | Rev | Description: |
|------------------------------------|----------|--------------------|------------|------------------|---|
| Z-110094-02 506889 | ≤ -10 °C | Methylene Chloride | 7/25/2028 | 0 | CLP Base/Neutral Surrogate Solution, 5,000 mg/L, 1 ml |
| Compound | | CAS No. | Purity (%) | Compound Lot No. | Concentration, mg/L |
| 1,2-dichlorobenzene-d ₄ | | 2199-69-1 | 99.7 | 247.29.3P | 5035 ± 28.02 |
| 2-fluorobiphenyl | | 321-60-8 | 99.69 | 8.286.1.1P | 4999 ± 103.66 |
| nitrobenzene-d5 | | 4165-60-0 | 99.67 | 7.9.3P | 4988 ± 27.32 |
| p-terphenyl-d14 | | 1718-51-0 | 99.3 | 9.120.8P | 5005 ± 27.85 |

511494 } Y.P.
↓ 08/11/2023
511498

*Not a certified value

Certified By: _____
Clint Tipton
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values
listed are determined gravimetrically.



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

gravimetric



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.: 555872 **Lot No.:** A0201728

Description: Custom Pentachlorophenol Standard

Custom Pentachlorophenol Standard 25,000µg/mL, Methanol, 1mL/ampul

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

Expiration Date: September 30, 2026 **Storage:** 10°C or colder

Ship: Ambient

511649 } Y.P.
↓ 11/13/23
511658 }

CERTIFIED VALUES

| Component # | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty* (95% C.L.; K=2) |
|-------------|-------------------|---------|-------------|--------|-----------------------------|---------------------------------------|
| 1 | Pentachlorophenol | 87-86-5 | RP230530RSR | 99% | 25,000.0 µg/mL | +/- 777.0837 |

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Josh McCloskey - Operations Technician I

Date Mixed: 05-Sep-2023 **Balance:** B251644995

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.



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. : 31853 **Lot No.:** A0196453
Description : 1,4-dioxane
1,4-Dioxane 2,000µg/mL, Methylene Chloride, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : March 31, 2028 **Storage:** 0°C or colder
Ship: Ambient

S11749
↓
S11794 } RC / 11/30/23

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|-------------|----------|----------|--------|-----------------------------|--|
| 1 | 1,4-Dioxane | 123-91-1 | SHBN3770 | 99% | 2,013.0 µg/mL | +/- 25.0521 |

* 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 flow 1.8 mL/min.

Temp. Program:

80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:

250°C

Det. Temp:

340°C

Det. Type:

FID

Split Vent:

100 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: 30-Mar-2023

Balance Serial # B707717271

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 31-Mar-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 33913 **Lot No.:** A0201976
Description : SOM01.0 SIM Analysis Standard
SOM01.0 SIM Analysis Standard 2000µg/mL, Methylene chloride, 1mL /ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : August 31, 2029 **Storage:** 10°C or colder
Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

S11828
↓
S11832 } RC/
11/30/23

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|-------------------------|------------|----------|--------|-----------------------------|--|
| 1 | 2-Methylnaphthalene-d10 | 7297-45-2 | EF-135 | 98% | 2,015.9 µg/mL | +/- 90.8098 |
| 2 | Fluoranthene-d10 | 93951-69-0 | PR-32557 | 99% | 2,020.0 µg/mL | +/- 90.9963 |

* 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:

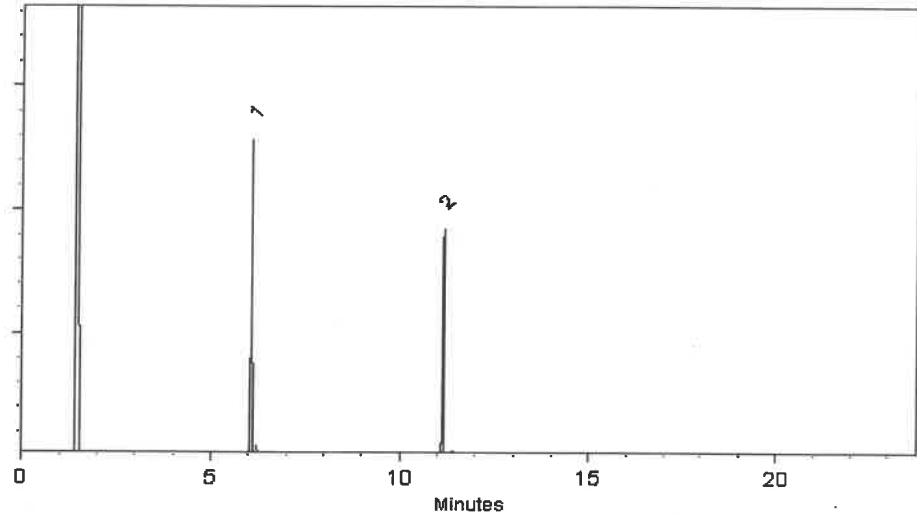
FID

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.


Dakota Parson - Operations Technician I

Date Mixed: 13-Sep-2023

Balance Serial # B442140311


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 28-Sep-2023

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.



5580 Skylane Blvd
Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

Date Received: _____

Certificate of Analysis

Rev 0

Page 1 of 1

| Catalog No.: | Lot No.: | Storage: | Solvent: | Exp. Date: | Description: | |
|--------------|----------|----------|--------------|------------|--|---------------------|
| Z-020223-01 | 454157 | ≤ -10 °C | P/T Methanol | 6/10/2026 | 1,4-Dioxane Solution, 2000 mg/L, 1 mL | |
| Compound | | | CAS No. | Purity (%) | Compound Lot No. | Concentration, mg/L |
| 1,4-dioxane | | | 123-91-1 | 100 | 223.1.3P | 1997 ± 57.08 |

512112 } RC/
↓
912116 } 03/08/24

*Not a certified value

Certified By: _____

Melissa Workoff

Melissa Workoff
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values
listed are determined gravimetrically.



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CERTIFIED REFERENCE MATERIAL

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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. : 31087 **Lot No.:** A0206206
Description : Acid Surrogate Mix (4/89 SOW)
Acid Surrogate 10, 000µg/mL, Methanol, 5mL/ampul
Container Size : 5 mL **Pkg Amt:** > 5 mL
Expiration Date : January 31, 2032 **Storage:** 10°C or colder
Ship: Ambient

512187 } RC/
↓ } 03/18/24
512206 }

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|----------------------|------------|-------------|--------|-----------------------------|--|
| 1 | 2-Fluorophenol | 367-12-4 | STBK1705 | 99% | 10,005.3 µg/mL | +/- 302.5390 |
| 2 | Phenol-d6 | 13127-88-3 | PR-33287A | 99% | 10,005.5 µg/mL | +/- 302.5475 |
| 3 | 2,4,6-Tribromophenol | 118-79-6 | RP230831RSR | 99% | 10,006.6 µg/mL | +/- 302.5783 |

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

Solvent: Methanol
CAS # 67-56-1
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:

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

Split Vent:

2 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.

Penelope S. Riglin

Penelope Riglin - Operations Tech I

Date Mixed: 04-Jan-2024

Balance Serial # 1128360905

Christie Mills

Christie Mills - Operations Lead Tech - ARM QC

Date Passed: 08-Jan-2024

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



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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. : 31086 **Lot No.:** A0206381
Description : B/N Surrogate Mix (4/89 SOW)
Base Neutral Surrogate 5000µg/mL, Methylene Chloride, 5mL/ampul
Container Size : 5 mL **Pkg Amt:** > 5 mL
Expiration Date : December 31, 2029 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

S12207 } RC/
↓
S12221 } 03/18/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|------------------|-----------|----------|--------|-----------------------------|--|
| 1 | Nitrobenzene-d5 | 4165-60-0 | I-25158 | 99% | 5,029.3 µg/mL | +/- 226.5204 |
| 2 | 2-Fluorobiphenyl | 321-60-8 | 00021384 | 99% | 5,030.9 µg/mL | +/- 226.5936 |
| 3 | p-Terphenyl-d14 | 1718-51-0 | PR-32599 | 99% | 5,026.4 µg/mL | +/- 226.3909 |

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

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

Tech Tips:

Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Quality Confirmation Test

Column:

30m x 0.25mm x 0.25µm
Rtx-S (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

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Jess Hoy - Operations Tech I

Date Mixed: 09-Jan-2024 Balance Serial # 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 11-Jan-2024

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



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Date Received: _____

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Page 1 of 4

| | | | | | |
|---------------------|-----------------|-----------------|--------------------|-------------------|--|
| Catalog No.: | Lot No.: | Storage: | Solvent: | Exp. Date: | Description: |
| Z-110381-01 | 520963 | ≤ -10 °C | Methylene Chloride | 10/10/2028 | Method 8270 Calibration Solution, 76-1, 500 & 1,000 mg/L, 1 mL |

| Compound | CAS No. | Purity (%) | Compound Lot No. | Concentration, mg/L |
|-----------------------------------|----------|------------|------------------|---------------------|
| acenaphthene | 83-32-9 | 99.9 | 13.1.5P | 1010 ± 9.89 |
| acenaphthylene | 208-96-8 | 97.6 | 14.290.1P | 1014 ± 9.93 |
| aniline | 62-53-3 | 99.97 | 64.1.4P | 1001 ± 9.8 |
| anthracene | 120-12-7 | 99.5 | 15.7.1P | 999.6 ± 9.79 |
| azobenzene | 103-33-3 | 98.1 | 252.7.2P | 999.1 ± 9.8 |
| benzo[a]anthracene | 56-55-3 | 100 | 16.7.3P | 1007 ± 9.86 |
| benzo[b]fluoranthene | 205-99-2 | 99.8 | 17.421.3P | 1011 ± 14.11 |
| benzo[k]fluoranthene | 207-08-9 | 98.9 | 18.421.4P | 1001 ± 10.96 |
| benzo[ghi]perylene | 191-24-2 | 93 | 19.286.4P | 999.6 ± 13.95 |
| benzo[a]pyrene | 50-32-8 | 97 | 20.286.2P | 999.9 ± 22.24 |
| benzyl alcohol | 100-51-6 | 99.9 | 65.18.1P | 1001 ± 9.82 |
| bis(2-chloroethoxy)methane | 111-91-1 | 99.1 | 31.3.15P | 1000 ± 14.69 |
| bis(2-chloroethyl)ether | 111-44-4 | 99.8 | 32.7.1P | 1003 ± 13.89 |
| bis(2-chloro-1-methylethyl) ether | 108-60-1 | 99.5 | 34.3.15P | 999.4 ± 14.68 |
| bis(2-ethylhexyl)adipate | 103-23-1 | 99.5 | 874.7.1P | 999.5 ± 9.8 |
| bis(2-ethylhexyl)phthalate | 117-81-7 | 99.4 | 33.29.1P | 998.8 ± 17.03 |
| 4-bromophenyl phenyl ether | 101-55-3 | 99.4 | 35.7.1.1P | 1000 ± 13.85 |
| butyl benzyl phthalate | 85-68-7 | 98.4 | 36.1.6P | 984.7 ± 16.79 |
| carbazole | 86-74-8 | 99.4 | 239.7.2P | 1000 ± 9.8 |

*Not a certified value

512270 } RC/
↓
512274 } 05/24/24

Kerry Kane

Certified By: _____

Kerry Kane
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values
listed are determined gravimetrically.

Certificate of Analysis

Page 2 of 4

Catalog No.: Z-110381-01

Lot No.: 520963

Expiration Date: 10/10/2028

| Compound | CAS No. | Purity (%) | Compound Lot No. | Concentration, mg/L |
|----------------------------|-----------|------------|------------------|---------------------|
| 4-chloroaniline | 106-47-8 | 100 | 66.7.1P | 1000 ± 9.79 |
| 4-chlorophenylphenyl ether | 7005-72-3 | 98 | 37.158.2P | 1001 ± 17.07 |
| 4-chloro-3-methylphenol | 59-50-7 | 99 | 102.1.2P | 1006 ± 17.16 |
| 2-chloronaphthalene | 91-58-7 | 99.9 | 42.7.6P | 1000 ± 9.79 |
| 2-chlorophenol | 95-57-8 | 99.8 | 103.7.1P | 1007 ± 13.96 |
| chrysene | 218-01-9 | 96 | 21.286.2P | 998.4 ± 12.85 |
| dibenz[a,h]anthracene | 53-70-3 | 99.44 | 22.286.3P | 1000 ± 9.74 |
| dibenzofuran | 132-64-9 | 100 | 67.7.2.1P | 1002 ± 9.77 |
| di-n-butyl phthalate | 84-74-2 | 99.84 | 40.286.1P | 1007 ± 24.48 |
| 1,2-dichlorobenzene | 95-50-1 | 99.8 | 43.7.1P | 1000 ± 9.79 |
| 1,3-dichlorobenzene | 541-73-1 | 99.5 | 44.1.3P | 999.4 ± 9.79 |
| 1,4-dichlorobenzene | 106-46-7 | 99.9 | 45.29.2P | 1000 ± 9.79 |
| 2,4-dichlorophenol | 120-83-2 | 99.6 | 104.7.1.1P | 1005 ± 13.93 |
| diethyl phthalate | 84-66-2 | 99.8 | 38.7.1P | 1011 ± 14 |
| 2,4-dimethylphenol | 105-67-9 | 99.6 | 105.7.1.1P | 1009 ± 13.98 |
| dimethyl phthalate | 131-11-3 | 99.9 | 39.9.2P | 996.5 ± 13.8 |
| 1,2-dinitrobenzene | 528-29-0 | 99.86 | 86.7.3.1P | 999.5 ± 9.75 |
| 1,3-dinitrobenzene | 99-65-0 | 100 | 313.7.2P | 998 ± 9.79 |
| 1,4-dinitrobenzene | 100-25-4 | 100 | 907.7.1P | 999.5 ± 9.8 |
| 2,4-dinitrophenol | 51-28-5 | 99.9 | 106.1.6DP | 1002 ± 13.89 |
| 2,4-dinitrotoluene | 121-14-2 | 100 | 87.7.3P | 999.8 ± 13.85 |
| 2,6-dinitrotoluene | 606-20-2 | 99.4 | 88.7.2.1P | 999.6 ± 13.85 |
| di-n-octyl phthalate | 117-84-0 | 99.1 | 41.7.5P | 991.6 ± 13.74 |
| diphenylamine | 122-39-4 | 100 | 78.1.6P | 998 ± 13.79 |
| 2,3,5,6-tetrachlorophenol | 935-95-5 | 97 | 1112.286.1P | 1004 ± 14.02 |
| fluoranthene | 206-44-0 | 98.6 | 23.7.4P | 999.6 ± 9.79 |
| fluorene | 86-73-7 | 98.4 | 24.7.1P | 999.7 ± 9.79 |

*Not a certified value

Kerry Kane

Certified By:

Kerry Kane
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetrically.

Certificate of Analysis

Page 3 of 4

Catalog No.: Z-110381-01

Lot No.: 520963

Expiration Date: 10/10/2028

| Compound | CAS No. | Purity (%) | Compound Lot No. | Concentration, mg/L |
|----------------------------|----------|------------|------------------|---------------------|
| hexachlorobenzene | 118-74-1 | 99 | 46.158.4P | 999.9 ± 13.96 |
| hexachlorobutadiene | 87-68-3 | 97.4 | 47.1.4P | 1000 ± 9.79 |
| hexachlorocyclopentadiene | 77-47-4 | 99.2 | 48.2.2P | 1001 ± 9.8 |
| hexachloroethane | 67-72-1 | 99.9 | 49.1.4P | 1003 ± 9.82 |
| indeno[1,2,3-cd]pyrene | 193-39-5 | 98 | 25.286.4P | 999.4 ± 22.23 |
| isophorone | 78-59-1 | 98.9 | 90.1.4P | 999.9 ± 13.85 |
| 2-methyl-4,6-dinitrophenol | 534-52-1 | 99.6 | 107.421.2DP | 991 ± 24.09 |
| 1-methylnaphthalene | 90-12-0 | 97.1 | 249.7.5P | 999.2 ± 13.95 |
| 2-methylnaphthalene | 91-57-6 | 97.4 | 68.7.2P | 1006 ± 22.38 |
| 2-methylphenol | 95-48-7 | 99.6 | 114.7.3P | 1001 ± 13.87 |
| 3-methylphenol | 108-39-4 | 99.1 | 115.7.4P | 499.7 ± 6.92 |
| 4-methylphenol | 106-44-5 | 99.5 | 116.7.1P | 501.2 ± 6.94 |
| naphthalene | 91-20-3 | 99.8 | 26.9.1P | 1018 ± 9.97 |
| 2-nitroaniline | 88-74-4 | 99.7 | 69.29.1P | 999.6 ± 9.79 |
| 3-nitroaniline | 99-09-2 | 100 | 70.7.3P | 1000 ± 9.74 |
| 4-nitroaniline | 100-01-6 | 99.7 | 71.29.1P | 1001 ± 9.8 |
| nitrobenzene | 98-95-3 | 100 | 94.7.1P | 1000 ± 13.85 |
| 2-nitrophenol | 88-75-5 | 99.1 | 108.29.1P | 996.5 ± 13.81 |
| 4-nitrophenol | 100-02-7 | 100 | 109.7.1P | 1000 ± 13.82 |
| N-nitrosodimethylamine | 62-75-9 | 99.5 | 57.3.19P | 998.5 ± 14.67 |
| N-nitrosodi-n-propylamine | 621-64-7 | 99.8 | 59.286.1P | 996.8 ± 17 |
| pentachlorophenol | 87-86-5 | 99 | 110.1.7P | 1004 ± 13.92 |
| phenanthrene | 85-01-8 | 99.7 | 27.1.5P | 999 ± 12.87 |
| phenol | 108-95-2 | 100 | 112.7.1P | 998.5 ± 13.8 |
| pyrene | 129-00-0 | 99.2 | 28.9.2P | 998.9 ± 9.78 |
| pyridine | 110-86-1 | 100 | 101.24.1P | 999 ± 9.73 |
| 2,3,4,6-Tetrachlorophenol | 58-90-2 | 91.8 | 120.421.1P | 996.5 ± 13.92 |

*Not a certified value

Kerry Kane

Certified By:

Kerry Kane
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetrically.

Certificate of Analysis

Page 4 of 4

Catalog No.: Z-110381-01

Lot No.: 520963

Expiration Date: 10/10/2028

| <u>Compound</u> | <u>CAS No.</u> | <u>Purity (%)</u> | <u>Compound Lot No.</u> | <u>Concentration, mg/L</u> |
|------------------------|----------------|-------------------|-------------------------|----------------------------|
| 1,2,4-trichlorobenzene | 120-82-1 | 99.6 | 54.29.1P | 999.6 ± 9.79 |
| 2,4,5-trichlorophenol | 95-95-4 | 96.5 | 121.7.1.1P | 999.5 ± 13.85 |
| 2,4,6-trichlorophenol | 88-06-2 | 99.6 | 113.7.1P | 996 ± 13.8 |

*Not a certified value



Certified By: _____

Kerry Kane
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values
listed are determined gravimetrically.



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

gravimetric



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. : 555223 **Lot No.:** A0214021

Description : Custom 8270 Plus Standard #1

Custom 8270 Plus Standard #1 1,000µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date : July 31, 2026 **Storage:** 10°C or colder

Handling: This product is photosensitive. **Ship:** Ambient

CERTIFIED VALUES

| Component # | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|-------------|------------------------|-----------|------------|--------|-----------------------------|--|
| 1 | 3,3'-Dichlorobenzidine | 91-94-1 | S240326RSR | 99% | 1,004.0 µg/mL | +/- 23.0487 |
| 2 | Atrazine | 1912-24-9 | 5FYWL | 99% | 1,005.0 µg/mL | +/- 23.0717 |
| 3 | Benzidine | 92-87-5 | S240430RSR | 99% | 1,006.0 µg/mL | +/- 23.0947 |
| 4 | epsilon-Caprolactam | 105-60-2 | Y16H012 | 99% | 1,000.0 µg/mL | +/- 22.9569 |

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

S12449 } RC/
↓
S12508 } 7/24/24

Rebecca Gingerich - Operations Tech II

Date Mixed: 18-Jul-2024

Balance: 1128353505

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

gravimetric



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. : 555224 **Lot No.:** A0214017

Description : Custom 8270 Plus Standard #2

Custom 8270 Plus Standard #2 1,000µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date : July 31, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

| Component # | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|-------------|----------------------------|----------|--------------|--------|-----------------------------|--|
| 1 | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | MKCT9480 | 99% | 1,005.0 µg/mL | +/- 29.541899 |
| 2 | Acetophenone | 98-86-2 | STBH8205 | 99% | 1,005.0 µg/mL | +/- 29.541899 |
| 3 | Benzaldehyde | 100-52-7 | RD231129RSRA | 99% | 1,008.0 µg/mL | +/- 29.630084 |
| 4 | Benzoic acid | 65-85-0 | MKCR2694 | 99% | 1,010.0 µg/mL | +/- 29.688874 |
| 5 | Biphenyl | 92-52-4 | MKCS5928 | 99% | 1,008.0 µg/mL | +/- 29.630084 |

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

S12509 } RC/
↓
S12568 } 7/24/24


Jess Hoy - Operations Tech I

Date Mixed: 18-Jul-2024

Balance: 1128360905

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.



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31615 **Lot No.:** A0212955

Description : GC/MS Tuning Mixture
GC/MS Tuning Mixture 1,000µg/mL, Methylene Chloride, 1mL/ampul

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

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

Handling: Contains carcinogen/reproductive toxin. **Ship:** Ambient

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|--------------------------------------|-----------|-------------|--------|-----------------------------|--|
| 1 | Pentachlorophenol | 87-86-5 | RP240517RSR | 99% | 1,004.5 µg/mL | +/- 44.8902 |
| 2 | DFTPP (Decafluorotriphenylphosphine) | 5074-71-5 | Q117-147 | 99% | 1,004.5 µg/mL | +/- 44.8902 |
| 3 | Benzidine | 92-87-5 | S240430RSR | 99% | 1,006.0 µg/mL | +/- 44.9572 |
| 4 | 4,4'-DDT | 50-29-3 | S240530RSR | 97% | 1,000.1 µg/mL | +/- 44.6922 |

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

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

S12577 } RC
↓
S12579 } 8/2/24

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:

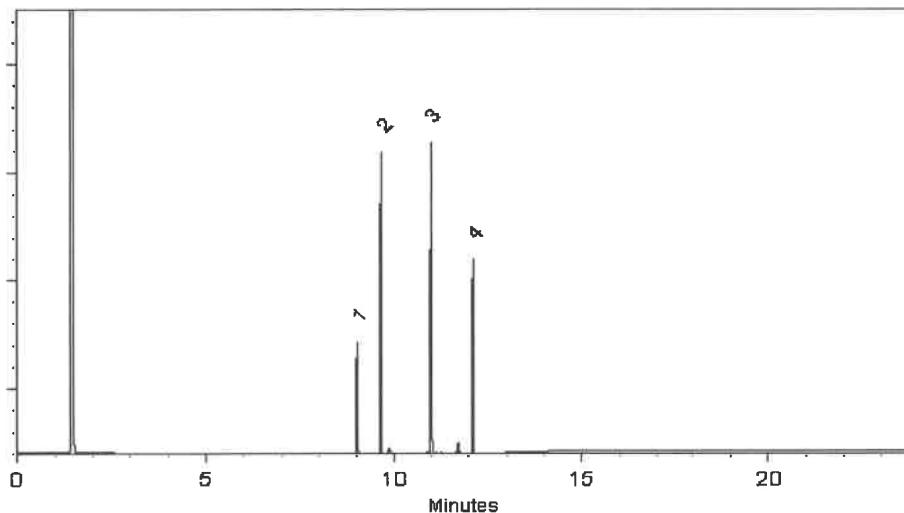
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl

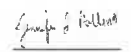


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Ethan Winiarski - Operations Tech I

Date Mixed: 19-Jun-2024

Balance Serial # 1128353505


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 26-Jun-2024

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



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Catalog No. : 31206 **Lot No.:** A0212266

Description : SV Internal Standard Mix 2mg/ml
SV Internal Standard Mix 2mg/ml 2000 µg/ml, Methylene Chloride, 1mL/ampul

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

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

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

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|------------------------|------------|----------|--------|-----------------------------|--|
| 1 | 1,4-Dichlorobenzene-d4 | 3855-82-1 | PR-30447 | 99% | 2,000.6 µg/mL | +/- 90.1075 |
| 2 | Naphthalene-d8 | 1146-65-2 | M-2180 | 99% | 2,000.3 µg/mL | +/- 90.0925 |
| 3 | Acenaphthene-d10 | 15067-26-2 | PR-33507 | 99% | 2,000.4 µg/mL | +/- 90.1000 |
| 4 | Phenanthrene-d10 | 1517-22-2 | PR-34099 | 99% | 2,000.5 µg/mL | +/- 90.1037 |
| 5 | Chrysene-d12 | 1719-03-5 | PR-33506 | 99% | 2,000.7 µg/mL | +/- 90.1112 |
| 6 | Perylene-d12 | 1520-96-3 | PR-33205 | 99% | 2,000.6 µg/mL | +/- 90.1075 |

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

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

S12645
↓
S12674 } AC
10/1/24



5580 Skylane Blvd
Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

Date Received: _____

Certificate of Analysis

Rev 0

Page 1 of 1

| | | | | | |
|--------------|----------|----------|--------------------|------------|---|
| Catalog No.: | Lot No.: | Storage: | Solvent: | Exp. Date: | Description: |
| Z-110816-01 | 414127 | ≤ -10 °C | Methylene Chloride | 6/21/2025 | Custom 8270 Mix, 4-79, 1000 mg/L, 1 mL |

| Compound | CAS No. | Purity (%) | Compound Lot No. | Concentration, mg/L |
|-------------|-----------|------------|------------------|---------------------|
| atrazine | 1912-24-9 | 99.5 | 337.7.3P | 997 ± 5.81 |
| benzidine | 92-87-5 | 99.9 | 124.18.6.2P | 991.8 ± 5.77 |
| caprolactam | 105-60-2 | 99.9 | 271.1.6P | 999 ± 5.82 |

~~512280~~ } RCL
↓
~~512284~~ } 05/24/24

New Numbers Generated.

512790 } RCL
↓
512794 } 11/12/24

*Not a certified value

Manufactured by o2si smart solutions, Accredited to ISO 9001:2008 by NSF and ISO/IEC 17025:2005 (Certification No. 3031.01) and ISO Guide 34:2009 (Certification No. 3031.02) by A2LA

Certified By: _____

Shane Overcash
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetrically.



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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. : 31850 **Lot No.:** A0219438

Description : 8270 MegaMix®
8270 MegaMix® 500-1000 µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date : September 30, 2025 **Storage:** 0°C or colder

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

S12963
↓
S12992 } AC
12/17/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---------------|------------------------------|----------|-------------|--------|-----------------------------|--|
| 1 | Pyridine | 110-86-1 | SHBP6240 | 99% | 1,008.3 µg/mL | +/- 36.6849 |
| 2 | N-Nitrosodimethylamine | 62-75-9 | S240313RSR | 99% | 1,008.6 µg/mL | +/- 36.6985 |
| 3 | Phenol | 108-95-2 | MKCK1120 | 99% | 1,003.5 µg/mL | +/- 36.5120 |
| 4 | Aniline | 62-53-3 | X22F726 | 99% | 1,002.9 µg/mL | +/- 36.4893 |
| 5 | Bis(2-chloroethyl)ether | 111-44-4 | 002891T24M | 99% | 1,003.0 µg/mL | +/- 36.4938 |
| 6 | 2-Chlorophenol | 95-57-8 | STBJ3909 | 99% | 1,005.6 µg/mL | +/- 36.5894 |
| 7 | 1,3-Dichlorobenzene | 541-73-1 | BCCD5315 | 99% | 1,004.1 µg/mL | +/- 36.5348 |
| 8 | 1,4-Dichlorobenzene | 106-46-7 | MKBS7929V | 99% | 1,002.1 µg/mL | +/- 36.4620 |
| 9 | Benzyl alcohol | 100-51-6 | SHBK5469 | 99% | 1,003.5 µg/mL | +/- 36.5120 |
| 10 | 1,2-Dichlorobenzene | 95-50-1 | SHBL6287 | 99% | 1,005.3 µg/mL | +/- 36.5757 |
| 11 | 2-Methylphenol (o-cresol) | 95-48-7 | SHBN7598 | 99% | 1,008.4 µg/mL | +/- 36.6894 |
| 12 | 2,2'-oxybis(1-chloropropane) | 108-60-1 | 29-MAR-45-5 | 99% | 1,004.6 µg/mL | +/- 36.5530 |
| 13 | 3-Methylphenol (m-cresol) | 108-39-4 | STBJ0710 | 99% | 502.1 µg/mL | +/- 18.2697 |
| 14 | 4-Methylphenol (p-cresol) | 106-44-5 | SHBN3411 | 99% | 503.8 µg/mL | +/- 18.3288 |
| 15 | N-Nitroso-di-n-propylamine | 621-64-7 | N63MG | 99% | 1,006.5 µg/mL | +/- 36.6212 |
| 16 | Hexachloroethane | 67-72-1 | DAXRI | 99% | 1,004.5 µg/mL | +/- 36.5484 |
| 17 | Nitrobenzene | 98-95-3 | 10224044 | 99% | 1,002.5 µg/mL | +/- 36.4757 |

| | | | | | | | |
|----|---|-----------|------------------|-------|---------|-------|-------------|
| 18 | Isophorone | 78-59-1 | MKCR3249 | 99% | 1,003.4 | µg/mL | +/- 36.5075 |
| 19 | 2-Nitrophenol | 88-75-5 | RP230710 | 99% | 1,002.5 | µg/mL | +/- 36.4757 |
| 20 | 2,4-Dimethylphenol | 105-67-9 | XW5GK | 99% | 1,006.5 | µg/mL | +/- 36.6212 |
| 21 | Bis(2-chloroethoxy)methane | 111-91-1 | 15705100 | 99% | 1,006.6 | µg/mL | +/- 36.6257 |
| 22 | 2,4-Dichlorophenol | 120-83-2 | BCKK6969 | 99% | 1,001.5 | µg/mL | +/- 36.4393 |
| 23 | 1,2,4-Trichlorobenzene | 120-82-1 | SHBP5900 | 99% | 1,006.4 | µg/mL | +/- 36.6166 |
| 24 | Naphthalene | 91-20-3 | STBL1057 | 99% | 1,002.1 | µg/mL | +/- 36.4620 |
| 25 | 4-Chloroaniline | 106-47-8 | BCCJ3217 | 99% | 1,004.4 | µg/mL | +/- 36.5439 |
| 26 | Hexachlorobutadiene | 87-68-3 | X05J | 98% | 1,002.5 | µg/mL | +/- 36.4771 |
| 27 | 4-Chloro-3-methylphenol | 59-50-7 | BCCD4461 | 99% | 1,004.5 | µg/mL | +/- 36.5484 |
| 28 | 2-Methylnaphthalene | 91-57-6 | STBL3028 | 99% | 1,000.0 | µg/mL | +/- 36.3847 |
| 29 | 1-Methylnaphthalene | 90-12-0 | 5234.00-8 | 98% | 990.2 | µg/mL | +/- 36.0269 |
| 30 | Hexachlorocyclopentadiene | 77-47-4 | 099063I14L | 98% | 1,001.3 | µg/mL | +/- 36.4325 |
| 31 | 2,4,6-Trichlorophenol | 88-06-2 | STBK8870 | 99% | 1,006.4 | µg/mL | +/- 36.6166 |
| 32 | 2,4,5-Trichlorophenol | 95-95-4 | 3YFRE | 97% | 1,004.6 | µg/mL | +/- 36.5505 |
| 33 | 2-Chloronaphthalene | 91-58-7 | RPN7O | 99% | 1,004.3 | µg/mL | +/- 36.5393 |
| 34 | 2-Nitroaniline | 88-74-4 | RP240715RSR | 99% | 1,004.4 | µg/mL | +/- 36.5439 |
| 35 | 1,4-Dinitrobenzene | 100-25-4 | RP240703RSR | 99% | 1,002.8 | µg/mL | +/- 36.4847 |
| 36 | Acenaphthylene | 208-96-8 | RP241029RSR | 98% | 1,000.0 | µg/mL | +/- 36.3835 |
| 37 | 1,3-Dinitrobenzene | 99-65-0 | TRC3-1075941-2-1 | 99% | 1,006.3 | µg/mL | +/- 36.6121 |
| 38 | Dimethylphthalate | 131-11-3 | 358221L17K | 99% | 1,008.9 | µg/mL | +/- 36.7076 |
| 39 | 2,6-Dinitrotoluene | 606-20-2 | BCCG1833 | 99% | 1,006.6 | µg/mL | +/- 36.6257 |
| 40 | 1,2-Dinitrobenzene | 528-29-0 | RP240701RSR | 99% | 1,002.5 | µg/mL | +/- 36.4757 |
| 41 | Acenaphthene | 83-32-9 | MKCR7169 | 99% | 1,000.0 | µg/mL | +/- 36.3847 |
| 42 | 3-Nitroaniline | 99-09-2 | RP240708RSR | 99% | 1,004.6 | µg/mL | +/- 36.5530 |
| 43 | 2,4-Dinitrophenol | 51-28-5 | D240927RSR | ----% | 1,005.6 | µg/mL | +/- 36.5894 |
| 44 | Dibenzofuran | 132-64-9 | MKCN1772 | 99% | 1,003.5 | µg/mL | +/- 36.5120 |
| 45 | 2,4-Dinitrotoluene | 121-14-2 | 102869V26E | 99% | 1,008.3 | µg/mL | +/- 36.6849 |
| 46 | 4-Nitrophenol | 100-02-7 | 20241029-2-AN | 99% | 1,004.8 | µg/mL | +/- 36.5575 |
| 47 | 2,3,4,6-Tetrachlorophenol | 58-90-2 | PR-34476 | 99% | 1,005.8 | µg/mL | +/- 36.5939 |
| 48 | 2,3,5,6-Tetrachlorophenol | 935-95-5 | RP231219RSR | 99% | 1,006.4 | µg/mL | +/- 36.6166 |
| 49 | Fluorene | 86-73-7 | 10246250 | 98% | 1,000.7 | µg/mL | +/- 36.4102 |
| 50 | 4-Chlorophenyl phenyl ether | 7005-72-3 | MKCT7248 | 99% | 1,004.9 | µg/mL | +/- 36.5621 |
| 51 | Diethylphthalate | 84-66-2 | BCCJ6241 | 99% | 1,003.9 | µg/mL | +/- 36.5257 |
| 52 | 4-Nitroaniline | 100-01-6 | RP230111 | 99% | 1,006.6 | µg/mL | +/- 36.6257 |
| 53 | 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) | 534-52-1 | S241008RSR | 99% | 1,001.3 | µg/mL | +/- 36.4302 |

| | | | | | | | |
|----|----------------------------|----------|--------------|-----|---------|-------|-------------|
| 54 | Diphenylamine | 122-39-4 | MKCT1512 | 99% | 1,003.0 | µg/mL | +/- 36.4938 |
| 55 | Azobenzene | 103-33-3 | BCKK0887 | 99% | 1,002.4 | µg/mL | +/- 36.4711 |
| 56 | 4-Bromophenyl phenyl ether | 101-55-3 | STBH6361 | 99% | 1,008.8 | µg/mL | +/- 36.7031 |
| 57 | Hexachlorobenzene | 118-74-1 | 15458400 | 99% | 1,005.1 | µg/mL | +/- 36.5712 |
| 58 | Pentachlorophenol | 87-86-5 | RP240517RSR | 99% | 1,005.9 | µg/mL | +/- 36.5984 |
| 59 | Phenanthrene | 85-01-8 | MKCT3391 | 99% | 1,004.9 | µg/mL | +/- 36.5621 |
| 60 | Anthracene | 120-12-7 | 101492T18R | 99% | 1,005.1 | µg/mL | +/- 36.5712 |
| 61 | Carbazole | 86-74-8 | 15276700 | 99% | 1,005.4 | µg/mL | +/- 36.5803 |
| 62 | Di-n-butylphthalate | 84-74-2 | MKCN4337 | 99% | 1,006.3 | µg/mL | +/- 36.6121 |
| 63 | Fluoranthene | 206-44-0 | MKCQ4728 | 99% | 1,003.5 | µg/mL | +/- 36.5120 |
| 64 | Pyrene | 129-00-0 | BCKK2592 | 99% | 1,002.0 | µg/mL | +/- 36.4575 |
| 65 | Benzyl butyl phthalate | 85-68-7 | X12I018 | 99% | 1,007.5 | µg/mL | +/- 36.6576 |
| 66 | Bis(2-ethylhexyl)adipate | 103-23-1 | MKCM1988 | 99% | 1,005.9 | µg/mL | +/- 36.5984 |
| 67 | Benz(a)anthracene | 56-55-3 | I70012022BAA | 99% | 1,005.5 | µg/mL | +/- 36.5848 |
| 68 | Chrysene | 218-01-9 | RP241007RSR | 99% | 1,005.3 | µg/mL | +/- 36.5757 |
| 69 | Bis(2-ethylhexyl)phthalate | 117-81-7 | MKCS8065 | 99% | 1,007.5 | µg/mL | +/- 36.6576 |
| 70 | Di-n-octyl phthalate | 117-84-0 | 15566400 | 99% | 1,002.3 | µg/mL | +/- 36.4666 |
| 71 | Benzo(b)fluoranthene | 205-99-2 | 052013B | 99% | 1,004.1 | µg/mL | +/- 36.5348 |
| 72 | Benzo(k)fluoranthene | 207-08-9 | 012022K | 99% | 1,002.8 | µg/mL | +/- 36.4847 |
| 73 | Benzo(a)pyrene | 50-32-8 | NQLXA | 98% | 1,006.2 | µg/mL | +/- 36.6108 |
| 74 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 12-JKL-118-9 | 97% | 1,001.8 | µg/mL | +/- 36.4490 |
| 75 | Dibenz(a,h)anthracene | 53-70-3 | 2-ASA-59-1 | 99% | 1,003.3 | µg/mL | +/- 36.5029 |
| 76 | Benzo(g,h,i)perylene | 191-24-2 | RP241014RSR | 98% | 1,003.8 | µg/mL | +/- 36.5217 |

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

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

Tech Tips:

N-Nitrosodiphenylamine (86-30-6) is prone to breakdown in the injection port and will be converted to Diphenylamine (122-39-4). When comparing the response of Diphenylamine to mixtures manufactured using N-Nitrosodiphenylamine, a difference in response will be observed. The ratio of the MW can be used to calculate the theoretical concentration of the N-Nitrosodiphenylamine.

