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Prep Standard - Chemical Standard Summary

Order ID : Q3690

Test : SVOC-SIMGroup1

Prepbatch ID : PB170712,

Sequence ID/Qc Batch ID: BN120125,

Standard ID :
EP2657,EP2658,EP2663,SP6830,SP6875,SP6876,SP6893,SP6896,SP6897,SP6898,SP6900,SP6901,SP6902,SP6903,SP6904,SP6905,SP6906,SP6907,

Chemical ID :
10ul/1000ul sample,E3875,E3882,E3942,E3972,E3973,E3980,E3986,M6186,S10105,S11497,S11652,S11828,S12116,S12201,S12273,S12560,S12563,S12577,S12670,S12905,S13058,S13097,S13120,S13122,S13182,S13245,S13249,S13299,W3112,

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Extractions STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
314	1.1 H2SO4 SOLN	EP2657	11/03/2025	05/03/2026	RUPESHKUMAR SHAH	None	None	Riteshkumar Patel 11/03/2025

FROM 1000.00000ml of M6186 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1874	10 N SODIUM HYDROXIDE SOLN	EP2658	11/03/2025	05/03/2026	RUPESHKUMAR SHAH	None	None	Riteshkumar Patel 11/03/2025

FROM 1000.00000ml of W3112 + 400.00000gram of E3882 = Final Quantity: 1000.000 ml

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Extractions STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3923	Baked Sodium Sulfate	EP2663	11/20/2025	05/20/2026	RUPESHKUMAR SHAH	Extraction_SCALE_2 (EX-SC-2)	None	Riteshkumar Patel 11/20/2025

FROM 4000.00000gram of E3875 = Final Quantity: 4000.000 gram

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3493	Internal Standard 0.4 PPM	SP6830	06/17/2025	12/13/2025	Jagrut Upadhyay	None	None	Rahul Chavli 06/19/2025

FROM 0.10000ml of S12670 + 4.90000ml of E3942 = Final Quantity: 5.000 ml

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SVOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3895	50 ug/ml DFTPP 8270E	SP6875	09/30/2025	03/30/2026	Rahul Chavli	None	None	Jagrut Upadhyay 09/30/2025

FROM 1.00000ml of S12577 + 19.00000ml of E3973 = Final Quantity: 20.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3492	8270-SIM-Spike 0.4 PPM	SP6876	09/30/2025	11/30/2025	Jagrut Upadhyay	None	None	Rahul Chavli 09/30/2025

FROM 0.00080ml of S11652 + 0.01000ml of S13120 + 0.02000ml of S12560 + 0.02000ml of S13097 + 0.02000ml of S13245 + 49.92920ml of E3972 = Final Quantity: 50.000 ml

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SVOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3491	8270-SIM-Surrogate 0.4 PPM	SP6893	10/09/2025	12/09/2025	Jagrut Upadhyay	None	None	Rahul Chavli 10/09/2025

FROM 0.00800ml of S12201 + 0.01600ml of S12905 + 0.04000ml of S11828 + 199.93600ml of E3972 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3339	8270 sim calibration stock 10ppm (CPI)	SP6896	10/22/2025	12/09/2025	Jagrut Upadhyay	None	None	Rahul Chavli 11/06/2025

FROM 0.03350ml of S10105 + 0.05000ml of S11497 + 0.12500ml of S11828 + 0.12500ml of S12116 + 0.25000ml of S12273 + 0.25000ml of S13058 + 24.16650ml of E3980 = Final Quantity: 25.000 ml

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SVOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3361	8270-SIM MDL-5PPM CALIBRATION SOLUTION	SP6897	10/22/2025	12/09/2025	Jagrut Upadhyay	None	None	Rahul Chavli 11/06/2025

FROM 0.50000ml of E3980 + 0.01000ml of SP6830 + 0.50000ml of SP6896 = Final Quantity: 1.010 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3341	8270-SIM MDL-3.2PPM CALIBRATION SOLUTION	SP6898	10/22/2025	12/09/2025	Jagrut Upadhyay	None	None	Rahul Chavli 11/06/2025

FROM 0.68000ml of E3980 + 0.01000ml of SP6830 + 0.32000ml of SP6896 = Final Quantity: 1.010 ml

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SVOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3344	8270-SIM MDL-1.6PPM CALIBRATION SOLUTION	SP6900	10/22/2025	12/09/2025	Jagrut Upadhyay	None	None	Rahul Chavli 11/06/2025

FROM 0.84000ml of E3980 + 0.01000ml of SP6830 + 0.16000ml of SP6896 = Final Quantity: 1.010 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3342	8270-SIM MDL-0.8PPM CALIBRATION SOLUTION	SP6901	10/22/2025	12/09/2025	Jagrut Upadhyay	None	None	Rahul Chavli 11/06/2025

FROM 0.92000ml of E3980 + 0.01000ml of SP6830 + 0.08000ml of SP6896 = Final Quantity: 1.010 ml

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SVOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3343	8270-SIM MDL-0.4PPM CALIBRATION SOLUTION	SP6902	10/22/2025	12/09/2025	Jagrut Upadhyay	None	None	Rahul Chavli 11/06/2025

FROM 0.96000ml of E3980 + 0.01000ml of SP6830 + 0.04000ml of SP6896 = Final Quantity: 1.010 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3345	8270-SIM MDL-0.2PPM CALIBRATION SOLUTION	SP6903	10/22/2025	12/09/2025	Jagrut Upadhyay	None	None	Rahul Chavli 11/06/2025

FROM 0.50000ml of E3980 + 0.01000ml of SP6830 + 0.50000ml of SP6902 = Final Quantity: 1.010 ml

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SVOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3346	8270-SIM MDL-0.1PPM CALIBRATION SOLUTION	SP6904	10/22/2025	12/09/2025	Jagrut Upadhyay	None	None	Rahul Chavli 11/06/2025

FROM 0.75000ml of E3980 + 0.01000ml of SP6830 + 0.25000ml of SP6902 = Final Quantity: 1.010 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3355	8270-SIM MDL-3.2PPM CALIBRATION STOCK SOL- 2ND SOURCE	SP6905	10/27/2025	12/09/2025	Jagrut Upadhyay	None	None	Rahul Chavli 11/06/2025

FROM 0.00630ml of S12201 + 0.01280ml of S12905 + 0.03200ml of S11828 + 0.03200ml of S13122 + 0.06400ml of S12563 + 0.06400ml of S13249 + 0.06400ml of S13299 + 19.72490ml of E3980 = Final Quantity: 20.000 ml

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SVOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3356	8270-SIM MDL-0.4PPM CALIBRATION SOL ICV-2ND SOURCE	SP6906	10/27/2025	12/09/2025	Jagrut Upadhyay	None	None	Rahul Chavli 11/06/2025

FROM 0.87500ml of E3980 + 0.01000ml of SP6830 + 0.12500ml of SP6905 = Final Quantity: 1.010 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3493	Internal Standard 0.4 PPM	SP6907	11/07/2025	04/16/2026	Jagrut Upadhyay	None	None	mohammad ahmed 11/13/2025

FROM 0.10000ml of S13182 + 4.90000ml of E3980 = Final Quantity: 5.000 ml

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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 #
PCI Scientific Supply, Inc.	PC19510-5 / Sodium Hydroxide Pellets 2.5 Kg, Pk of 4	240301-B077875	01/31/2028	07/30/2025 /	02/24/2025 / RUPESH	E3882

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)	25A2862010	12/13/2025	06/13/2025 / Rajesh	02/28/2025 / Rajesh	E3942

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H1462005	05/24/2027	09/16/2025 / Evelyn	09/04/2025 / Riteshkumar	E3972

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	09/15/2025 / Riteshkumar	09/15/2025 / Riteshkumar	E3973

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

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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 #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	07/12/2026	08/13/2025 / Sagar	08/06/2025 / Sagar	M6186

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	12/19/2025	06/19/2025 / Jagrut	12/09/2021 / Christian	S10105

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	04/22/2026	10/22/2025 / Jagrut	08/11/2023 / Yogesh	S11497

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	01/30/2026	07/30/2025 / Rahul	11/09/2023 / Yogesh	S11652

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	12/09/2025	06/09/2025 / Jagrut	11/21/2023 / rahul	S11828

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CHEMICAL RECEIPT LOG BOOK

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	04/22/2026	10/22/2025 / Jagrut	03/08/2024 / Rahul	S12116

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	03/22/2026	09/22/2025 / Jagrut	03/15/2024 / Rahul	S12201

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	12/25/2025	06/25/2025 / Jagrut	05/24/2024 / Rahul	S12273

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] [CS 4978-2]	A0214017	03/22/2026	09/22/2025 / Jagrut	07/23/2024 / RAHUL	S12560

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] [CS 4978-2]	A0214017	04/16/2026	10/16/2025 / Jagrut	07/23/2024 / RAHUL	S12563

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31615 / SV Mixture, GC/MS Tuning Mixture, CH2Cl2, 1mL,	A0212955	06/30/2027	03/31/2025 / Rahul	08/01/2024 / Rahul	S12577

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CHEMICAL RECEIPT LOG BOOK

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, CH2Cl2, 1mL	A0212266	12/16/2025	06/16/2025 / anahy	09/20/2024 / anahy	S12670

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31086 / Base Neutral Surrogate 5000ug/ml,CH2Cl2,5ml	A0216785	03/22/2026	09/22/2025 / Jagrut	12/09/2024 / anahy	S12905

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)	531243	12/25/2025	06/25/2025 / Jagrut	01/16/2025 / anahy	S13058

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, CH2Cl2 [New Solvent 100% CH2Cl2]	A0221014	11/30/2025	09/03/2025 / Jagrut	05/20/2025 / Rahul	S13097

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	A0218894	02/25/2026	08/25/2025 / Jagrut	05/20/2025 / Rahul	S13120

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	A0218894	04/16/2026	10/16/2025 / Jagrut	05/20/2025 / Rahul	S13122

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CHEMICAL RECEIPT LOG BOOK

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, CH2Cl2, 1mL	A0224359	05/07/2026	11/07/2025 / rahul	06/02/2025 / anahy	S13182

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] [CS 4978-1]	A0228451	03/23/2026	09/22/2025 / Jagrut	08/06/2025 / Rahul	S13245

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] [CS 4978-1]	A0228451	04/27/2026	10/27/2025 / Jagrut	08/06/2025 / Rahul	S13249

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, CH2Cl2 [New Solvent 100% CH2Cl2]	A0229652	04/27/2026	10/27/2025 / Jagrut	10/15/2025 / rahul	S13299

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 / Iwona	07/03/2024 / Iwona	W3112

CPI INTERNATIONAL

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

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
Z-112090-04	440246	≤ -10 °C	Methylene Chloride	2/16/2026	CLP Acid Surrogate Solution, 7,500 mg/L, 1 mL

Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
2-chlorophenol-d_4	93951-73-6	99.3	248.12.7P	7487 ± 17.2
2-fluorophenol	367-12-4	99.8	10.7.3.3P	7513 ± 17.26
phenol-d6	13127-88-3	99.9	949.120.8P	7481 ± 17.19
2,4,6-tribromophenol	118-79-6	99.8	12.1.6P	7469 ± 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

Certified By: Erica Castiglione

Erica Castiglione
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 gravimetricly.

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

MIRADOR 201, COL. MIRADOR
MONTERREY, N.L. MÉXICO
CP 64070
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www.pqm.com.mx

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE CRYSTALS ANHYDROUS		
QUALITY :	ACS (CODE **RMB3375)**	FORMULA :	Na_2SO_4
SPECIFICATION NUMBER:	6399	RELEASE DATE:	MAY/23/2024
LOT NUMBER :	417203		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na_2SO_4)	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_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%	0.001 %
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 foreing 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.

E 3875

PHARMCO
by Greenfield Global

CERTIFICATE OF ANALYSIS

Product Name	Sodium Hydroxide Pellets
Grade	ACS/NF/EP/BP Grade
Catalog #	289ACSNFEPBP
Item #	103433
Batch #	240301-B077875
Date of Manufacture:	01 Feb 2024
Recommended Retest Date:	31 Jan 2028
Customer PO #	6058164
Packaging Type	Drum Fiber 50 Kg

TEST	MONO-GRAPH	SPECIFICATION	RESULT	UNITS
Assay	ACS	NLT 97.0%	98.7	%
Assay - Total Alkali	NF	95.0% - 100.5%	98.7	%
Assay - Content of Sodium	NF	54.0% - 59.8%	56.7	%
Appearance of solution	EP/BP	The solution is clear and colourless	Pass	N/A
Sodium Carbonate (Na2CO3)	ACS	1.0% max.	0.5	%
Sodium Carbonate (Na2CO3)	NF	3.0% max.	0.5	%
Carbonates	EP/BP	Maximum 2.0%, calculated as Na2CO3	0.5	%
Sulfate (SO4)	ACS	0.003% max.	LT 0.002%	N/A
Sulfates	EP/BP	Maximum 200 ppm	LT 20 ppm	N/A
Chloride (Cl)	ACS	0.005% max.	LT 0.005%	N/A
Chlorides	EP/BP	Maximum 200 ppm	LT 50 ppm	N/A
Nitrogen Compounds (as N)	ACS	0.001% max.	LT 0.001%	N/A
Phosphate (PO4)	ACS	0.001% max.	LT 0.001%	N/A
Heavy Metals (as Ag)	ACS	0.002% max	LT 0.002%	N/A
Iron (Fe)	ACS	0.001% max.	LT 0.001%	N/A

E3882 E3884
E3883 E3885

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

avantor™ | J.T.Baker

Material No.: 9266-A4
Batch No.: 25A2862010
Manufactured Date: 2024-12-18
Expiration Date:2026-03-19
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	2
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	99.9 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.3 ppm
Titrable Acid (µeq/g)	<= 0.3	<0.1
Chloride (Cl)	<= 10 ppm	<5 ppm
Water (by KF, coulometric)	<= 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

E3942

JCroak
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

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™ | J.T.Baker

Material No.: 9254-03
Batch No.: 24H1462005
Manufactured Date: 2024-05-24
Expiration Date:2027-05-24
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ($(CH_3)_2CO$) (by GC, corrected forwater)	>= 99.4 %	99.8 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titrable Acid (µeq/g)	<= 0.3	0.2
Titrable Base (µeq/g)	<= 0.6	<0.1
Water (H_2O)	<= 0.5 %	0.2 %
FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL)	<= 5	<1
ECD Sensitive Impurities (as HeptachlorEpoxide) 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

E3972

JCroak
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

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

avantor | J.T.Baker

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)	<= 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	1
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.1 ppm
Titrable Acid (µeq/g)	<= 0.3	<0.1
Chloride (Cl)	<= 10 ppm	<5 ppm
Water (by KF, coulometric)	<= 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 6/10/25 PJ

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

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

avantor™ | J.T.Baker

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)	<= 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	1
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.1 ppm
Titrable Acid (µeq/g)	<= 0.3	<0.1
Chloride (Cl)	<= 10 ppm	<5 ppm
Water (by KF, coulometric)	<= 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

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

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

avantor™ | J.T.Baker®

M6186

Recien Date :- 08/06/25

Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay (H_2SO_4)	95.0 - 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS - Color (APHA)	≤ 10	5
ACS - Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS - Substances Reducing Permanganate (as SO2)	≤ 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 and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities - Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities - Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities - Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities - Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities - Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities - Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities - Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities - Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

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

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities – Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities – Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory,Research,or Manufacturing Use

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

James T Ethier

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855 282 6867 or +1 610 286 1700

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Date Received:_____

Certificate of Analysis

Rev 0

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
Z-110094-02	506889	≤ -10 °C	Methylene Chloride	7/25/2028	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 to 511498 } Y.P. 08/11/2023

*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 gravimetricly.

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

gravimetric

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

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 ↓ 511658 Y.P. 11/13/23

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:

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

  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

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chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

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

S11828 ↓ S11832 RC/ 11/30/23

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

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.)

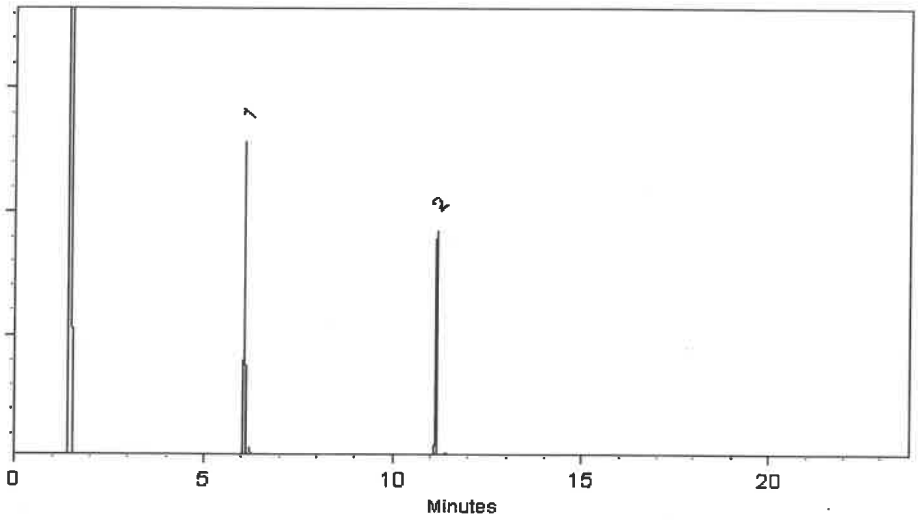
Inj. Temp:
250°C

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:

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

  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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Certificate of Analysis

Rev 0

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

S12112 ↓ S12116 } RC/ 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 gravimetricly.

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Certificate #3222.02

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

S12187 ↓ S12206 } RC/ 03/18/24

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.)

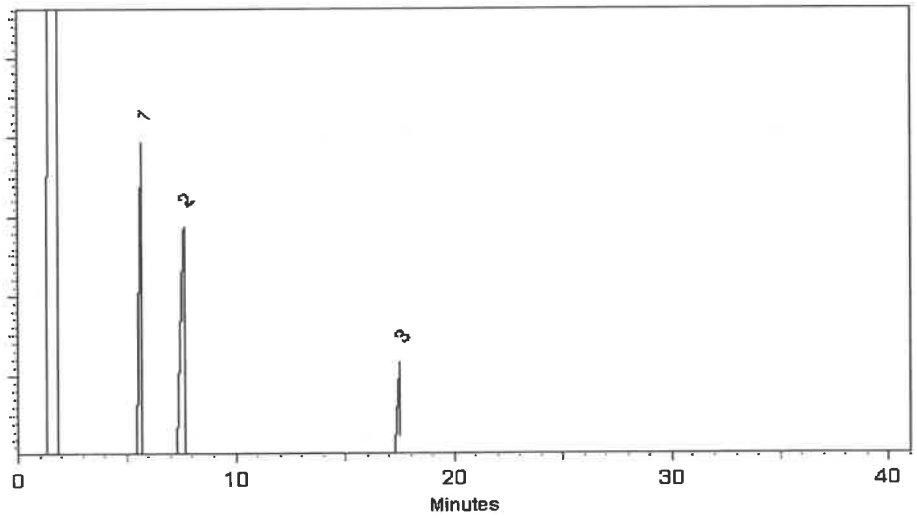
Inj. Temp:
250°C

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 Riglin - Operations Tech I

Date Mixed: 04-Jan-2024 **Balance Serial #** 1128360905

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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Date Received: _____

Certificate of Analysis

Rev 0

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

S12270 ↓ S12274 } RC 05/24/24

*Not a certified value

Kerry E 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 gravimetricly.

Certificate of Analysis

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

Certified By: Kerry E Kane

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 gravimetricly.

Certificate of Analysis

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

Certified By: Kerry E Kane

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 gravimetricly.

Certificate of Analysis

Catalog No.: Z-110381-01 **Lot No.:** 520963 **Expiration Date:** 10/10/2028

Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
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 E Kane

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 gravimetricly.

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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. : 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 ↓ S12568 } RC/ 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:

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

  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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Certificate of Analysis

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Certificate #3222.02

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 ↓ S12568 } RC/ 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:

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

  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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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 ↓ S12579 RC 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.)

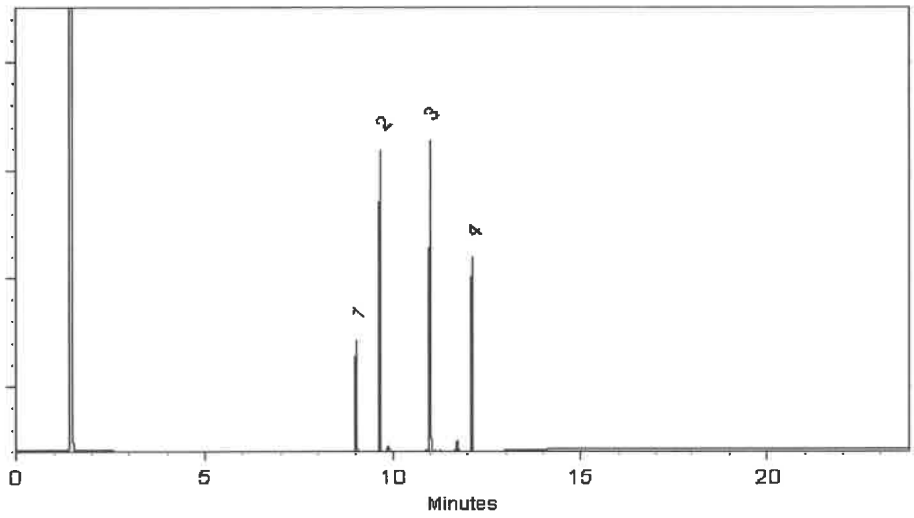
Inj. Temp:
250°C

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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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. : 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

CPI INTERNATIONAL

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Santa Rosa, CA 95403

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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	531243	≤ -10 °C	Methylene Chloride	1/2/2030	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	337.7.4P	997 ± 5.81
benzidine	92-87-5	99.9	124.18.6.2P	993.8 ± 5.78
caprolactam	105-60-2	99.9	271.1.6P	999 ± 5.82

513057
↓
513061
AC
1/16/25

*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: 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 gravimetricly.

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Catalog No. : 31850 **Lot No.:** A0221014

S13088 ↓ S13117 RC 5/20/25.

Description : 8270 MegaMix®

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

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

Expiration Date : November 30, 2025 **Storage:** 0°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	Pyridine	110-86-1	SHBR4811	99%	1,005.2 µg/mL	+/- 36.5730
2	N-Nitrosodimethylamine	62-75-9	S241226RSR	99%	1,005.5 µg/mL	+/- 36.5848
3	Phenol	108-95-2	MKCK1120	99%	1,005.3 µg/mL	+/- 36.5780
4	Aniline	62-53-3	X22F726	99%	1,005.4 µg/mL	+/- 36.5816
5	Bis(2-chloroethyl)ether	111-44-4	002891T24M	99%	1,004.7 µg/mL	+/- 36.5562
6	2-Chlorophenol	95-57-8	STBJ3909	99%	1,005.3 µg/mL	+/- 36.5766
7	1,3-Dichlorobenzene	541-73-1	BCCD5315	99%	1,004.6 µg/mL	+/- 36.5530
8	1,4-Dichlorobenzene	106-46-7	MKBS7929V	99%	1,006.3 µg/mL	+/- 36.6125
9	Benzyl alcohol	100-51-6	SHBK5469	99%	1,005.5 µg/mL	+/- 36.5853
10	1,2-Dichlorobenzene	95-50-1	SHBL6287	99%	1,004.6 µg/mL	+/- 36.5507
11	2-Methylphenol (o-cresol)	95-48-7	SHBN7598	99%	1,004.8 µg/mL	+/- 36.5575
12	2,2'-oxybis(1-chloropropane)	108-60-1	29-MAR-45-5	99%	1,005.4 µg/mL	+/- 36.5803
13	3-Methylphenol (m-cresol)	108-39-4	STBL3873	99%	502.7 µg/mL	+/- 18.2888
14	4-Methylphenol (p-cresol)	106-44-5	SHBN3411	99%	502.6 µg/mL	+/- 18.2869
15	N-Nitroso-di-n-propylamine	621-64-7	N63MG	99%	1,004.6 µg/mL	+/- 36.5502
16	Hexachloroethane	67-72-1	DAXRI	99%	1,004.6 µg/mL	+/- 36.5530
17	Nitrobenzene	98-95-3	10224044	99%	1,005.3 µg/mL	+/- 36.5780

18	Isophorone	78-59-1	MKCR3249	99%	1,004.6	µg/mL	+/- 36.5511
19	2-Nitrophenol	88-75-5	RP230710	99%	1,005.7	µg/mL	+/- 36.5916
20	2,4-Dimethylphenol	105-67-9	DIRAF	99%	1,004.9	µg/mL	+/- 36.5612
21	Bis(2-chloroethoxy)methane	111-91-1	15705100	99%	1,004.3	µg/mL	+/- 36.5402
22	2,4-Dichlorophenol	120-83-2	BCCK6969	99%	1,004.7	µg/mL	+/- 36.5571
23	1,2,4-Trichlorobenzene	120-82-1	SHBP5900	99%	1,004.6	µg/mL	+/- 36.5516
24	Naphthalene	91-20-3	STBL1057	99%	1,006.8	µg/mL	+/- 36.6335
25	4-Chloroaniline	106-47-8	BCCJ3217	99%	1,005.9	µg/mL	+/- 36.5980
26	Hexachlorobutadiene	87-68-3	X05J	98%	1,004.1	µg/mL	+/- 36.5328
27	4-Chloro-3-methylphenol	59-50-7	BCCD4461	99%	1,005.4	µg/mL	+/- 36.5793
28	2-Methylnaphthalene	91-57-6	STBL3028	99%	1,006.3	µg/mL	+/- 36.6144
29	1-Methylnaphthalene	90-12-0	5234.00-8	98%	990.2	µg/mL	+/- 36.0269
30	Hexachlorocyclopentadiene	77-47-4	099063P13G	99%	1,005.9	µg/mL	+/- 36.5975
31	2,4,6-Trichlorophenol	88-06-2	STBK8870	99%	1,004.7	µg/mL	+/- 36.5566
32	2,4,5-Trichlorophenol	95-95-4	3YFRE	97%	1,004.7	µg/mL	+/- 36.5571
33	2-Chloronaphthalene	91-58-7	RPN7O	99%	1,005.3	µg/mL	+/- 36.5757
34	2-Nitroaniline	88-74-4	RP240715RSR	99%	1,004.8	µg/mL	+/- 36.5584
35	1,4-Dinitrobenzene	100-25-4	RP240703RSR	99%	1,004.5	µg/mL	+/- 36.5475
36	Acenaphthylene	208-96-8	214935V18H	95%	1,000.1	µg/mL	+/- 36.3888
37	1,3-Dinitrobenzene	99-65-0	TRC3-1075941-2-1	99%	1,004.9	µg/mL	+/- 36.5616
38	Dimethylphthalate	131-11-3	358221L17K	99%	1,004.5	µg/mL	+/- 36.5489
39	2,6-Dinitrotoluene	606-20-2	BCCG1833	99%	1,005.2	µg/mL	+/- 36.5734
40	1,2-Dinitrobenzene	528-29-0	RP240701RSR	99%	1,005.9	µg/mL	+/- 36.6003
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	+/- 36.5525
43	2,4-Dinitrophenol	51-28-5	D240927RSR	99%	1,005.0	µg/mL	+/- 36.5657
44	Dibenzofuran	132-64-9	MKCN1772	99%	1,005.4	µg/mL	+/- 36.5803
45	2,4-Dinitrotoluene	121-14-2	102869V26E	99%	1,005.4	µg/mL	+/- 36.5803
46	4-Nitrophenol	100-02-7	20241120-1-AN	99%	1,005.7	µg/mL	+/- 36.5930
47	2,3,4,6-Tetrachlorophenol	58-90-2	PR-34476	99%	1,004.9	µg/mL	+/- 36.5616
48	2,3,5,6-Tetrachlorophenol	935-95-5	RP240523RSR	99%	1,005.2	µg/mL	+/- 36.5739
49	Fluorene	86-73-7	10246250	98%	1,005.8	µg/mL	+/- 36.5948
50	4-Chlorophenyl phenyl ether	7005-72-3	002531K02D	99%	1,004.8	µg/mL	+/- 36.5584
51	Diethylphthalate	84-66-2	STBL3611	99%	1,005.3	µg/mL	+/- 36.5762
52	4-Nitroaniline	100-01-6	RP240830RSR	99%	1,005.5	µg/mL	+/- 36.5844
53	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)	534-52-1	S241008RSR	99%	1,004.8	µg/mL	+/- 36.5589

54	Diphenylamine	122-39-4	MKCT1512	99%	1,005.2	µg/mL	+/- 36.5725
55	Azobenzene	103-33-3	BCCL3292	99%	1,004.7	µg/mL	+/- 36.5566
56	4-Bromophenyl phenyl ether	101-55-3	STBH6361	99%	1,005.6	µg/mL	+/- 36.5875
57	Hexachlorobenzene	118-74-1	15828800	99%	1,005.3	µg/mL	+/- 36.5789
58	Pentachlorophenol	87-86-5	RP240517RSR	99%	1,005.4	µg/mL	+/- 36.5825
59	Phenanthrene	85-01-8	MKCT3391	99%	1,004.8	µg/mL	+/- 36.5584
60	Anthracene	120-12-7	MKCW9141	99%	1,005.5	µg/mL	+/- 36.5834
61	Carbazole	86-74-8	15630800	99%	1,005.3	µg/mL	+/- 36.5789
62	Di-n-butylphthalate	84-74-2	MKCN4337	99%	1,005.5	µg/mL	+/- 36.5848
63	Fluoranthene	206-44-0	A0458721	99%	1,005.4	µg/mL	+/- <0.0001
64	Pyrene	129-00-0	BCCL8032	99%	1,005.2	µg/mL	+/- 36.5734
65	Benzyl butyl phthalate	85-68-7	X12I018	99%	1,004.8	µg/mL	+/- 36.5584
66	Bis(2-ethylhexyl)adipate	103-23-1	MKCR8567	99%	1,004.5	µg/mL	+/- 36.5480
67	Benz(a)anthracene	56-55-3	I60012022BAA	99%	1,005.5	µg/mL	+/- 36.5844
68	Chrysene	218-01-9	RP241212RSR	99%	1,005.5	µg/mL	+/- 36.5848
69	Bis(2-ethylhexyl)phthalate	117-81-7	MKCS8065	99%	1,004.7	µg/mL	+/- 36.5548
70	Di-n-octyl phthalate	117-84-0	15817300	99%	1,004.8	µg/mL	+/- 36.5607
71	Benzo(b)fluoranthene	205-99-2	022013B	99%	1,005.1	µg/mL	+/- 36.5716
72	Benzo(k)fluoranthene	207-08-9	012022K	98%	1,004.6	µg/mL	+/- 36.5511
73	Benzo(a)pyrene	50-32-8	NQLXA	98%	1,004.2	µg/mL	+/- 36.5377
74	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	1,004.1	µg/mL	+/- 36.5337
75	Dibenz(a,h)anthracene	53-70-3	712061504-1-1	99%	1,005.7	µg/mL	+/- 36.5930
76	Benzo(g,h,i)perylene	191-24-2	RP241014RSR	98%	1,005.4	µg/mL	+/- 36.5814

* 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.

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.)

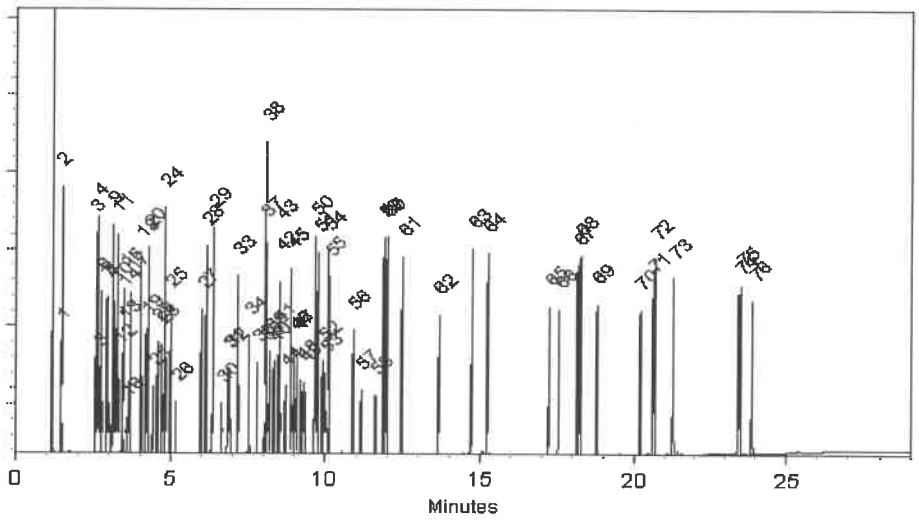
Inj. Temp:
250°C

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.

Penelope Riglin - Operations Tech I

Date Mixed: 12-Jan-2025 **Balance Serial #** 1128360905

Dillan Murphy - Operations Technician I

Date Passed: 21-Jan-2025

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

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31853 **Lot No.:** A0218894

Description : 1,4-dioxane

1,4-Dioxane 2,000µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date : November 30, 2029 **Storage:** 0°C or colder

Ship: Ambient

513118 ↓ 513147 } RC/ 5/20/25.

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	SHBQ1693	99%	2,002.4 µg/mL	+/- 24.9202

* 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.)

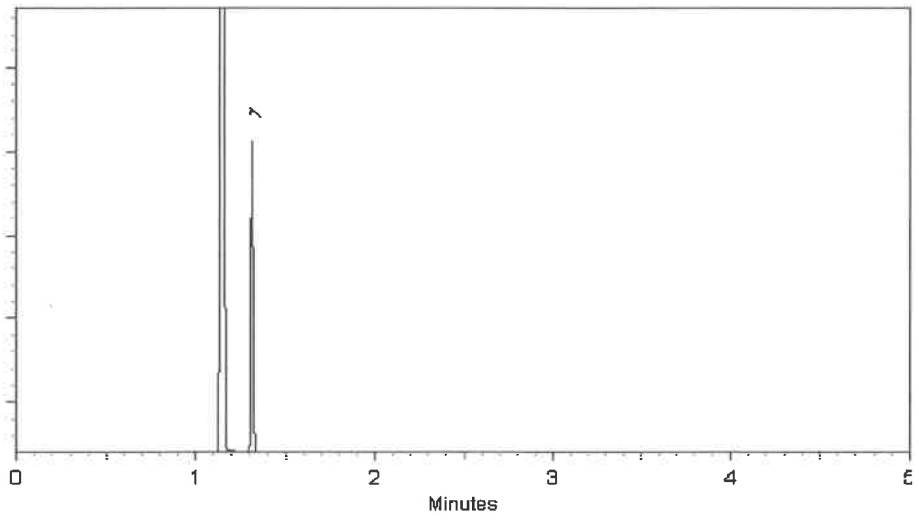
Inj. Temp:
250°C

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.

Penelope Riglin - Operations Tech I

Date Mixed: 07-Nov-2024 **Balance Serial #** 1128360905

Dillan Murphy - Operations Technician I

Date Passed: 11-Nov-2024

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

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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.:** A0218894

Description : 1,4-dioxane

1,4-Dioxane 2,000µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date : November 30, 2029 **Storage:** 0°C or colder

Ship: Ambient

513118 ↓ 513147 } RC/ 5/20/25.

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	SHBQ1693	99%	2,002.4 µg/mL	+/- 24.9202

* 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.)

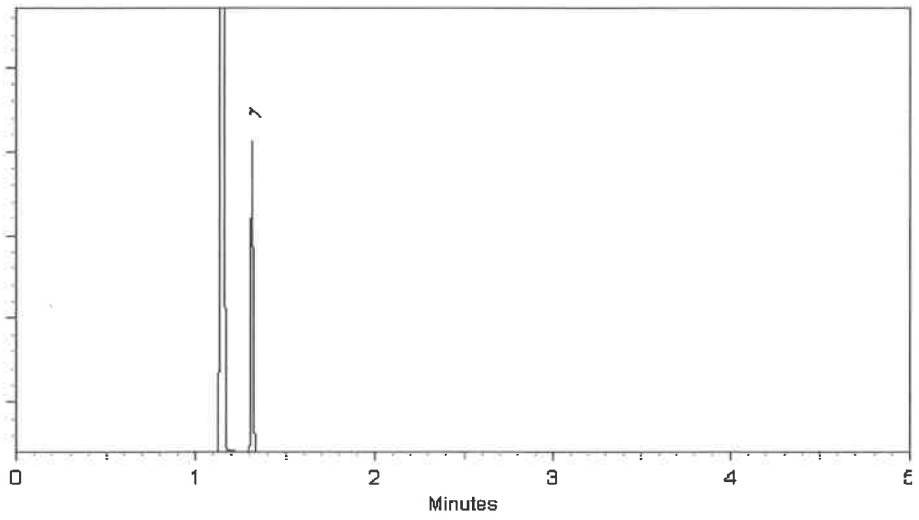
Inj. Temp:
250°C

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.

Penelope Riglin - Operations Tech I

Date Mixed: 07-Nov-2024 **Balance Serial #** 1128360905

Dillan Murphy - Operations Technician I

Date Passed: 11-Nov-2024

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

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31206 **Lot No.:** A0224359

Description : SV Internal Standard Mix 2mg/ml

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

S13168 ↓ S13197 } AC 6/9/25

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

Expiration Date : March 31, 2031 **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%	2,000.0 µg/mL	+/- 90.0812
2	Naphthalene-d8	1146-65-2	M-2180	99%	2,000.8 µg/mL	+/- 90.1187
3	Acenaphthene-d10	15067-26-2	PR-33507	99%	2,000.8 µg/mL	+/- 90.1187
4	Phenanthrene-d10	1517-22-2	PR-34099	99%	2,000.0 µg/mL	+/- 90.0812
5	Chrysene-d12	1719-03-5	PR-33506	99%	2,000.8 µg/mL	+/- 90.1187
6	Perylene-d12	1520-96-3	PR-33205	99%	2,000.0 µg/mL	+/- 90.0812

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

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

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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. : 555223 **Lot No.:** A0228451

S13239 ↓ S13268 } RC 08/06/25

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 : August 31, 2027 **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	S250226RSR	99%	1,006.0 µg/mL	+/- 23.0947
2	Atrazine	1912-24-9	5FYWL	99%	1,007.0 µg/mL	+/- 23.1176
3	Benzidine	92-87-5	S250227ECS	99%	1,003.0 µg/mL	+/- 23.0258
4	epsilon-Caprolactam	105-60-2	Y16H012	99%	1,003.0 µg/mL	+/- 23.0258

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

Tom Suckar - Mix Technician **Date Mixed:** 01-Aug-2025 **Balance:** 1128360905

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

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 555223 **Lot No.:** A0228451

S13239 ↓ S13268 } RC 08/06/25

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 : August 31, 2027 **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	S250226RSR	99%	1,006.0 µg/mL	+/- 23.0947
2	Atrazine	1912-24-9	5FYWL	99%	1,007.0 µg/mL	+/- 23.1176
3	Benzidine	92-87-5	S250227ECS	99%	1,003.0 µg/mL	+/- 23.0258
4	epsilon-Caprolactam	105-60-2	Y16H012	99%	1,003.0 µg/mL	+/- 23.0258

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

Tom Suckar - Mix Technician **Date Mixed:** 01-Aug-2025 **Balance:** 1128360905

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

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Testing Laboratory
Certificate #3222.02

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.:** A0229652

Description : 8270 MegaMix®

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

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

Expiration Date : July 31, 2026 **Storage:** 0°C or colder

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

S13299 ↓ S13328 RC 10/17/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Pyridine	110-86-1	SHBR4811	99%	1,004.9 µg/mL	+/- 36.5621
2	N-Nitrosodimethylamine	62-75-9	S250717RSR	99%	1,004.5 µg/mL	+/- 36.5484
3	Phenol	108-95-2	MKCT5446	99%	1,003.5 µg/mL	+/- 36.5120
4	Aniline	62-53-3	X22F726	99%	1,004.8 µg/mL	+/- 36.5575
5	Bis(2-chloroethyl)ether	111-44-4	002891T24M	99%	1,003.6 µg/mL	+/- 36.5166
6	2-Chlorophenol	95-57-8	STBK4742	99%	1,004.5 µg/mL	+/- 36.5484
7	1,3-Dichlorobenzene	541-73-1	STBL1702	99%	1,003.8 µg/mL	+/- 36.5211
8	1,4-Dichlorobenzene	106-46-7	MKBS7929V	99%	1,003.8 µg/mL	+/- 36.5211
9	Benzyl alcohol	100-51-6	094986W07G	99%	1,003.8 µg/mL	+/- 36.5211
10	1,2-Dichlorobenzene	95-50-1	SHBR4446	99%	1,004.9 µg/mL	+/- 36.5621
11	2-Methylphenol (o-cresol)	95-48-7	SHBN7598	99%	1,004.3 µg/mL	+/- 36.5393
12	2,2'-oxybis(1-chloropropane)	108-60-1	RP250904RSR	99%	1,005.0 µg/mL	+/- 36.5666
13	3-Methylphenol (m-cresol)	108-39-4	STBL3873	99%	502.4 µg/mL	+/- 18.2788
14	4-Methylphenol (p-cresol)	106-44-5	SHBQ7653	99%	502.3 µg/mL	+/- 18.2742
15	N-Nitroso-di-n-propylamine	621-64-7	N63MG	99%	1,004.9 µg/mL	+/- 36.5621
16	Hexachloroethane	67-72-1	DAXRI	99%	1,003.9 µg/mL	+/- 36.5257
17	Nitrobenzene	98-95-3	10224044	99%	1,003.9 µg/mL	+/- 36.5257

18	Isophorone	78-59-1	MKCR3249	99%	1,004.8	µg/mL	+/- 36.5575
19	2-Nitrophenol	88-75-5	RP230710	99%	1,003.6	µg/mL	+/- 36.5166
20	2,4-Dimethylphenol	105-67-9	DIRAF	99%	1,004.1	µg/mL	+/- 36.5348
21	Bis(2-chloroethoxy)methane	111-91-1	15705100	99%	1,004.5	µg/mL	+/- 36.5484
22	2,4-Dichlorophenol	120-83-2	BCCK6969	99%	1,004.8	µg/mL	+/- 36.5575
23	1,2,4-Trichlorobenzene	120-82-1	SHBR1701	99%	1,004.0	µg/mL	+/- 36.5302
24	Naphthalene	91-20-3	STBL1057	99%	1,004.0	µg/mL	+/- 36.5302
25	4-Chloroaniline	106-47-8	BCCJ3217	99%	1,004.5	µg/mL	+/- 36.5484
26	Hexachlorobutadiene	87-68-3	X05J	98%	1,002.7	µg/mL	+/- 36.4816
27	4-Chloro-3-methylphenol	59-50-7	BCCK5906	99%	1,004.3	µg/mL	+/- 36.5393
28	2-Methylnaphthalene	91-57-6	STBL3028	99%	1,000.5	µg/mL	+/- 36.4029
29	1-Methylnaphthalene	90-12-0	5234.00-8	98%	1,000.0	µg/mL	+/- 36.3847
30	Hexachlorocyclopentadiene	77-47-4	099063P13G	99%	1,004.0	µg/mL	+/- 36.5302
31	2,4,6-Trichlorophenol	88-06-2	STBK8870	99%	1,003.5	µg/mL	+/- 36.5120
32	2,4,5-Trichlorophenol	95-95-4	3YFRE	97%	1,003.6	µg/mL	+/- 36.5152
33	2-Chloronaphthalene	91-58-7	RPN7O	99%	1,003.6	µg/mL	+/- 36.5166
34	2-Nitroaniline	88-74-4	RP250625RSR	99%	1,003.8	µg/mL	+/- 36.5211
35	1,4-Dinitrobenzene	100-25-4	RP250401RSR	99%	1,004.6	µg/mL	+/- 36.5530
36	Acenaphthylene	208-96-8	214935V18H	95%	1,000.4	µg/mL	+/- 36.3974
37	1,3-Dinitrobenzene	99-65-0	TRC3-1075941-2-1	99%	1,004.8	µg/mL	+/- 36.5575
38	Dimethylphthalate	131-11-3	358221L17K	99%	1,003.5	µg/mL	+/- 36.5120
39	2,6-Dinitrotoluene	606-20-2	BCCG1833	99%	1,004.6	µg/mL	+/- 36.5530
40	1,2-Dinitrobenzene	528-29-0	RP250203RSR	99%	1,002.6	µg/mL	+/- 36.4802
41	Acenaphthene	83-32-9	MKCV8166	99%	1,000.0	µg/mL	+/- 36.3847
42	3-Nitroaniline	99-09-2	RP240708RSR	99%	1,003.8	µg/mL	+/- 36.5211
43	2,4-Dinitrophenol	51-28-5	D240927RSR	99%	1,004.1	µg/mL	+/- 36.5348
44	Dibenzofuran	132-64-9	MKCW3845	99%	1,003.6	µg/mL	+/- 36.5166
45	2,4-Dinitrotoluene	121-14-2	102869V26E	99%	1,003.8	µg/mL	+/- 36.5211
46	4-Nitrophenol	100-02-7	20241120-1-AN	99%	1,003.0	µg/mL	+/- 36.4938
47	2,3,4,6-Tetrachlorophenol	58-90-2	PR-34476	99%	1,003.8	µg/mL	+/- 36.5211
48	2,3,5,6-Tetrachlorophenol	935-95-5	RP250724RSR	99%	1,003.1	µg/mL	+/- 36.4984
49	Fluorene	86-73-7	10246250	98%	1,002.9	µg/mL	+/- 36.4905
50	4-Chlorophenyl phenyl ether	7005-72-3	002531K02D	99%	1,004.3	µg/mL	+/- 36.5393
51	Diethylphthalate	84-66-2	223219R19C	99%	1,004.8	µg/mL	+/- 36.5575
52	4-Nitroaniline	100-01-6	RP240830RSR	99%	1,004.0	µg/mL	+/- 36.5302
53	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)	534-52-1	S250805RSR	99%	1,004.8	µg/mL	+/- 36.5575

54	Diphenylamine	122-39-4	MKCT1512	99%	1,004.9	µg/mL	+/- 36.5621
55	Azobenzene	103-33-3	BCCL3292	99%	1,003.9	µg/mL	+/- 36.5257
56	4-Bromophenyl phenyl ether	101-55-3	STBH6361	99%	1,003.9	µg/mL	+/- 36.5257
57	Hexachlorobenzene	118-74-1	16302300	99%	1,004.5	µg/mL	+/- 36.5484
58	Pentachlorophenol	87-86-5	RP240411RSR	99%	1,004.9	µg/mL	+/- 36.5621
59	Phenanthrene	85-01-8	MKCV8193	99%	1,003.8	µg/mL	+/- 36.5211
60	Anthracene	120-12-7	MKCW9141	99%	1,003.3	µg/mL	+/- 36.5029
61	Carbazole	86-74-8	15821400	99%	1,003.1	µg/mL	+/- 36.4984
62	Di-n-butylphthalate	84-74-2	MKCN4337	99%	1,004.6	µg/mL	+/- 36.5530
63	Fluoranthene	206-44-0	A0458721	99%	1,004.8	µg/mL	+/- 36.5575
64	Pyrene	129-00-0	BCCL8032	99%	1,003.8	µg/mL	+/- 36.5211
65	Benzyl butyl phthalate	85-68-7	X12I018	99%	1,004.9	µg/mL	+/- 36.5621
66	Bis(2-ethylhexyl)adipate	103-23-1	MKCM1988	99%	1,003.4	µg/mL	+/- 36.5075
67	Benz(a)anthracene	56-55-3	I80012022BAA	99%	1,004.3	µg/mL	+/- 36.5393
68	Chrysene	218-01-9	RP250815RSR	99%	1,003.9	µg/mL	+/- 36.5257
69	Bis(2-ethylhexyl)phthalate	117-81-7	MKCS8065	99%	1,004.5	µg/mL	+/- 36.5484
70	Di-n-octyl phthalate	117-84-0	16197600	99%	1,004.4	µg/mL	+/- 36.5439
71	Benzo(b)fluoranthene	205-99-2	0225BF	99%	1,005.4	µg/mL	+/- 36.5803
72	Benzo(k)fluoranthene	207-08-9	012022K	99%	1,004.5	µg/mL	+/- 36.5484
73	Benzo(a)pyrene	50-32-8	NQLXA	98%	1,002.4	µg/mL	+/- 36.4726
74	Indeno(1,2,3-cd)pyrene	193-39-5	17-YMK-40-2	99%	1,004.0	µg/mL	+/- 36.5302
75	Dibenz(a,h)anthracene	53-70-3	712215450-1-1	99%	1,003.5	µg/mL	+/- 36.5120
76	Benzo(g,h,i)perylene	191-24-2	RP250501RSR	98%	1,003.0	µg/mL	+/- 36.4949

* 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.

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.)

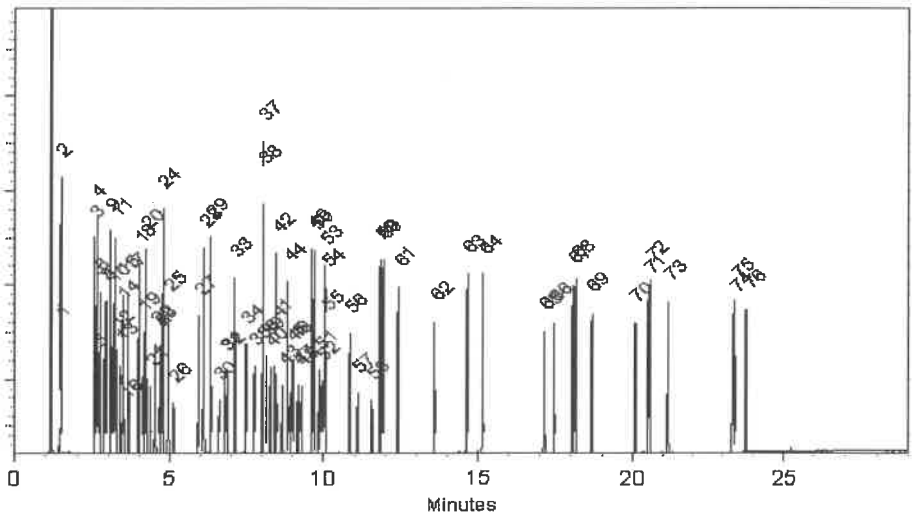
Inj. Temp:
250°C

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.

Dakota Parson - Operations Technician I

Date Mixed: 04-Sep-2025 **Balance Serial #** B345965662

Brittany Federinko - Operations Tech II

Date Passed: 15-Sep-2025

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