



## Prep Standard - Chemical Standard Summary

**Order ID :** O1233

**Test :** Gasoline Range Organics

**Prepbatch ID :**

**Sequence ID/Qc Batch ID:** FB012323,

**Standard ID :**

PP21302,PP21303,PP21304,PP21485,PP21486,PP21487,PP21488,PP21489,PP21490,PP21507,PP21508,

**Chemical ID :**

P9822,P9823,V11250,V13214,W2606,

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## 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	<a href="#">PP21302</a>	12/19/2022	06/19/2023	Yogesh Patel	None	None	Ankita Jodhani
12/20/2022								

**FROM** 0.11100ml of P9822 + 9.89000ml of V13214 = 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	<a href="#">PP21303</a>	12/19/2022	06/19/2023	Yogesh Patel	None	None	Ankita Jodhani
12/20/2022								

**FROM** 0.11100ml of P9823 + 9.89000ml of V13214 = Final Quantity: 10.000 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## 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	<a href="#">PP21304</a>	12/19/2022	06/12/2023	Yogesh Patel	None	None	Ankita Jodhani
12/20/2022								

**FROM** 0.10000ml of V11250 + 9.90000ml of V13214 = 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	<a href="#">PP21485</a>	01/17/2023	02/17/2023	Yogesh Patel	None	None	Ankita Jodhani
01/24/2023								

**FROM** 5.00000ml of W2606 + 0.00100ml of PP21304 + 0.00250ml of PP21302 = Final Quantity: 5.004 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## 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	<a href="#">PP21486</a>	01/17/2023	06/12/2023	Yogesh Patel	None	None	Ankita Jodhani
01/24/2023								

**FROM** 5.00000ml of W2606 + 0.00200ml of PP21304 + 0.00500ml of PP21302 = 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	<a href="#">PP21487</a>	01/17/2023	06/12/2023	Yogesh Patel	None	None	Ankita Jodhani
01/24/2023								

**FROM** 5.00000ml of W2606 + 0.00400ml of PP21304 + 0.01000ml of PP21302 = Final Quantity: 5.014 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## 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	<a href="#">PP21488</a>	01/17/2023	06/12/2023	Yogesh Patel	None	None	Ankita Jodhani
01/24/2023								

**FROM** 5.00000ml of W2606 + 0.01000ml of PP21304 + 0.02500ml of PP21302 = 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	<a href="#">PP21489</a>	01/17/2023	06/12/2023	Yogesh Patel	None	None	Ankita Jodhani
01/24/2023								

**FROM** 5.00000ml of W2606 + 0.02000ml of PP21304 + 0.05000ml of PP21302 = Final Quantity: 5.070 ml

# CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

## 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	<a href="#">PP21490</a>	01/17/2023	06/12/2023	Yogesh Patel	None	None	Ankita Jodhani
01/24/2023								

**FROM** 5.00000ml of W2606 + 0.00400ml of PP21304 + 0.01000ml of PP21303 = 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	<a href="#">PP21507</a>	01/23/2023	06/12/2023	Yogesh Patel	None	None	Ankita Jodhani
01/24/2023								

**FROM** 5.00000ml of W2606 + 0.00400ml of PP21304 + 0.01000ml of PP21302 = Final Quantity: 5.014 ml

**284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900**

<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	<a href="#">PP21508</a>	01/23/2023	06/12/2023	Yogesh Patel	None	None	Ankita Jodhani 01/24/2023
<u>FROM</u>	5.00000ml of W2606 + 0.00400ml of PP21304 + 0.01000ml of PP21302 = 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)	A0155991	01/07/2023	07/07/2022 / yogesh	09/11/2020 / DHAVAL	P9822

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30065 / GRO Mix (EPA)	A0155991	01/07/2023	07/07/2022 / yogesh	09/11/2020 / DHAVAL	P9823

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30068 / VOA Mix, a, a, a-trifluorotoluene 2500ug/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)	22C2362001	06/12/2023	12/12/2022 / SAM	09/13/2022 / SAM	V13214

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



Material No.: 9077-02  
Batch No.: 22C2362001  
Manufactured Date: 2022-02-15  
Expiration Date: 2025-02-14  
Revision No.: 0

## Certificate of Analysis

Test	Specification	Result
Assay (CH <sub>3</sub> OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	< 0.1 ppm
Titration Acid (μeq/g)	≤ 0.3	0.3
Titration Base (μeq/g)	≤ 0.10	0.03
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

  
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  
Page 1 of 1



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

www.restek.com

# CERTIFIED REFERENCE MATERIAL

## 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.*

1st source

DP

P9817

To

10

P9826

**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 (Lot MKCB1674V) Purity 98%	1,505.3 µg/mL	+/- 8.9409 µg/mL Gravimetric +/- 84.4194 µg/mL Unstressed +/- 86.3938 µg/mL Stressed
2	2,2,4-Trimethylpentane (isooctane) CAS # 540-84-1 (Lot SHBD2922V) Purity 99%	1,504.0 µg/mL	+/- 8.9333 µg/mL Gravimetric +/- 84.3476 µg/mL Unstressed +/- 86.3203 µg/mL Stressed
3	n-Heptane (C7) CAS # 142-82-5 (Lot SHBK8626) Purity 98%	500.8 µg/mL	+/- 2.9745 µg/mL Gravimetric +/- 28.0848 µg/mL Unstressed +/- 28.7417 µg/mL Stressed
4	Benzene CAS # 71-43-2 (Lot SHBK5679) Purity 99%	501.0 µg/mL	+/- 2.9758 µg/mL Gravimetric +/- 28.0972 µg/mL Unstressed +/- 28.7543 µg/mL Stressed
5	Toluene CAS # 108-88-3 (Lot MKCH9232) Purity 99%	1,505.0 µg/mL	+/- 8.9392 µg/mL Gravimetric +/- 84.4037 µg/mL Unstressed +/- 86.3777 µg/mL Stressed
6	Ethylbenzene CAS # 100-41-4 (Lot SHBJ4278) Purity 99%	502.0 µg/mL	+/- 2.9817 µg/mL Gravimetric +/- 28.1533 µg/mL Unstressed +/- 28.8117 µg/mL Stressed
7	m-Xylene CAS # 108-38-3 (Lot SHBJ8743) Purity 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL Gravimetric +/- 56.3065 µg/mL Unstressed +/- 57.6234 µg/mL 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
<b>Solvent:</b> P&T Methanol						
	CAS # 67-56-1					
	Purity 99%					

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

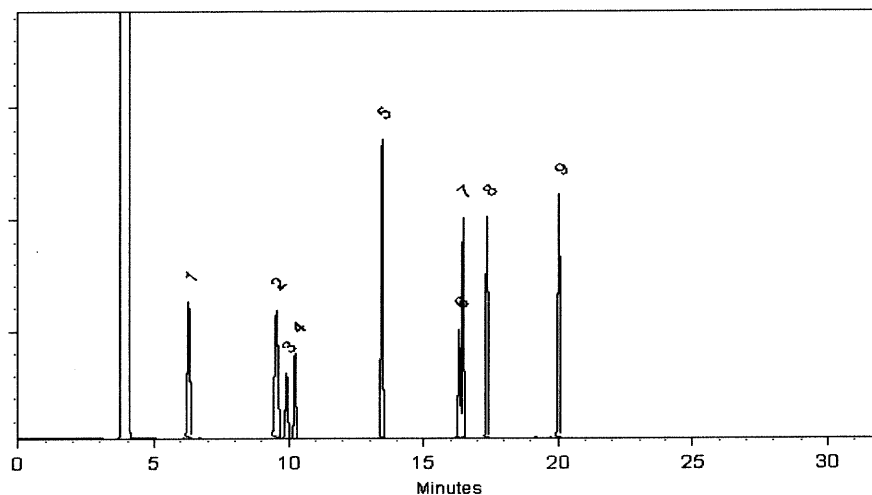
**Carrier Gas:**  
hydrogen-constant pressure 11.0 psi.

**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

*Feng-Yun Lo*  
Feng-Yun Lo - QC Analyst

**Date Passed:** 23-Dec-2019

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



110 Benner Circle  
Bellefonte, PA 16823-8812  
Tel: (800)356-1688  
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# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis



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1st source

DP

P9817

To

10

P9826

**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 (Lot MKCB1674V) Purity 98%	1,505.3 µg/mL	+/- 8.9409 µg/mL Gravimetric +/- 84.4194 µg/mL Unstressed +/- 86.3938 µg/mL Stressed
2	2,2,4-Trimethylpentane (isooctane) CAS # 540-84-1 (Lot SHBD2922V) Purity 99%	1,504.0 µg/mL	+/- 8.9333 µg/mL Gravimetric +/- 84.3476 µg/mL Unstressed +/- 86.3203 µg/mL Stressed
3	n-Heptane (C7) CAS # 142-82-5 (Lot SHBK8626) Purity 98%	500.8 µg/mL	+/- 2.9745 µg/mL Gravimetric +/- 28.0848 µg/mL Unstressed +/- 28.7417 µg/mL Stressed
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6	Ethylbenzene CAS # 100-41-4 (Lot SHBJ4278) Purity 99%	502.0 µg/mL	+/- 2.9817 µg/mL Gravimetric +/- 28.1533 µg/mL Unstressed +/- 28.8117 µg/mL Stressed
7	m-Xylene CAS # 108-38-3 (Lot SHBJ8743) Purity 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL Gravimetric +/- 56.3065 µg/mL Unstressed +/- 57.6234 µg/mL 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
<b>Solvent:</b> P&T Methanol						
	CAS # 67-56-1					
	Purity 99%					

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

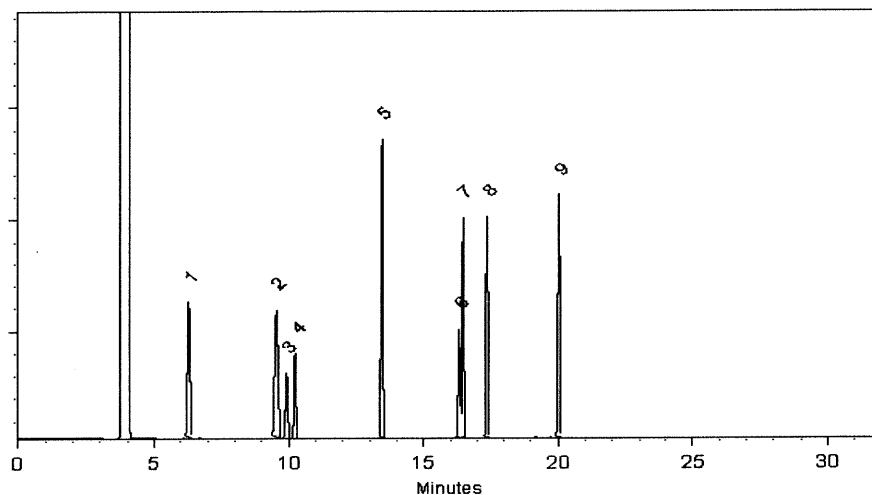
**Carrier Gas:**  
hydrogen-constant pressure 11.0 psi.

**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

*Feng-Yun Lo*  
Feng-Yun Lo - QC Analyst

**Date Passed:** 23-Dec-2019

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



CERTIFIED REFERENCE MATERIAL

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

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## 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. : 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

DD  
VII250  
TO  
VII254  
(S)

### CERTIFIED VALUES

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

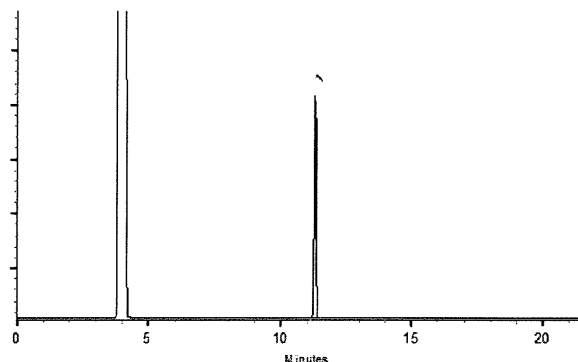
**Carrier Gas:**  
hydrogen-constant pressure 11.0 psi.

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

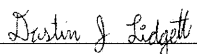
**Inj. Temp:**  
200°C

**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 Lidgett - Mix Technician

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

**Balance:** B251644995

  
Fang-Yun Lo - QC Analyst

**Date Passed:** 24-Feb-2020

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