CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Prep Standard - Chemical Standard Summary

Order ID : O4699

Test : VOCGC Group 1

Prepbatch ID : PB156067,

Sequence ID/Qc Batch ID: PR100323,

Standard ID :
PP22365,PP22366,PP22367,PP22368,PP22568,PP22569,PP22570,PP22571,PP22572,PP22573,PP22574,PP22578,P
P22579,PP22580,PP22581,

Chemical ID :
E3576,M5501,P10222,P10334,P12212,V13644,W2606,

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2263	EDB-DBCP 2 PPM Stock Solution	PP22365	07/14/2023	01/05/2024	Ankita Jodhani	None	None	Yogesh Patel 07/14/2023

FROM 0.01000ml of P10222 + 0.01000ml of P10334 + 9.98000ml of V13644 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2264	EDB-DBCP 2 PPM Stock Solution 2nd Source	PP22366	07/14/2023	01/05/2024	Ankita Jodhani	None	None	Yogesh Patel 07/14/2023

FROM 0.10000ml of P12212 + 9.90000ml of V13644 = Final Quantity: 10.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2517	EDB-DBCP 100 PPB Working Solution	PP22367	07/14/2023	01/05/2024	Ankita Jodhani	None	None	Yogesh Patel 07/14/2023

FROM 9.50000ml of V13644 + 0.50000ml of PP22365 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2518	EDB-DBCP 100 PPB Working Sol. 2nd Source	PP22368	07/14/2023	01/05/2024	Ankita Jodhani	None	None	Yogesh Patel 07/14/2023

FROM 9.50000ml of V13644 + 0.50000ml of PP22366 = Final Quantity: 10.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2269	M8011-504.1 0.5 PPB STD	PP22568	10/03/2023	11/03/2023	Ankita Jodhani	None	None	Sohil Jodhani 10/03/2023

FROM 35.00000ml of W2606 + 0.17500ml of PP22367 = Final Quantity: 35.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2270	M8011-504.1 0.25 PPB STD	PP22569	10/03/2023	11/03/2023	Ankita Jodhani	None	None	Sohil Jodhani 10/03/2023

FROM 35.00000ml of W2606 + 0.08750ml of PP22367 = Final Quantity: 35.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2271	M8011-504.1 0.1 PPB STD	PP22570	10/03/2023	11/03/2023	Ankita Jodhani	None	None	Sohil Jodhani 10/03/2023

FROM 35.00000ml of W2606 + 0.03500ml of PP22367 = Final Quantity: 35.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2272	M8011-504.1 0.05 PPB STD	PP22571	10/03/2023	11/03/2023	Ankita Jodhani	None	None	Sohil Jodhani 10/03/2023

FROM 35.00000ml of W2606 + 0.01750ml of PP22367 = Final Quantity: 35.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2273	M8011-504.1 0.025 PPB STD	PP22572	10/03/2023	11/03/2023	Ankita Jodhani	None	None	Sohil Jodhani 10/03/2023

FROM 35.00000ml of W2606 + 0.00880ml of PP22367 = Final Quantity: 35.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2274	M8011-504.1 0.1 PPB ICV STD	PP22573	10/03/2023	11/03/2023	Ankita Jodhani	None	None	Sohil Jodhani 10/03/2023

FROM 35.00000ml of W2606 + 0.03500ml of PP22368 = Final Quantity: 35.000 ml

CHEMTECH

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2519	M8011-504.1 0.1 PPB CCC	PP22574	10/03/2023	10/04/2023	Ankita Jodhani	None	None	Sohil Jodhani 10/03/2023

FROM 35.00000ml of W2606 + 0.03500ml of PP22367 = Final Quantity: 35.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2275	M8011-504.1 0.25 PPB LCS STD	PP22578	10/03/2023	10/04/2023	Ankita Jodhani	None	None	Sohil Jodhani 10/03/2023

FROM 35.00000ml of W2606 + 0.08750ml of PP22368 = Final Quantity: 35.000 ml

CHEMTECH

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2275	M8011-504.1 0.25 PPB LCS STD	PP22579	10/03/2023	10/04/2023	Ankita Jodhani	None	None	Sohil Jodhani 10/03/2023

FROM 35.00000ml of W2606 + 0.08750ml of PP22368 = Final Quantity: 35.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3653	M8011-504.1 LOD 0.025 PPB	PP22580	10/03/2023	11/03/2023	Ankita Jodhani	None	None	Sohil Jodhani 10/03/2023

FROM 35.00000ml of W2606 + 0.00880ml of PP22367 = Final Quantity: 35.000 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3759	M8011-504.1 LOQ 0.025 PPB	PP22581	10/03/2023	11/03/2023	Ankita Jodhani	None	None	Sohil Jodhani 10/03/2023

FROM 35.00000ml of W2606 + 0.00880ml of PP22367 = Final Quantity: 35.000 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 #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	23G1262009	03/28/2024	09/28/2023 / Rajesh	09/28/2023 / Rajesh	E3576

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	07/24/2023 / mohan	04/14/2023 / mohan	M5501

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30270 / 1,2-Dibromo-3-Chloropropane Standard, 2,000 ug/ml	A0164665	01/14/2024	07/14/2023 / Ankita	01/19/2021 / Abdul	P10222

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	A0154067	01/14/2024	07/14/2023 / Ankita	03/04/2021 / Abdul	P10334

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	01/14/2024	07/14/2023 / Ankita	11/28/2022 / Ankita	P12212

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)	22C2862010	01/05/2024	07/05/2023 / SAM	02/23/2023 / SAM	V13644

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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	DIW / DI Water	Daily Lab-Certified	10/24/2024	10/24/2019 / apatel	10/24/2019 / apatel	W2606

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

avantor™ | J.T.Baker®

Material No.: 9077-02
Batch No.: 22C2862010
Manufactured Date: 2022-02-15
Expiration Date: 2025-02-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.3
Titrable Base (µeq/g)	≤ 0.10	< 0.02
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

James T Ethier
Jamie Ethier
Vice President Global Quality

Hexanes (95% n-hexane)
BAKER RESI-ANALYZED® Reagent

avantor™ | J.T.Baker®

Material No.: 9262-03
Batch No.: 23G1262009
Manufactured Date: 2023-06-01
Expiration Date: 2024-08-30
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 Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	≤ 5	3
Assay (Total Saturated C_6 Isomers) (by GC, corrected for water)	≥ 99.5 %	99.6 %
Assay (as n-Hexane) (by GC, corrected for water)	≥ 95 %	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Substances Darkened by H_2SO_4	Passes Test	Passes Test
Water (by KF, coulometric)	≤ 0.05 %	0.01 %

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

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

Recd by RP on 9/28/23

E 3576

Ken Koehnlein
Sr. Manager, Quality Assurance

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

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

M5497 - M5708
Rcvd on 4/14/23
MB

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 2

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

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Reference Material Producer
Certificate #3222.01

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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. : 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	2,009.8 µg/mL	+/- 18.6904 µg/mL	Gravimetric
	CAS # 96-12-8 (Lot FBL01)		+/- 113.6299 µg/mL	Unstressed
	Purity 97%		+/- 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)

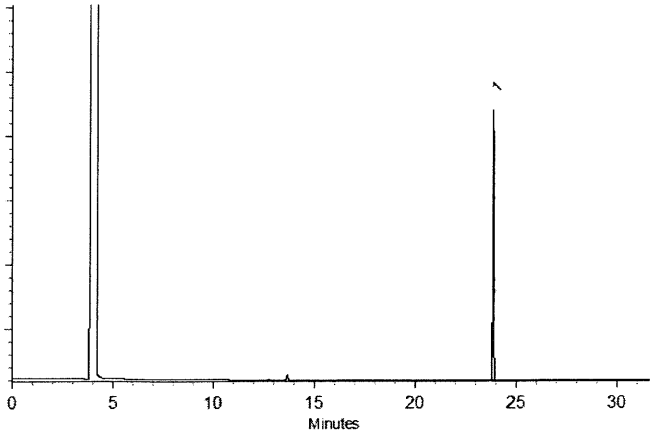
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

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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. : 30272 **Lot No.:** A0151983

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 : August 31, 2024 **Storage:** 0°C or colder

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 (Lot BCBH3877V) **Purity** 99%	2,004.0 µg/mL	+/- 11.9032 µg/mL +/- 112.3887 µg/mL +/- 115.0172 µg/mL		Gravimetric Unstressed Stressed

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

P10332
↓
P10335

AR
03/25/21

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

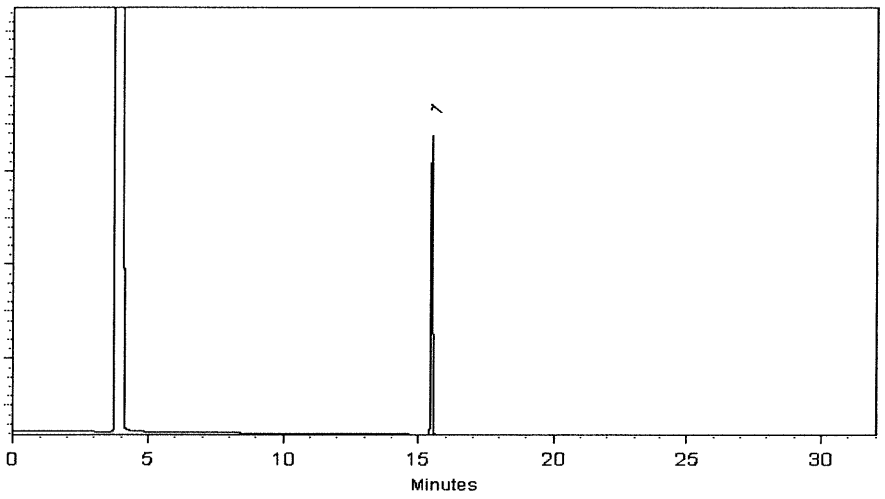
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Matt Fragassi - Mix Technician

Date Mixed: 18-Aug-2019 **Balance:** 1128342314

Tyler Brown - Operations Tech-ARM QC

Date Passed: 20-Aug-2019

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

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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. : 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)		200.5 µg/mL	+/- 1.4217	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCBP2268V)		+/- 11.2713	µg/mL	Unstressed
	Purity 99%			+/- 11.5336	µg/mL	Stressed
2	1,2,3-Trichloropropane		200.0 µg/mL	+/- 1.4182	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot BCBH8722V)		+/- 11.2431	µg/mL	Unstressed
	Purity 99%			+/- 11.5049	µg/mL	Stressed
3	1,2-Dibromo-3-chloropropane		199.8 µg/mL	+/- 1.4169	µg/mL	Gravimetric
	CAS # 96-12-8	(Lot FBL01)		+/- 11.2330	µg/mL	Unstressed
	Purity 97%			+/- 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)

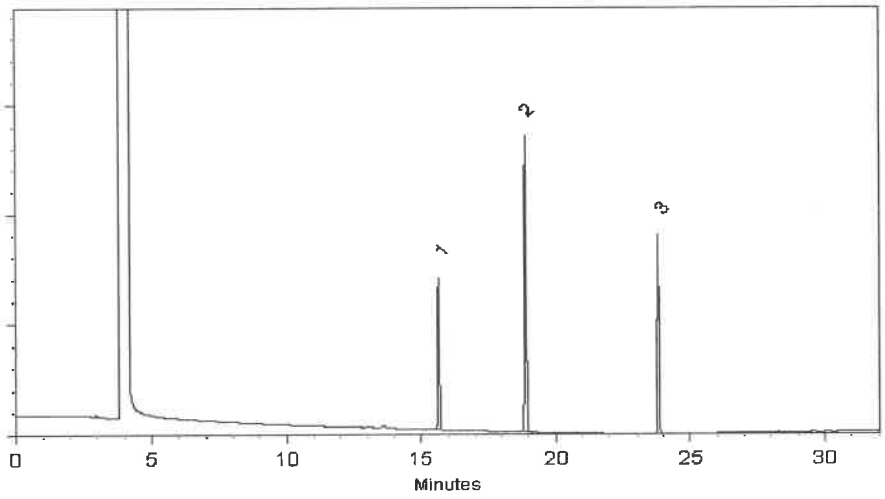
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

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