

Instrument ID: MSVOA_L

Daily Analysis Runlog For Sequence/QC Batch ID # VL121624

Review By	Mahesh Dadoda	Review On	12/18/2024 8:44:47 AM
Supervise By	Semsettin Yesilyurt	Supervise On	12/18/2024 8:48:10 AM
SubDirectory	VL121624	HP Acquire Method	TO15AIR.M HP Processing Method VL121624AIR.M

STD. NAME	STD REF.#
Tune/Reschk	AP2556
Initial Calibration Stds	AP2560,AP2561,AP2562
CCC	AP2560,MDL,AP2561,AP2562
Internal Standard/PEM	AP2556
ICV/I.BLK	AP2558
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	Sampleld	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VL041750.D	16 Dec 2024 12:02		SY/MD	Ok
2	VSTDIC0.5	VSTDIC0.5	VL041751.D	16 Dec 2024 12:59	Not used	SY/MD	Not Ok
3	VSTDICCC010	VSTDICCC010	VL041752.D	16 Dec 2024 13:30	Method failed for Comp.#,80	SY/MD	Ok,M
4	VSTDIC002	VSTDIC002	VL041753.D	16 Dec 2024 14:03		SY/MD	Ok,M
5	VSTDIC001	VSTDIC001	VL041754.D	16 Dec 2024 14:34		SY/MD	Ok,M
6	VSTDIC0.5	VSTDIC0.5	VL041755.D	16 Dec 2024 15:05		SY/MD	Ok,M
7	VSTDIC0.1	VSTDIC0.1	VL041756.D	16 Dec 2024 15:37		SY/MD	Ok,M
8	VSTDIC0.03	VSTDIC0.03	VL041757.D	16 Dec 2024 16:08		SY/MD	Ok,M
9	VSTDIC015	VSTDIC015	VL041758.D	16 Dec 2024 16:41		SY/MD	Ok,M
10	VSTDICV010	ICVVL121624	VL041759.D	16 Dec 2024 18:59		SY/MD	Ok,M
11	VL1216ABL01	VL1216ABL01	VL041760.D	16 Dec 2024 20:20		SY/MD	Ok
12	VL1216ABL02	VL1216ABL02	VL041761.D	16 Dec 2024 20:51		SY/MD	Ok
13	VL1216ABL03	VL1216ABL03	VL041762.D	16 Dec 2024 21:21		SY/MD	Ok
14	MDL 0.4	MDL 0.4	VL041763.D	16 Dec 2024 21:52		SY/MD	Ok,M
15	MDL 0.4	MDL 0.4	VL041764.D	16 Dec 2024 22:23		SY/MD	Ok,M
16	MDL 0.4	MDL 0.4	VL041765.D	16 Dec 2024 22:54		SY/MD	Ok,M
17	MDL 0.03	MDL 0.03	VL041766.D	16 Dec 2024 23:24		SY/MD	Ok,M
18	MDL 0.03	MDL 0.03	VL041767.D	16 Dec 2024 23:55		SY/MD	Ok,M

Instrument ID: MSVOA_L

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Review By	Mahesh Dadoda	Review On	12/18/2024 8:44:47 AM		
Supervise By	Semsettin Yesilyurt	Supervise On	12/18/2024 8:48:10 AM		
SubDirectory	VL121624	HP Acquire Method	TO15AIR.M	HP Processing Method	VL121624AIR.M
STD. NAME		STD REF.#			
Tune/Reschk	AP2556				
Initial Calibration Stds	AP2560,AP2561,AP2562				
CCC	AP2560,MDL,AP2561,AP2562				
Internal Standard/PEM	AP2556				
ICV/I.BLK	AP2558				
Surrogate Standard					
MS/MSD Standard					
LCS Standard					

19	VL1216ABS01	VL1216ABS01	VL041768.D	17 Dec 2024 00:57		SY/MD	Ok,M
20	VSTDCCC010	VSTDCCC010EC	VL041769.D	17 Dec 2024 07:59		SY/MD	Ok,M

M : Manual Integration

Instrument ID: MSVOA_L

Daily Analysis Runlog For Sequence/QC Batch ID # VL121824

Review By	Semsettin Yesilyurt	Review On	12/19/2024 1:32:59 PM
Supervise By	Mahesh Dadoda	Supervise On	12/19/2024 2:45:49 PM
SubDirectory	VL121824	HP Acquire Method	TO15AIR.M HP Processing Method VL121624AIR.M

STD. NAME	STD REF.#
Tune/Reschk	AP2556
Initial Calibration Stds	AP2560,AP2561,AP2562
CCC	AP2560,MDL,AP2561,AP2562
Internal Standard/PEM	AP2556
ICV/I.BLK	AP2558
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VL041787.D	18 Dec 2024 08:06		SY/MD	Ok
2	VSTDCCC010	VSTDCCC010	VL041788.D	18 Dec 2024 10:29		SY/MD	Ok,M
3	VL1218ABL01	VL1218ABL01	VL041789.D	18 Dec 2024 11:57		SY/MD	Ok
4	VL1218ABL02	VL1218ABL02	VL041790.D	18 Dec 2024 12:28		SY/MD	Ok
5	MDL 0.4	MDL 0.4	VL041791.D	18 Dec 2024 12:59		SY/MD	Ok,NR
6	MDL 0.4	MDL 0.4	VL041792.D	18 Dec 2024 13:30		SY/MD	Ok,NR
7	MDL 0.03	MDL 0.03	VL041793.D	18 Dec 2024 14:32		SY/MD	Ok,M
8	MDL 0.03	MDL 0.03	VL041794.D	18 Dec 2024 15:03		SY/MD	Ok,M
9	VL1218ABS01	VL1218ABS01	VL041795.D	18 Dec 2024 16:06		SY/MD	Ok,M
10	QC121724 CAN 10158	QC121724 CAN 10158	VL041796.D	18 Dec 2024 16:37		SY/MD	Ok
11	P5293-01	C0AB9	VL041797.D	18 Dec 2024 17:10		SY/MD	Ok,M
12	P5293-01DUP	C0AB9DUP	VL041798.D	18 Dec 2024 17:43	Not match for Ethanol	SY/MD	Ok,M
13	P5293-02	C0AC0	VL041799.D	18 Dec 2024 18:17		SY/MD	Ok,M
14	P5293-03	C0AC1	VL041800.D	18 Dec 2024 18:50	Need 2X	SY/MD	Dilution
15	P5296-01	C0AC2	VL041801.D	18 Dec 2024 19:24		SY/MD	Ok,M
16	P5294-01	C0AB6	VL041802.D	18 Dec 2024 19:58		SY/MD	Ok,M
17	P5294-02	C0AB7	VL041803.D	18 Dec 2024 20:32		SY/MD	Ok,M
18	P5294-03	C0AB8	VL041804.D	18 Dec 2024 21:03	Need Straight Run	SY/MD	Not Ok

Instrument ID: MSVOA_L

Daily Analysis Runlog For Sequence/QC Batch ID # VL121824

Review By	Semsettin Yesilyurt	Review On	12/19/2024 1:32:59 PM		
Supervise By	Mahesh Dadoda	Supervise On	12/19/2024 2:45:49 PM		
SubDirectory	VL121824	HP Acquire Method	TO15AIR.M	HP Processing Method	VL121624AIR.M
STD. NAME		STD REF.#			
Tune/Reschk		AP2556			
Initial Calibration Stds		AP2560,AP2561,AP2562			
CCC		AP2560,MDL,AP2561,AP2562			
Internal Standard/PEM		AP2556			
ICV/I.BLK		AP2558			
Surrogate Standard					
MS/MSD Standard					
LCS Standard					

19	P5292-01	C0AC5	VL041805.D	18 Dec 2024 21:35	Need Straight Run	SY/MD	Not Ok
20	P5292-02	C0AC6	VL041806.D	18 Dec 2024 22:06	Need Straight Run	SY/MD	Not Ok
21	P5295-01	C0AC8	VL041807.D	18 Dec 2024 22:37	Need 10X	SY/MD	Dilution
22	P5295-02	C0AC9	VL041808.D	18 Dec 2024 23:08	need straight run	SY/MD	Ok
23	VIBLK	VIBLK	VL041809.D	18 Dec 2024 23:40		SY/MD	Ok
24	P5293-03DL	C0AC1DL	VL041810.D	19 Dec 2024 00:11		SY/MD	Ok
25	P5294-03	C0AB8	VL041811.D	19 Dec 2024 00:44		SY/MD	Ok
26	P5292-01	C0AC5	VL041812.D	19 Dec 2024 01:18		SY/MD	Ok
27	P5292-02	C0AC6	VL041813.D	19 Dec 2024 01:55		SY/MD	Ok
28	P5295-01DL	C0AC8DL	VL041814.D	19 Dec 2024 02:26		SY/MD	Ok
29	P5295-02	C0AC9	VL041815.D	19 Dec 2024 02:59	Need 4X	SY/MD	Dilution
30	VSTDCCC010	VSTDCCC010EC	VL041816.D	19 Dec 2024 03:31		SY/MD	Ok

M : Manual Integration

Instrument ID: MSVOA_L

Daily Analysis Runlog For Sequence/QC Batch ID # VL121924

Review By	Semsettin Yesilyurt	Review On	12/20/2024 8:58:06 AM
Supervise By	Maresh Dadoda	Supervise On	12/20/2024 10:53:27 AM
SubDirectory	VL121924	HP Acquire Method	TO15AIR.M HP Processing Method VL121624AIR.M

STD. NAME	STD REF.#
Tune/Reschk	AP2556
Initial Calibration Stds	AP2560,AP2561,AP2562
CCC	AP2560
Internal Standard/PEM	AP2556
ICV/I.BLK	AP2558
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	Sampled	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VL041817.D	19 Dec 2024 11:34		SY/MD	Ok
2	VSTDCCC010	VSTDCCC010	VL041818.D	19 Dec 2024 13:16		SY/MD	Ok,M
3	VL1219ABL01	VL1219ABL01	VL041819.D	19 Dec 2024 14:06		SY/MD	Ok
4	VL1219ABS01	VL1219ABS01	VL041820.D	19 Dec 2024 14:49		SY/MD	Ok,M
5	VIBLK	VIBLK	VL041821.D	19 Dec 2024 15:32		SY/MD	Ok
6	P5296-02	C0AC3	VL041822.D	19 Dec 2024 16:03	Need Straight Run	SY/MD	Not Ok
7	P5296-03	C0AC4	VL041823.D	19 Dec 2024 16:34	Need Straight Run	SY/MD	Not Ok
8	P5296-03	C0AC4	VL041824.D	19 Dec 2024 17:08		SY/MD	Ok,M
9	P5296-02	C0AC3	VL041825.D	19 Dec 2024 17:41		SY/MD	Ok,M
10	VSTDCCC010	VSTDCCC010EC	VL041826.D	19 Dec 2024 18:12		SY/MD	Ok,M

M : Manual Integration

Prep Standard - Chemical Standard Summary

Order ID : P5296

Test : TO-15

Prepbatch ID :

Sequence ID/Qc Batch ID: v1121824,v1121924,

Standard ID :

AP2556,AP2558,AP2560,AP2561,AP2562,

Chemical ID :

A1117,A1135,A1136,A1137,MDL,

Air 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>
47	Internal Standard/Surrogate Mix-80 ppbv	AP2556	12/06/2024	01/04/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								12/20/2024

FROM 2.40000psi of A1135 + 27.60000psi of A1117 = Final Quantity: 30.000 psi

<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>
2396	TO-15 15 PPBV CAL MIX	AP2558	12/06/2024	01/04/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								12/20/2024

FROM 14.55000SCCM of A1117 + 45.00000SCCM of A1137 = Final Quantity: 30.000 psi

Air 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>
2396	TO-15 15 PPBV CAL MIX	AP2560	12/06/2024	01/04/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								12/20/2024

FROM 1455.00000SCCM of A1117 + 45.00000SCCM of A1136 = Final Quantity: 30.000 psi

<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>
2397	TO-15 -2 PPBV CAL.MIX	AP2561	12/06/2024	01/04/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								12/20/2024

FROM 26.00000psi of A1117 + 4.00000psi of AP2560 = Final Quantity: 30.000 psi



<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>
2668	0.5 PPBV CAL.MIX	AP2562	12/06/2024	01/04/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 12/20/2024
<u>FROM</u> 29.00000psi of A1117 + 1.00000psi of AP2560 = Final Quantity: 30.000 psi								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
AIR LIQUIDE	365A-49 / AIR, Compressed	90402401186-01	04/01/2026	04/01/2022 / apatel	04/01/2022 / SAM	A1117

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CUSTOMGAS Solutions	TB500009-110 / TO-15 Internal Standard/Surrogate Standard	BC275465	07/16/2025	07/22/2024 / SAM	07/22/2024 / SAM	A1135

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CUSTOMGAS Solutions	TO15-80-6R-07092 / TO-15 Modified (80 comp) in Nitrogen (addition of 2-methylnaphthalene)	040424-003A	07/16/2025	07/25/2024 / SAM	07/22/2024 / SAM	A1136

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CUSTOMGAS Solutions	TO15-80-6R-07092 / TO-15 Modified (80 comp) in Nitrogen (addition of 2-methylnaphthalene)	040424-003B	07/16/2025	07/25/2024 / SAM	07/22/2024 / SAM	A1137

CUSTOMGAS SOLUTIONS



1750 East Club Boulevard

Durham, NC 27704

Phone: (919) 220-2570

Fax: (919) 220-4540

Certificate of Analysis

Customer:

Chem Tech
284 Sheffield Street
Mountainside, NJ 07092

Tel: (908) 789-8900

Cylinder Number: BC275465
Cylinder Size/CGA: 170/180SS
Fill Pressure: 1815 PSIA
Gas Volume: ~170 liters
Date of Mfg: 07/16/2024
Expiration Date: 07/16/2025

Ship To : Chem Tech
284 Sheffield Street
Mountainside, NJ 07092

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00107092NJ	Best Way	040424-003	240404-10	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Bromochloromethane	1 ppm	1.014 ppm +/- 0.02 ppm	Gravimetric Master Gas
4-Bromofluorobenzene	1 ppm	1.008 ppm +/- 0.02 ppm	
Chlorobenzene-D5	1 ppm	0.993 ppm +/- 0.02 ppm	
1,4-Difluorobenzene	1 ppm	0.979 ppm +/- 0.02 ppm	
Nitrogen	balance	balance	

NOTES: Blend Tolerance: +/- 10 %

Analytical Tolerance: +/- 5 %

Traceability: NIST by weight set. NIST Traceability No MT001810.
Internal Standards by analysis

Reactive Mixtures: Analyzed twice with required agreement between analyses of 2%.
Required wait time between analyses of >7 days.

Caution: Do not use below 150 PSIG.

Analyst Name: Joseph A. Ernst

QA Signature: 

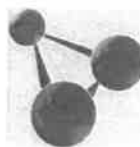
Signature: 

Date: 07/16/2024

*Every effort has been made to establish the actual concentration of the components using master gas blending technology however, Custom Gas Solutions shall have no liability in excess of the established charge for this material.

CUSTOMGAS

SOLUTIONS



1750 East Club Boulevard
Durham, NC 27704
Phone: (919) 220-2570
Fax: (919) 220-4540

Certificate of Analysis

Customer:

ChemTech
284 Sheffield Street
Mountainside, NJ 07092

Cylinder Number: BC917782
Cylinder Size/CGA: 170/180
Fill Pressure: 1815 PSIA
Gas Volume: 110 liters
Date of Mfg: 07/16/2024
Expiration Date: 07/16/2025
Lot Number: 040424-003A

Ship To : Chemtech
284 Sheffield Street
Mountainside, NJ 07092

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00107092NJ	Best Way	040424-003	240404-10	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Acetone	500 ppb	517 ppb +/- 50 ppb	Gravimetric Master Gas
Acetonitrile	500 ppb	534 ppb +/- 50 ppb	
Acrolein	500 ppb	545 ppb +/- 50 ppb	
Acrylonitrile	500 ppb	539 ppb +/- 50 ppb	-
Allyl chloride	500 ppb	509 ppb +/- 50 ppb	
Benzene	500 ppb	483 ppb +/- 50 ppb	
Benzyl Chloride	500 ppb	489 ppb +/- 50 ppb	
Bromodichloromethane	500 ppb	509 ppb +/- 50 ppb	
Bromoform	500 ppb	495 ppb +/- 50 ppb	
1,3-Butadiene	500 ppb	504 ppb +/- 50 ppb	
tert-Butyl alcohol	500 ppb	532 ppb +/- 50 ppb	
n-Butyl benzene	500 ppb	529 ppb +/- 50 ppb	
sec-Butyl benzene	500 ppb	529 ppb +/- 50 ppb	
tert-Butyl benzene	500 ppb	529 ppb +/- 50 ppb	
Carbon disulfide	500 ppb	485 ppb +/- 50 ppb	
Carbon tetrachloride	500 ppb	506 ppb +/- 50 ppb	
Chlorobenzene	500 ppb	491 ppb +/- 50 ppb	
Chlorodibromomethane	500 ppb	488 ppb +/- 50 ppb	
Chloroform	500 ppb	492 ppb +/- 50 ppb	
2-Chlorotoluene	500 ppb	532 ppb +/- 50 ppb	
Cyclohexane	500 ppb	482 ppb +/- 50 ppb	
1,2-Dibromoethane	500 ppb	491 ppb +/- 50 ppb	
1,2-Dichlorobenzene	500 ppb	510 ppb +/- 50 ppb	
1,3-Dichlorobenzene	500 ppb	489 ppb +/- 50 ppb	
1,4-Dichlorobenzene	500 ppb	490 ppb +/- 50 ppb	
Dichlorodifluoromethane (R12)	500 ppb	508 ppb +/- 50 ppb	

1,1-Dichloroethane	500 ppb	492 ppb +/- 50 ppb	
1,2-Dichloroethane	500 ppb	497 ppb +/- 50 ppb	
1,1-Dichloroethylene	500 ppb	493 ppb +/- 50 ppb	
cis 1,2-Dichloroethylene	500 ppb	488 ppb +/- 50 ppb	
trans 1,2-Dichloroethylene	500 ppb	488 ppb +/- 50 ppb	
1,2-Dichloropropane	500 ppb	490 ppb +/- 50 ppb	
cis 1,3-Dichloropropylene	500 ppb	516 ppb +/- 50 ppb	
trans 1,3-Dichloropropylene	500 ppb	466 ppb +/- 50 ppb	
1,2-Dichlorotetrafluoroethane	500 ppb	505 ppb +/- 50 ppb	
1,4-Dioxane	500 ppb	484 ppb +/- 50 ppb	
Ethyl acetate	500 ppb	486 ppb +/- 50 ppb	
Ethyl Alcohol	500 ppb	555 ppb +/- 50 ppb	
Ethyl benzene	500 ppb	497 ppb +/- 50 ppb	
Ethyl Chloride	500 ppb	506 ppb +/- 50 ppb	
4-Ethyltoluene	500 ppb	485 ppb +/- 50 ppb	
n-Heptane	500 ppb	487 ppb +/- 50 ppb	
Hexachloro-1,3-butadiene	500 ppb	489 ppb +/- 50 ppb	
2-Hexanone	500 ppb	490 ppb +/- 50 ppb	
n-Hexane	500 ppb	485 ppb +/- 50 ppb	
Isopropyl alcohol	500 ppb	511 ppb +/- 50 ppb	
Isopropyl benzene	500 ppb	527 ppb +/- 50 ppb	
p-Isopropyl toluene	500 ppb	534 ppb +/- 50 ppb	
Methyl Bromide	500 ppb	505 ppb +/- 50 ppb	
Methyl Chloride	500 ppb	509 ppb +/- 50 ppb	
Methyl ethyl ketone	500 ppb	496 ppb +/- 50 ppb	
Methyl isobutyl ketone	500 ppb	493 ppb +/- 50 ppb	
Methyl methacrylate	500 ppb	532 ppb +/- 50 ppb	
Methyl tertiary butyl ether	500 ppb	483 ppb +/- 50 ppb	
Methylene chloride	500 ppb	498 ppb +/- 50 ppb	
Naphthalene	500 ppb	542 ppb +/- 50 ppb	
n-Propylbenzene	500 ppb	529 ppb +/- 50 ppb	
Propylene	500 ppb	508 ppb +/- 50 ppb	
Styrene	500 ppb	485 ppb +/- 50 ppb	
1,1,1,2-Tetrachloroethane	500 ppb	483 ppb +/- 50 ppb	
1,1,2,2-Tetrachloroethane	500 ppb	534 ppb +/- 50 ppb	
Tetrachloroethylene	500 ppb	487 ppb +/- 50 ppb	
Tetrahydrofuran	500 ppb	535 ppb +/- 50 ppb	
Toluene	500 ppb	491 ppb +/- 50 ppb	
1,2,4-Trichlorobenzene	500 ppb	494 ppb +/- 50 ppb	
1,1,1-Trichloroethane	500 ppb	494 ppb +/- 50 ppb	
1,1,2-Trichloroethane	500 ppb	494 ppb +/- 50 ppb	
Trichloroethylene	500 ppb	488 ppb +/- 50 ppb	
Trichlorofluoromethane	500 ppb	508 ppb +/- 50 ppb	
1,1,2-Trichlorotrifluoroethane	500 ppb	495 ppb +/- 50 ppb	
1,2,4-Trimethylbenzene	500 ppb	494 ppb +/- 50 ppb	
1,3,5-Trimethylbenzene	500 ppb	498 ppb +/- 50 ppb	
2,2,4-Trimethylpentane	500 ppb	489 ppb +/- 50 ppb	
Vinyl acetate	500 ppb	499 ppb +/- 50 ppb	
Vinyl bromide	500 ppb	505 ppb +/- 50 ppb	
Vinyl chloride	500 ppb	507 ppb +/- 50 ppb	
m-Xylene	500 ppb	492 ppb +/- 50 ppb	
o-Xylene	500 ppb	480 ppb +/- 50 ppb	
p-Xylene	500 ppb	486 ppb +/- 50 ppb	
2-Methyl Naphthalene	500 ppb	498 ppb +/- 50 ppb	
R-22	500 ppb	590 ppb +/- 50 ppb	
Nitrogen	balance	balance	

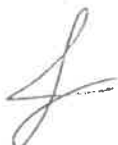
NOTES: Blend Tolerance: +/- 20 %
Analytical Tolerance: +/- 10 %
Traceability: NIST by weight set. NIST Traceability No MT001810.
Internal Standards by analysis
Reactive Mixtures: Analyzed twice with required agreement between analyses of 2%.
Required wait time between analyses of >7 days.
Caution: Do not use below 150 PSIG.

Analyst Name: Joseph A. Ernst

QA Signature: 

Signature:

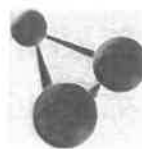
Date: 07/16/2024



*Every effort has been made to establish the actual concentration of the components using master gas blending technology however, Custom Gas Solutions shall have no liability in excess of the established charge for this material.

CUSTOMGAS

SOLUTIONS



1750 East Club Boulevard
Durham, NC 27704
Phone: (919) 220-2570
Fax: (919) 220-4540

Certificate of Analysis

Customer:

ChemTech
284 Sheffield Street
Mountainside, NJ 07092

Cylinder Number: BC169552
Cylinder Size/CGA: 170/180
Fill Pressure: 1815 PSIA
Gas Volume: 110 liters
Date of Mfg: 07/16/2024
Expiration Date: 07/16/2025
Lot Number: 040424-003B

Ship To : Chemtech
284 Sheffield Street
Mountainside, NJ 07092

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00107092NJ	Best Way	040424-003	240404-10	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Acetone	500 ppb	502 ppb +/- 50 ppb	Gravimetric Master Gas
Acetonitrile	500 ppb	530 ppb +/- 50 ppb	
Acrolein	500 ppb	540 ppb +/- 50 ppb	
Acrylonitrile	500 ppb	535 ppb +/- 50 ppb	
Allyl chloride	500 ppb	494 ppb +/- 50 ppb	
Benzene	500 ppb	470 ppb +/- 50 ppb	
Benzyl Chloride	500 ppb	476 ppb +/- 50 ppb	
Bromodichloromethane	500 ppb	495 ppb +/- 50 ppb	
Bromoform	500 ppb	481 ppb +/- 50 ppb	
1,3-Butadiene	500 ppb	490 ppb +/- 50 ppb	
tert-Butyl alcohol	500 ppb	527 ppb +/- 50 ppb	
n-Butyl benzene	500 ppb	525 ppb +/- 50 ppb	
sec-Butyl benzene	500 ppb	525 ppb +/- 50 ppb	
tert-Butyl benzene	500 ppb	525 ppb +/- 50 ppb	
Carbon disulfide	500 ppb	471 ppb +/- 50 ppb	
Carbon tetrachloride	500 ppb	492 ppb +/- 50 ppb	
Chlorobenzene	500 ppb	478 ppb +/- 50 ppb	
Chlorodibromomethane	500 ppb	474 ppb +/- 50 ppb	
Chloroform	500 ppb	478 ppb +/- 50 ppb	
2-Chlorotoluene	500 ppb	527 ppb +/- 50 ppb	
Cyclohexane	500 ppb	469 ppb +/- 50 ppb	
1,2-Dibromoethane	500 ppb	477 ppb +/- 50 ppb	
1,2-Dichlorobenzene	500 ppb	495 ppb +/- 50 ppb	
1,3-Dichlorobenzene	500 ppb	475 ppb +/- 50 ppb	
1,4-Dichlorobenzene	500 ppb	476 ppb +/- 50 ppb	
Dichlorodifluoromethane (R12)	500 ppb	494 ppb +/- 50 ppb	

1,1-Dichloroethane	500 ppb	478 ppb +/- 50 ppb	
1,2-Dichloroethane	500 ppb	483 ppb +/- 50 ppb	
1,1-Dichloroethylene	500 ppb	479 ppb +/- 50 ppb	
cis 1,2-Dichloroethylene	500 ppb	475 ppb +/- 50 ppb	
trans 1,2-Dichloroethylene	500 ppb	475 ppb +/- 50 ppb	
1,2-Dichloropropane	500 ppb	476 ppb +/- 50 ppb	
cis 1,3-Dichloropropylene	500 ppb	501 ppb +/- 50 ppb	
trans 1,3-Dichloropropylene	500 ppb	466 ppb +/- 50 ppb	
1,2-Dichlorotetrafluoroethane	500 ppb	491 ppb +/- 50 ppb	
1,4-Dioxane	500 ppb	470 ppb +/- 50 ppb	
Ethyl acetate	500 ppb	472 ppb +/- 50 ppb	
Ethyl Alcohol	500 ppb	550 ppb +/- 50 ppb	
Ethyl benzene	500 ppb	483 ppb +/- 50 ppb	
Ethyl Chloride	500 ppb	492 ppb +/- 50 ppb	
4-Ethyltoluene	500 ppb	472 ppb +/- 50 ppb	
n-Heptane	500 ppb	473 ppb +/- 50 ppb	
Hexachloro-1,3-butadiene	500 ppb	475 ppb +/- 50 ppb	
2-Hexanone	500 ppb	477 ppb +/- 50 ppb	
n-Hexane	500 ppb	471 ppb +/- 50 ppb	
Isopropyl alcohol	500 ppb	497 ppb +/- 50 ppb	
Isopropyl benzene	500 ppb	522 ppb +/- 50 ppb	
p-Isopropyl toluene	500 ppb	530 ppb +/- 50 ppb	
Methyl Bromide	500 ppb	491 ppb +/- 50 ppb	
Methyl Chloride	500 ppb	494 ppb +/- 50 ppb	
Methyl ethyl ketone	500 ppb	482 ppb +/- 50 ppb	
Methyl isobutyl ketone	500 ppb	479 ppb +/- 50 ppb	
Methyl methacrylate	500 ppb	527 ppb +/- 50 ppb	
Methyl tertiary butyl ether	500 ppb	470 ppb +/- 50 ppb	
Methylene chloride	500 ppb	484 ppb +/- 50 ppb	
Naphthalene	500 ppb	537 ppb +/- 50 ppb	
n-Propylbenzene	500 ppb	525 ppb +/- 50 ppb	
Propylene	500 ppb	494 ppb +/- 50 ppb	
Styrene	500 ppb	472 ppb +/- 50 ppb	
1,1,1,2-Tetrachloroethane	500 ppb	530 ppb +/- 50 ppb	
1,1,2,2-Tetrachloroethane	500 ppb	470 ppb +/- 50 ppb	
Tetrachloroethylene	500 ppb	473 ppb +/- 50 ppb	
Tetrahydrofuran	500 ppb	520 ppb +/- 50 ppb	
Toluene	500 ppb	477 ppb +/- 50 ppb	
1,2,4-Trichlorobenzene	500 ppb	480 ppb +/- 50 ppb	
1,1,1-Trichloroethane	500 ppb	480 ppb +/- 50 ppb	
1,1,2-Trichloroethane	500 ppb	481 ppb +/- 50 ppb	
Trichloroethylene	500 ppb	474 ppb +/- 50 ppb	
Trichlorofluoromethane	500 ppb	494 ppb +/- 50 ppb	
1,1,2-Trichlorotrifluoroethane	500 ppb	481 ppb +/- 50 ppb	
1,2,4-Trimethylbenzene	500 ppb	480 ppb +/- 50 ppb	
1,3,5-Trimethylbenzene	500 ppb	484 ppb +/- 50 ppb	
2,2,4-Trimethylpentane	500 ppb	475 ppb +/- 50 ppb	
Vinyl acetate	500 ppb	485 ppb +/- 50 ppb	
Vinyl bromide	500 ppb	491 ppb +/- 50 ppb	
Vinyl chloride	500 ppb	493 ppb +/- 50 ppb	
m-Xylene	500 ppb	479 ppb +/- 50 ppb	
o-Xylene	500 ppb	466 ppb +/- 50 ppb	
p-Xylene	500 ppb	473 ppb +/- 50 ppb	
2-Methyl Naphthalene	500 ppb	497 ppb +/- 50 ppb	
R-22	500 ppb	589 ppb +/- 50 ppb	
Nitrogen	balance	balance	

NOTES: Blend Tolerance: +/- 20 %
Analytical Tolerance: +/- 10 %
Traceability: NIST by weight set. NIST Traceability No MT001810.
Internal Standards by analysis
Reactive Mixtures: Analyzed twice with required agreement between analyses of 2%.
Required wait time between analyses of >7 days.
Caution: Do not use below 150 PSIG.

Analyst Name: Joseph A. Ernst

QA Signature: 

Signature:

Date: 07/16/2024



*Every effort has been made to establish the actual concentration of the components using master gas blending technology however, Custom Gas Solutions shall have no liability in excess of the established charge for this material.