

Prep Standard - Chemical Standard Summary

Order ID : Q3399

Test : Gasoline Range Organics

Prepbatch ID :

Sequence ID/Qc Batch ID: fb102125,

Standard ID :

PP24717,PP24718,PP24719,PP24931,PP24932,PP24933,PP24934,PP24935,PP24936,PP25003,PP25004,

Chemical ID :

P13537,P13582,V11252,V14629,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>
231	10 PPM GRO STD 1ST SOURCE	PP24717	07/14/2025	01/09/2026	Yogesh Patel	None	None	Abdul Mirza
								09/24/2025

FROM 0.11100ml of P13537 + 9.89000ml of V14629 = 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>
233	10 PPM GRO STD 2nd SOURCE	PP24718	07/14/2025	01/09/2026	Yogesh Patel	None	None	Abdul Mirza
								09/24/2025

FROM 0.11100ml of P13582 + 9.89000ml of V14629 = 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>
3619	25 PPM AAA-TFT Surg	PP24719	07/14/2025	01/09/2026	Yogesh Patel	None	None	Abdul Mirza
								09/24/2025

FROM 0.10000ml of V11252 + 9.90000ml of V14629 = 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>
238	5 PPB ICC GRO STD	PP24931	09/22/2025	10/22/2025	Amit Patel	None	None	Abdul Mirza
								09/24/2025

FROM 5.00000ml of W3112 + 0.00100ml of PP24719 + 0.00250ml of PP24717 = Final Quantity: 5.004 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>
237	10 PPB ICC GRO STD	PP24932	09/22/2025	10/22/2025	Amit Patel	None	None	Abdul Mirza
								09/24/2025

FROM 5.00000ml of W3112 + 0.00200ml of PP24719 + 0.00500ml of PP24717 = Final Quantity: 5.007 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>
239	20 PPB ICC GRO STD	PP24933	09/22/2025	10/22/2025	Amit Patel	None	None	Abdul Mirza
								09/24/2025

FROM 5.00000ml of W3112 + 0.00400ml of PP24719 + 0.01000ml of PP24717 = Final Quantity: 5.014 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>
235	50 PPB ICC GRO STD	PP24934	09/22/2025	10/22/2025	Amit Patel	None	None	Abdul Mirza
								09/24/2025

FROM 5.00000ml of W3112 + 0.01000ml of PP24719 + 0.25000ml of PP24717 = Final Quantity: 5.035 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>
234	100 PPB ICC GRO STD	PP24935	09/22/2025	10/22/2025	Amit Patel	None	None	Abdul Mirza
								09/24/2025

FROM 5.00000ml of W3112 + 0.02000ml of PP24719 + 0.05000ml of PP24717 = Final Quantity: 5.070 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>
240	20 PPB ICV GRO STD	PP24936	09/22/2025	01/08/2026	Amit Patel	None	None	Abdul Mirza
								09/24/2025

FROM 5.00000ml of W3112 + 0.00400ml of PP24719 + 0.01000ml of PP24718 = Final Quantity: 5.014 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>
241	20 PPB CCC GRO STD	PP25003	10/21/2025	10/22/2025	Amit Patel	None	None	Yogesh Patel
								11/04/2025

FROM 5.00000ml of W3112 + 0.00400ml of PP24719 + 0.01000ml of PP24717 = Final Quantity: 5.014 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>
241	20 PPB CCC GRO STD	PP25004	10/21/2025	10/22/2025	Amit Patel	None	None	Yogesh Patel 11/04/2025
<u>FROM</u> 5.00000ml of W3112 + 0.00400ml of PP24719 + 0.01000ml of PP24717 = Final Quantity: 5.014 ml								

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)	A0208729	01/14/2026	07/14/2025 / yogesh	09/23/2024 / yogesh	P13537

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30065 / GRO Mix (EPA)	A0216814	01/14/2026	07/14/2025 / yogesh	09/25/2024 / yogesh	P13582

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30068 / VOA Mix, a, a, a-trifluorotoluene 2500uq/ml, P&T methanol, 1ml	A0158026	05/31/2028	11/27/2023 / yogesh	09/11/2020 / DHAVAL	V11252

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)	23I0762004	01/09/2026	07/07/2025 / SAM	11/26/2024 / SAM	V14629

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



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30065 **Lot No.:** A0208729

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 : April 30, 2031 **Storage:** 0°C or colder

Ship: Ambient

P13537
↓
P13541 } Y.P.
09/23/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	2-Methylpentane	107-83-5	MKCR9584	99%	1,502.0 µg/mL	+/- 84.3956
2	2,2,4-Trimethylpentane (isooctane)	540-84-1	SHBP5702	99%	1,504.0 µg/mL	+/- 84.5080
3	n-Heptane (C7)	142-82-5	044743T03G	99%	504.0 µg/mL	+/- 28.3192
4	Benzene	71-43-2	MKCS3357	99%	503.0 µg/mL	+/- 28.2630
5	Toluene	108-88-3	MKCS9989	99%	1,508.0 µg/mL	+/- 84.7327
6	Ethylbenzene	100-41-4	094632T20F	99%	503.0 µg/mL	+/- 28.2630
7	m-Xylene	108-38-3	SHBN6673	99%	1,008.0 µg/mL	+/- 56.6383
8	o-Xylene	95-47-6	SHBN5105	99%	1,005.0 µg/mL	+/- 56.4697
9	1,2,4-Trimethylbenzene	95-63-6	MKCS3775	99%	1,004.0 µg/mL	+/- 56.4136

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

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

Quality Confirmation Test

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:

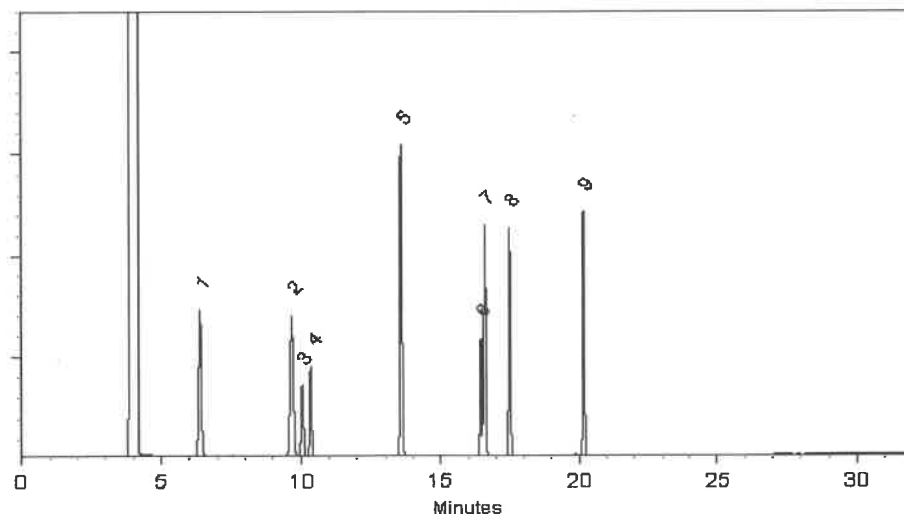
FID

Split Vent:

40 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.

Will Torres
Wilner Torres - Operation Tech I

Date Mixed: 06-Mar-2024

Balance Serial # B707717271

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 08-Mar-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30065 **Lot No.:** A0216814

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 : October 31, 2031 **Storage:** 0°C or colder

Ship: Ambient

P13582 } Y.P.
↓
P13586 } 09/25/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	2-Methylpentane	107-83-5	MKCR9584	99%	1,506.0 µg/mL	+/- 84.6203
2	2,2,4-Trimethylpentane (isooctane)	540-84-1	SHBP5702	99%	1,503.0 µg/mL	+/- 84.4518
3	n-Heptane (C7)	142-82-5	044743T22W	99%	503.0 µg/mL	+/- 28.2630
4	Benzene	71-43-2	MKCS3357	99%	504.0 µg/mL	+/- 28.3192
5	Toluene	108-88-3	SHBR3812	99%	1,506.0 µg/mL	+/- 84.6203
6	Ethylbenzene	100-41-4	094632V01F	99%	501.0 µg/mL	+/- 28.1506
7	m-Xylene	108-38-3	SHBQ9117	99%	1,006.0 µg/mL	+/- 56.5259
8	o-Xylene	95-47-6	SHBN5105	99%	1,003.0 µg/mL	+/- 56.3574
9	1,2,4-Trimethylbenzene	95-63-6	WXBC9428V	99%	1,007.0 µg/mL	+/- 56.5821

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

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

Quality Confirmation Test

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:

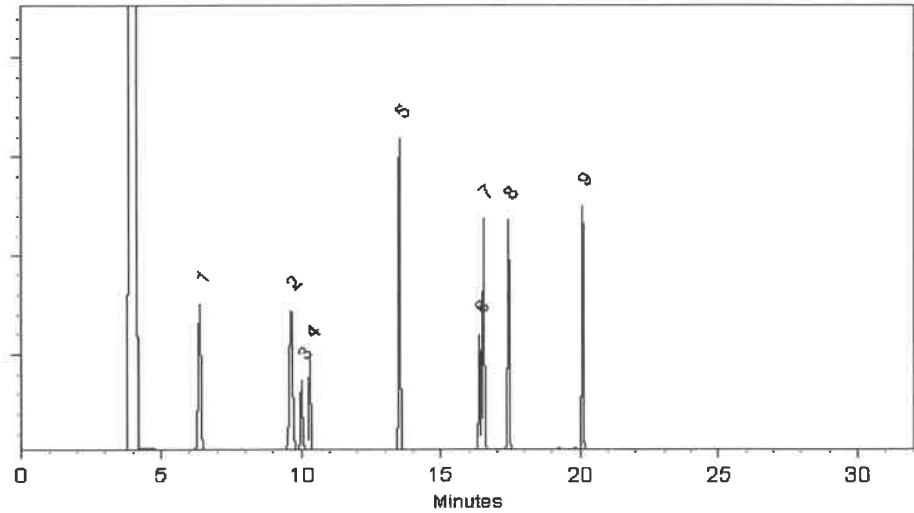
FID

Split Vent:

40 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.

Scott McNeil - Operations Tech I

Date Mixed: 23-Sep-2024

Balance Serial # 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Sep-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

