

Prep Standard - Chemical Standard Summary

Order ID : Q1502

Test : VOCGC Group 1

Prepbatch ID : PB167059,

Sequence ID/Qc Batch ID: PQ031225,

Standard ID :

PP24133,PP24134,PP24135,PP24136,PP24289,PP24290,PP24292,PP24293,PP24294,PP24295,PP24297,PP24300,PP24301,

Chemical ID :

E3877,M5884,P10225,P12215,P13234,V14624,W3112,

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2263	EDB-DBCP 2 PPM Stock Solution	PP24133	01/28/2025	07/13/2025	Ankita Jodhani	None	None	Yogesh Patel
								01/29/2025

FROM 0.01000ml of P10225 + 0.01000ml of P13234 + 9.98000ml of V14624 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2264	EDB-DBCP 2 PPM Stock Solution 2nd Source	PP24134	01/28/2025	07/13/2025	Ankita Jodhani	None	None	Yogesh Patel
								01/29/2025

FROM 0.10000ml of P12215 + 9.90000ml of V14624 = Final Quantity: 10.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2517	EDB-DBCP 100 PPB Working Solution	PP24135	01/28/2025	07/13/2025	Ankita Jodhani	None	None	Yogesh Patel
								01/29/2025

FROM 9.50000ml of V14624 + 0.50000ml of PP24133 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2518	EDB-DBCP 100 PPB Working Sol. 2nd Source	PP24136	01/28/2025	07/13/2025	Ankita Jodhani	None	None	Yogesh Patel
								01/29/2025

FROM 9.50000ml of V14624 + 0.50000ml of PP24134 = Final Quantity: 10.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2269	M8011-504.1 0.5 PPB STD	PP24289	03/12/2025	04/12/2025	Ankita Jodhani	None	None	Yogesh Patel
								03/13/2025

FROM 35.00000ml of W3112 + 0.17500ml of PP24135 = Final Quantity: 35.000 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>
2270	M8011-504.1 0.25 PPB STD	PP24290	03/12/2025	04/12/2025	Ankita Jodhani	None	None	Yogesh Patel
								03/13/2025

FROM 35.00000ml of W3112 + 0.08750ml of PP24135 = Final Quantity: 35.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2271	M8011-504.1 0.1 PPB STD	PP24292	03/12/2025	04/12/2025	Ankita Jodhani	None	None	Yogesh Patel
								03/13/2025

FROM 35.00000ml of W3112 + 0.03500ml of PP24135 = Final Quantity: 35.000 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>
2272	M8011-504.1 0.05 PPB STD	PP24293	03/12/2025	04/12/2025	Ankita Jodhani	None	None	Yogesh Patel
								03/13/2025

FROM 35.00000ml of W3112 + 0.01750ml of PP24135 = Final Quantity: 35.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2273	M8011-504.1 0.025 PPB STD	PP24294	03/12/2025	04/12/2025	Ankita Jodhani	None	None	Yogesh Patel
								03/13/2025

FROM 35.00000ml of W3112 + 0.00880ml of PP24135 = Final Quantity: 35.000 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>
2274	M8011-504.1 0.1 PPB ICV STD	PP24295	03/12/2025	04/12/2025	Ankita Jodhani	None	None	Yogesh Patel
								03/13/2025

FROM 35.00000ml of W3112 + 0.03500ml of PP24136 = Final Quantity: 35.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2519	M8011-504.1 0.1 PPB CCC	PP24297	03/12/2025	03/13/2025	Ankita Jodhani	None	None	Yogesh Patel
								03/13/2025

FROM 35.00000ml of W3112 + 0.03500ml of PP24135 = Final Quantity: 35.000 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>
2275	M8011-504.1 0.25 PPB LCS STD	PP24300	03/12/2025	03/13/2025	Ankita Jodhani	None	None	Yogesh Patel
								03/13/2025

FROM 35.00000ml of W3112 + 0.08750ml of PP24136 = Final Quantity: 35.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2275	M8011-504.1 0.25 PPB LCS STD	PP24301	03/12/2025	03/13/2025	Ankita Jodhani	None	None	Yogesh Patel
								03/13/2025

FROM 35.00000ml of W3112 + 0.08750ml of PP24136 = Final Quantity: 35.000 ml

CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	04/30/2024 / mohan	04/25/2024 / mohan	M5884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30270 / 1,2-Dibromo-3-Chloropropene Standard, 2,000 ug/ml	A0164665	07/28/2025	01/28/2025 / Ankita	01/19/2021 / Abdul	P10225

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30239 / 504.1 Calibration Mix (3 components)	A0170154	07/28/2025	01/28/2025 / Ankita	11/28/2022 / Ankita	P12215

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30272 / 1,2-Dibromoethane Standard, 2000 ug/ml	A0183330	07/28/2025	01/28/2025 / Ankita	02/02/2024 / Ankita	P13234

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	2310762004	07/13/2025	01/13/2025 / SAM	11/26/2024 / SAM	V14624

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

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis



Material No.: 9077-02
Batch No.: 23I0762004
Manufactured Date: 2023-08-11
Expiration Date: 2026-08-10
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH ₃ OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.5 ppm
Titration Acid (μeq/g)	≤ 0.3	0.2
Titration Base (μeq/g)	≤ 0.10	0.01
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis – Below EPA 8260B CRQL	Conforms	Conforms

For Laboratory, Research, or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

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

Ken Koehnlein
Sr. Manager, Quality Assurance

Certificate of Analysis

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

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

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

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

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

Recd. by RP on 2/12/25

Harout Sahagian E3877

Harout Sahagian - Quality Control Manager - Fair Lawn

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

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

*Based on suggested storage condition.

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent



MS824
MB

Material No.: 3624-01

Batch No.: 0000281938

Manufactured Date: 2021-06-07

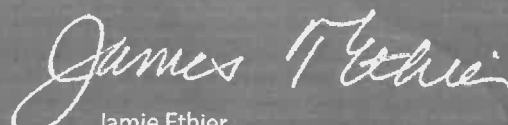
Retest Date: 2026-06-07

Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO ₃)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO ₄)	≤ 5 ppm	< 5 ppm
Sulfate (SO ₄)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory, Research, or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

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

Avantor Performance Materials, LLC

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



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30270 **Lot No.:** A0164665
Description : 1,2-Dibromo-3-chloropropane Standard
1,2-Dibromo-3-Chloropropane 2000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : September 30, 2025 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,2-Dibromo-3-chloropropane CAS # 96-12-8 (Lot FBL01) Purity 97%	2,009.8 µg/mL	+/- 18.6904 µg/mL Gravimetric +/- 113.6299 µg/mL Unstressed +/- 116.2454 µg/mL Stressed

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

P10222
↓
P10225
AR
01/19/2020

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

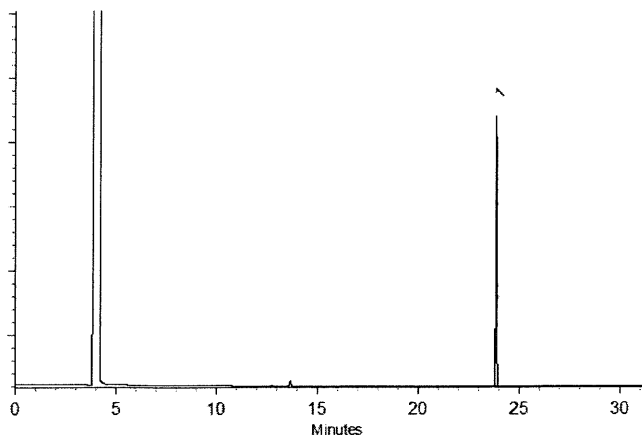
200°C

Det. Temp:

250°C

Det. Type:

FID



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


Jeremy Johnson - Mfg. Supervisor

Date Mixed: 22-Sep-2020

Balance: B251644995


Justine Albertson - Operations Tech-ARM QC

Date Passed: 24-Sep-2020

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



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30239 **Lot No.:** A0170154

Description : 504.1 Calibration Mix

504.1 Calibration Std 200µg/mL, P&T Methanol, 1mL/ampul

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

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

Ship: Ambient

P12211
↓
P12215
AJ
11/28/22

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,2-Dibromoethane (EDB) CAS # 106-93-4 Purity 99% (Lot BCBP2268V)	200.5 µg/mL	+/- 1.4217 µg/mL Gravimetric +/- 11.2713 µg/mL Unstressed +/- 11.5336 µg/mL Stressed
2	1,2,3-Trichloropropane CAS # 96-18-4 Purity 99% (Lot BCBH8722V)	200.0 µg/mL	+/- 1.4182 µg/mL Gravimetric +/- 11.2431 µg/mL Unstressed +/- 11.5049 µg/mL Stressed
3	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 97% (Lot FBL01)	199.8 µg/mL	+/- 1.4169 µg/mL Gravimetric +/- 11.2330 µg/mL Unstressed +/- 11.4945 µg/mL Stressed

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

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

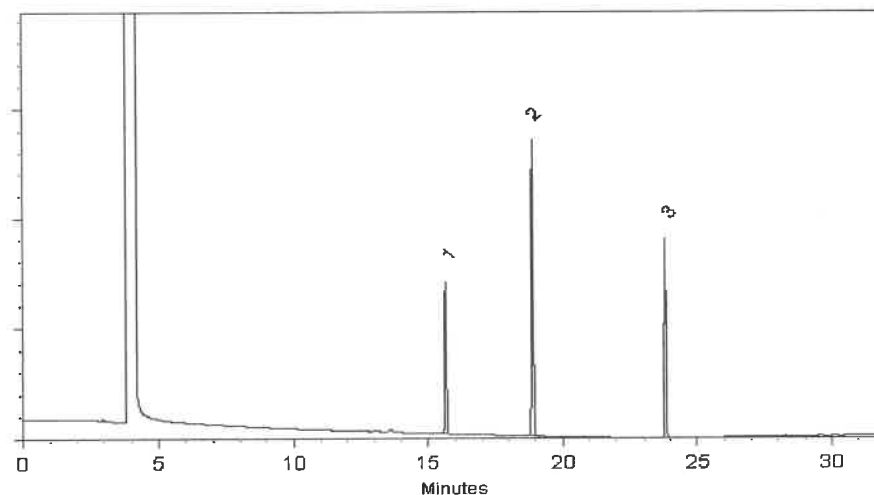
200°C

Det. Temp:

250°C

Det. Type:

FID



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


Erik Strommer - Operations Tech I

Date Mixed: 15-Mar-2021

Balance: B251644995


Alexis Shelow - Operations Tech I

Date Passed: 16-Mar-2021

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



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30272 Lot No.: A0183330

Description : 1,2-Dibromoethane Standard
1,2-Dibromoethane 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : March 31, 2027 Storage: 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,2-Dibromoethane (EDB) CAS # 106-93-4 Purity 99% (Lot BCBZ7221)	2,016.0 µg/mL	+/- 18.7477 µg/mL
			+/- 113.9782 µg/mL
			+/- 116.6017 µg/mL
			Gravimetric Unstressed
			Gravimetric Stressed

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

p13233
↓
p13237

AJ
02/02/24

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

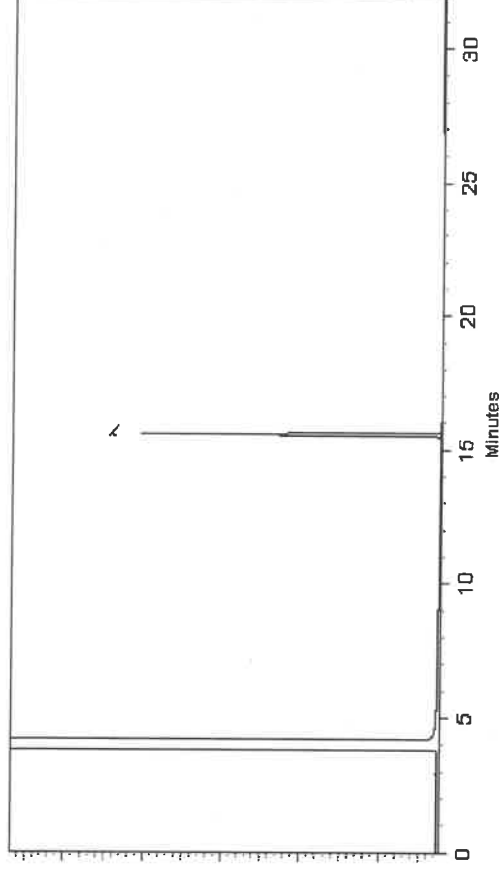
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Jess Hoy - Operations Tech I

Date Mixed: 25-Mar-2022 **Balance:** 1127510105

Amanda Miller - Operations Tech-ARM QC

Date Passed: 30-Mar-2022

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