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

Prep Standard - Chemical Standard Summary

Order ID : O3572

Test : Gasoline Range Organics

Prepbatch ID :

Sequence ID/Qc Batch ID: FB071123,

Standard ID :
PP22090,PP22091,PP22092,PP22155,PP22156,PP22157,PP22158,PP22159,PP22160,PP22341,PP22342,PP22343,

Chemical ID :
P9824,V11250,V13658,W2606,

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3619	25 PPM AAA-TFT Surg	PP22090	06/02/2023	12/02/2023	Yogesh Patel	None	None	Ankita Jodhani 06/05/2023

FROM 0.10000ml of V11250 + 9.90000ml of V13658 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
231	10 PPM GRO STD 1ST SOURCE	PP22091	06/02/2023	12/02/2023	Yogesh Patel	None	None	Ankita Jodhani 06/05/2023

FROM 0.11100ml of P9824 + 9.89000ml of V13658 = 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
233	10 PPM GRO STD 2nd SOURCE	PP22092	06/02/2023	12/02/2023	Yogesh Patel	None	None	Ankita Jodhani 06/05/2023

FROM 0.11100ml of P9824 + 9.89000ml of V13658 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
238	5 PPB ICC GRO STD	PP22155	06/26/2023	12/02/2023	Yogesh Patel	None	None	Ankita Jodhani 06/26/2023

FROM 5.00000ml of W2606 + 0.00100ml of PP22090 + 0.00250ml of PP22091 = Final Quantity: 5.004 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
237	10 PPB ICC GRO STD	PP22156	06/26/2023	12/02/2023	Yogesh Patel	None	None	Ankita Jodhani 06/26/2023

FROM 5.00000ml of W2606 + 0.00200ml of PP22090 + 0.00500ml of PP22091 = Final Quantity: 5.007 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
239	20 PPB ICC GRO STD	PP22157	06/26/2023	12/02/2023	Yogesh Patel	None	None	Ankita Jodhani 06/26/2023

FROM 5.00000ml of W2606 + 0.00400ml of PP22090 + 0.01000ml of PP22091 = Final Quantity: 5.014 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
235	50 PPB ICC GRO STD	PP22158	06/26/2023	12/02/2023	Yogesh Patel	None	None	Ankita Jodhani 06/26/2023

FROM 5.00000ml of W2606 + 0.01000ml of PP22090 + 0.02500ml of PP22091 = Final Quantity: 5.035 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
234	100 PPB ICC GRO STD	PP22159	06/26/2023	12/02/2023	Yogesh Patel	None	None	Ankita Jodhani 06/26/2023

FROM 5.00000ml of W2606 + 0.02000ml of PP22090 + 0.05000ml of PP22091 = Final Quantity: 5.070 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
240	20 PPB ICV GRO STD	PP22160	06/26/2023	12/02/2023	Yogesh Patel	None	None	Ankita Jodhani 06/26/2023

FROM 5.00000ml of W2606 + 0.00400ml of PP22090 + 0.01000ml of PP22092 = Final Quantity: 5.014 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
241	20 PPB CCC GRO STD	PP22341	07/11/2023	12/02/2023	Yogesh Patel	None	None	Ankita Jodhani 07/11/2023

FROM 5.00000ml of W2606 + 0.00400ml of PP22090 + 0.01000ml of PP22091 = Final Quantity: 5.014 ml

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Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
241	20 PPB CCC GRO STD	PP22342	07/11/2023	12/02/2023	Yogesh Patel	None	None	Ankita Jodhani 07/11/2023

FROM 5.00000ml of W2606 + 0.00400ml of PP22090 + 0.01000ml of PP22091 = Final Quantity: 5.014 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
241	20 PPB CCC GRO STD	PP22343	07/11/2023	12/02/2023	Yogesh Patel	None	None	Ankita Jodhani 07/11/2023

FROM 5.00000ml of W2606 + 0.00400ml of PP22090 + 0.01000ml of PP22091 = Final Quantity: 5.014 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 #
Restek	30065 / GRO Mix (EPA)	A0155991	06/19/2023	12/19/2022 / yogesh	09/11/2020 / DHAVAL	P9824

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30068 / VOA Mix, a, a, a-triflurotoluene 2500uq/ml, P&T methanol, 1ml	A0158026	06/19/2023	03/08/2022 / Ankita	09/11/2020 / DHAVAL	V11250

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	11/16/2023	05/16/2023 / SAM	02/23/2023 / SAM	V13658

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

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

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Jamie Ethier
Vice President Global Quality

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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.

1st source
DD
P9817 To P9826 (10)

Catalog No. : 30065 **Lot No.:** A0155991

Description : Gasoline Range Organics Mix (EPA)

Gasoline Range Organics Mix (EPA) 500 - 1500µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : January 31, 2027 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Methylpentane **CAS #** 107-83-5 **Purity** 98%	(Lot MKCB1674V)	1,505.3 µg/mL	+/- 8.9409 µg/mL +/- 84.4194 µg/mL +/- 86.3938 µg/mL		Gravimetric Unstressed Stressed
2	2,2,4-Trimethylpentane (isooctane) **CAS #** 540-84-1 **Purity** 99%	(Lot SHBD2922V)	1,504.0 µg/mL	+/- 8.9333 µg/mL +/- 84.3476 µg/mL +/- 86.3203 µg/mL		Gravimetric Unstressed Stressed
3	n-Heptane (C7) **CAS #** 142-82-5 **Purity** 98%	(Lot SHBK8626)	500.8 µg/mL	+/- 2.9745 µg/mL +/- 28.0848 µg/mL +/- 28.7417 µg/mL		Gravimetric Unstressed Stressed
4	Benzene **CAS #** 71-43-2 **Purity** 99%	(Lot SHBK5679)	501.0 µg/mL	+/- 2.9758 µg/mL +/- 28.0972 µg/mL +/- 28.7543 µg/mL		Gravimetric Unstressed Stressed
5	Toluene **CAS #** 108-88-3 **Purity** 99%	(Lot MKCH9232)	1,505.0 µg/mL	+/- 8.9392 µg/mL +/- 84.4037 µg/mL +/- 86.3777 µg/mL		Gravimetric Unstressed Stressed
6	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBJ4278)	502.0 µg/mL	+/- 2.9817 µg/mL +/- 28.1533 µg/mL +/- 28.8117 µg/mL		Gravimetric Unstressed Stressed
7	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot SHBJ8743)	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 56.3065 µg/mL +/- 57.6234 µg/mL		Gravimetric Unstressed Stressed

8	o-Xylene		1,008.0	µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBK7739)			+/- 56.5308	µg/mL	Unstressed
	Purity 99%				+/- 57.8530	µg/mL	Stressed
9	1,2,4-Trimethylbenzene		1,004.5	µg/mL	+/- 5.9664	µg/mL	Gravimetric
	CAS # 95-63-6	(Lot MKBJ6229V)			+/- 56.3345	µg/mL	Unstressed
	Purity 98%				+/- 57.6521	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)

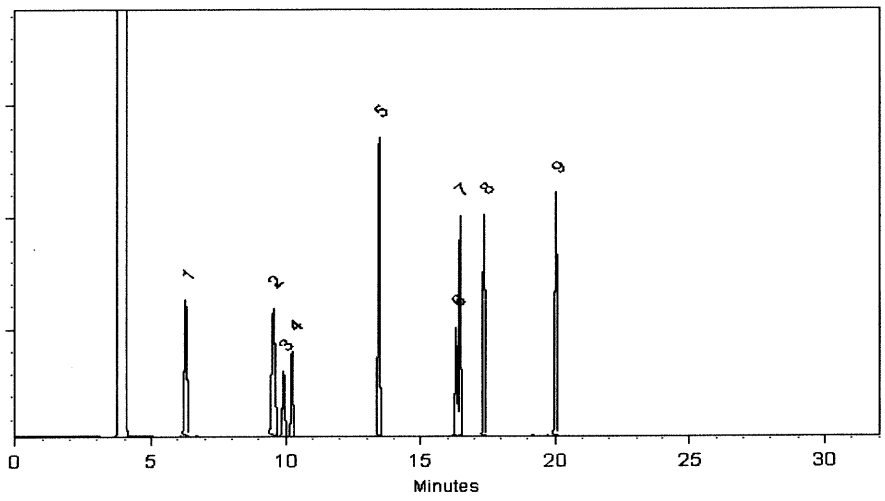
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Miranda Kline

Miranda Kline - Operations Technician I

Date Mixed: 19-Dec-2019 **Balance:** 1127510105

Fang-Yun Lo - QC Analyst

Date Passed: 23-Dec-2019

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.

DD
V11250
TO
V11254
(5)

Catalog No. : 30068 **Lot No.:** A0158026

Description : a,a,a-Trifluorotoluene Standard

a,a,a-Trifluorotoluene 2500µg/mL, P & T Methanol, 1mL/ampul

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

Expiration Date : May 31, 2028 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	a,a,a-Trifluorotoluene	2,514.0 µg/mL	+/- 14.9324	µg/mL	Gravimetric
	CAS # 98-08-8 (Lot SHBJ9102)		+/- 140.9906	µg/mL	Unstressed
	Purity 99%		+/- 144.2881	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)

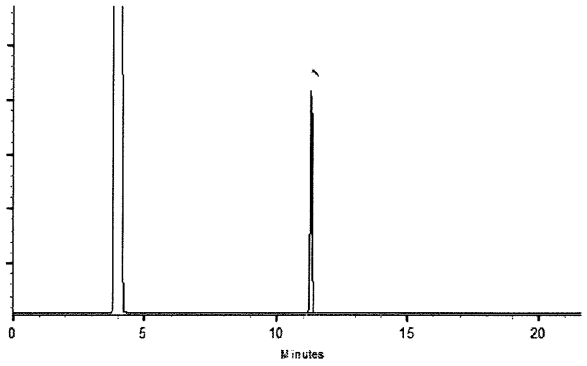
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Dustin J Lidgett

Dustin Lidgett - Mix Technician

Date Mixed: 20-Feb-2020 **Balance:** B251644995

Feng-Yun Lo - QC Analyst

Date Passed: 24-Feb-2020

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