

Prep Standard - Chemical Standard Summary

Order ID : P4873

Test : Gases

Prepbatch ID :

Sequence ID/Qc Batch ID: FA111924,

Standard ID :

PP23991,PP23992,PP23993,PP23994,PP23995,PP23996,PP23997,PP23998,PP23999,PP24000,PP24001,PP24002,

Chemical ID :

P11978,P9156,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>
2714	1000 PPMV GASES Working STD	PP23991	11/19/2024	05/19/2025	Yogesh Patel	None	None	Ankita Jodhani
11/21/2024								

FROM 36.00000ml of W3112 + 4.00000ml of P11978 = Final Quantity: 40.000 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>
3617	2000 PPMV GASES Working STD - ICV	PP23992	11/19/2024	12/04/2024	Yogesh Patel	None	None	Ankita Jodhani
11/21/2024								

FROM 36.00000ml of W3112 + 4.00000ml of P9156 = Final Quantity: 40.000 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>
2551	500 PPMV GAS STD	PP23993	11/19/2024	05/19/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/21/2024

FROM 0.50000ml of PP23991 = Final Quantity: 0.500 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>
2606	300 PPMV GAS STD	PP23994	11/19/2024	05/19/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/21/2024

FROM 0.30000ml of PP23991 = Final Quantity: 0.300 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>
2552	200 PPMV GAS STD	PP23995	11/19/2024	05/19/2025	Yogesh Patel	None	None	Ankita Jodhani
11/21/2024								

FROM 0.20000ml of PP23991 = Final Quantity: 0.200 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>
2553	100 PPMV GAS STD	PP23996	11/19/2024	05/19/2025	Yogesh Patel	None	None	Ankita Jodhani
11/21/2024								

FROM 0.10000ml of PP23991 = Final Quantity: 0.100 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>
2554	50 PPMV GAS STD	PP23997	11/19/2024	05/19/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/21/2024

FROM 0.05000ml of PP23991 = Final Quantity: 0.050 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>
2555	200 PPMV ICV STD	PP23998	11/19/2024	12/04/2024	Yogesh Patel	None	None	Ankita Jodhani
								11/21/2024

FROM 0.10000ml of PP23992 = Final Quantity: 0.100 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>
2552	200 PPMV GAS STD	PP23999	11/19/2024	05/19/2025	Yogesh Patel	None	None	Ankita Jodhani 11/21/2024

FROM	0.20000ml of PP23991 = Final Quantity: 0.200 ml
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<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>
2552	200 PPMV GAS STD	PP24000	11/19/2024	05/19/2025	Yogesh Patel	None	None	Ankita Jodhani 11/21/2024

FROM	0.20000ml of PP23991 = Final Quantity: 0.200 ml
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<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>
2552	200 PPMV GAS STD	PP24001	11/19/2024	05/19/2025	Yogesh Patel	None	None	Ankita Jodhani 11/21/2024
<u>FROM</u> 0.20000ml of PP23991 = Final Quantity: 0.200 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>
2552	200 PPMV GAS STD	PP24002	11/19/2024	05/19/2025	Yogesh Patel	None	None	Ankita Jodhani 11/21/2024
<u>FROM</u> 0.20000ml of PP23991 = Final Quantity: 0.200 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
AIR LIQUIDE	0702E400000PCL / 3 Gases Components Mix, 1000 PPM	160-402482954-1	07/15/2030	08/10/2022 / yogesh	07/29/2022 / Ankita	P11978

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
AIR LIQUIDE	0702E400000PCL / 3 Gases Components Mix, 2000 PPM	160-401645978-1	12/04/2024	02/10/2020 / DHAVAL	12/04/2019 / Ankita	P9156

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

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04NI99C33A00P7	Reference Number:	160-402482954-1
Cylinder Number:	CLM007359	Cylinder Volume:	32.0 CF
Laboratory:	124 - Plumsteadville - PA	Cylinder Pressure:	2217 PSIG
Analysis Date:	Jul 15, 2022	Valve Outlet:	350
Lot Number:	160-402482954-1		
	Expiration Date:		Jul 15, 2030

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
ETHANE	1000 PPM	1021 PPM	+/-2%
ETHYLENE	1000 PPM	1000 PPM	+/-2%
METHANE	1000 PPM	1000 PPM	+/-2%
NITROGEN	Balance		

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X04NI99C33A00J9	Reference Number:	160-401645978-1
Cylinder Number:	EA0004927	Cylinder Volume:	31.6 CF
Laboratory:	124 - Plumsteadville - PA	Cylinder Pressure:	2216 PSIG
Analysis Date:	Nov 19, 2019	Valve Outlet:	350
Lot Number:	160-401645978-1		

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

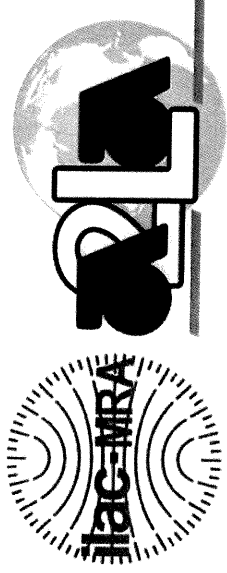
Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
ETHANE	2000 PPM	2094 PPM	+/- 2%
ETHYLENE	2000 PPM	2091 PPM	+/- 2%
METHANE	2000 PPM	1999 PPM	+/- 2%
NITROGEN	Balance		



Received by
SG on 12/14/19

P9156
AJ
12/24/19

[Signature]
Approved for Release



Accredited Laboratory

A2LA has accredited

AIRGAS USA, LLC - PLUMSTEADVILLE

Plumsteadville, PA

for technical competence in the field of

Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. This laboratory also meets the requirements of any additional program requirements in the Chemical field. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 21st day of May 2018.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3082.05
Valid to February 28, 2020
Revised on May 15, 2019

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

AIRGAS USA, LLC – PLUMSTEADVILLE
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Plumsteadville PA 18949
Lee Payton Phone: 609 820 8800
Ricky Doney Phone: 860 405 6084
Brandon Capetillo Phone: 832 514 9928

CHEMICAL

Valid To: February 28, 2020

Certificate Number: 3082.05

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on manufactured gases:

Technology

Chemiluminescence

Determination of Nitric Oxide in Nitrogen
Determination of Total Oxides of Nitrogen in Nitrogen
Determination of Nitrogen Dioxide in Nitrogen or Air
Determination of Ammonia in Nitrogen or Air

FTIR

Determination of Carbon Dioxide in Nitrogen or Air
Determination of Carbon Monoxide in Nitrogen or Air
Determination of Nitric Oxide in Nitrogen
Determination of Sulfur Dioxide in Nitrogen or Air
Determination of Nitrogen Dioxide in Nitrogen or Air
Determination of Methane in Nitrogen or Air
Determination of Propane in Nitrogen or Air
Determination of Ammonia in Nitrogen or Air
Determination of Nitrous Oxide in Nitrogen or Air
Determination of Hydrogen Chloride in Nitrogen or Air

Paramagnetic

Determination of Oxygen in Nitrogen

NDIR

Determination of Carbon Dioxide in Nitrogen or Air
Determination of Carbon Monoxide in Nitrogen or Air

NDUV

Determination of Sulfur Dioxide in Nitrogen or Air
Determination of Hydrogen Sulfide in Nitrogen or Air

All testing is carried out according to AIRGAS EPA Methods 4.01, 4.02, 4.03 and 4.04 and is in compliance with EPA 600/R12/531.