284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Prep Standard - Chemical Standard Summary

Order ID : Q3626

Test : TO-15

Prepbatch ID :

Sequence ID/Qc Batch ID: VL111925,VL112025,

Standard ID :
AP2691,AP2694,AP2695,AP2696,AP2697,

Chemical ID :
A1117,A1141,A1142,A1143,

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Air STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
47	Internal Standard/Surrogate Mix-80 ppbv	AP2691	11/18/2025	12/18/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 11/25/2025

FROM 2.40000psi of A1141 + 27.60000psi of A1117 = Final Quantity: 30.000 psi

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2396	TO-15 15 PPBV CAL MIX	AP2694	11/18/2025	12/18/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 11/25/2025

FROM 1455.00000SCCM of A1117 + 45.00000SCCM of A1142 = Final Quantity: 30.000 psi

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Air STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2397	TO-15 -2 PPBV CAL.MIX	AP2695	11/18/2025	12/18/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 11/25/2025

FROM 26.00000psi of A1117 + 4.00000psi of AP2694 = Final Quantity: 30.000 psi

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2668	0.5 PPBV CAL.MIX	AP2696	11/18/2025	12/18/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 11/25/2025

FROM 29.00000psi of A1117 + 1.00000psi of AP2694 = Final Quantity: 30.000 psi

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Air STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2396	TO-15 15 PPBV CAL MIX	AP2697	11/18/2025	12/18/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 11/25/2025

FROM 1455.00000SCCM of A1117 + 45.00000SCCM of A1143 = Final Quantity: 30.000 psi

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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	BC884004	10/01/2026	10/14/2025 / sam	10/13/2025 / sam	A1141

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)	051925-001A	10/01/2026	10/13/2025 / sam	10/13/2025 / sam	A1142

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)	051925-001B	10/01/2026	10/13/2025 / sam	10/13/2025 / sam	A1143

CUSTOMGAS
SOLUTIONS

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

A1141

Certificate of Analysis

Customer:

Chem Tech
284 Sheffield Street
Mountainside, NJ 07092

Tel: (908) 789-8900

Cylinder Number: BC884004
Cylinder Size/CGA: 170/180SS
Fill Pressure: 1815 PSIA
Gas Volume: ~170 liters
Date of Mfg: 10/01/2025
Expiration Date: 10/01/2026

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

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00107092NJ	Best Way	051925-001RRR	Email051925	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Bromochloromethane	1 ppm	1.019 ppm +/- 0.02 ppm	Gravimetric Master Gas
4-Bromofluorobenzene	1 ppm	1.013 ppm +/- 0.02 ppm	
Chlorobenzene-D5	1 ppm	0.993 ppm +/- 0.02 ppm	
1,4-Difluorbenzene	1 ppm	0.981 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

Signature:

QA Signature:

Date: 10/01/2025

*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
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Fax: (919) 220-4540

A1142
Rec 10/13/25

Certificate of Analysis

Customer:

ChemTech
284 Sheffield Street
Mountianside, NJ 07092

Cylinder Number: BC993219
Cylinder Size/CGA: 170/180
Fill Pressure: 1815 PSIA
Gas Volume: 110 liters
Date of Mfg: 10/01/2025
Expiration Date: 10/01/2026
Lot Number: 051925-001A

Ship To : Chemtech
284 Sheffield Street
Mountainside, NJ 07092

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00107092NJ	Best Way	051925-001	Email051925	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Acetone	500 ppb	508 ppb +/- 50 ppb	Gravimetric Master Gas
Acetonitrile	500 ppb	515 ppb +/- 50 ppb	
Acrolein	500 ppb	514 ppb +/- 50 ppb	
Acrylonitrile	500 ppb	519 ppb +/- 50 ppb	
Allyl chloride	500 ppb	499 ppb +/- 50 ppb	
Benzene	500 ppb	475 ppb +/- 50 ppb	
Benzyl Chloride	500 ppb	480 ppb +/- 50 ppb	
Bromodichloromethane	500 ppb	500 ppb +/- 50 ppb	
Bromoform	500 ppb	486 ppb +/- 50 ppb	
1,3-Butadiene	500 ppb	495 ppb +/- 50 ppb	
tert-Butyl alcohol	500 ppb	512 ppb +/- 50 ppb	
n-Butyl benzene	500 ppb	510 ppb +/- 50 ppb	
sec-Butyl benzene	500 ppb	510 ppb +/- 50 ppb	
tert-Butyl benzene	500 ppb	529 ppb +/- 50 ppb	
Carbon disulfide	500 ppb	476 ppb +/- 50 ppb	
Carbon tetrachloride	500 ppb	497 ppb +/- 50 ppb	
Chlorobenzene	500 ppb	483 ppb +/- 50 ppb	
Chlorodibromomethane	500 ppb	488 ppb +/- 50 ppb	
Chloroform	500 ppb	483 ppb +/- 50 ppb	
2-Chlorotoluene	500 ppb	512 ppb +/- 50 ppb	
Cyclohexane	500 ppb	474 ppb +/- 50 ppb	
1,2-Dibromoethane	500 ppb	482 ppb +/- 50 ppb	
1,2-Dichlorobenzene	500 ppb	500 ppb +/- 50 ppb	
1,3-Dichlorobenzene	500 ppb	480 ppb +/- 50 ppb	
1,4-Dichlorobenzene	500 ppb	481 ppb +/- 50 ppb	
Dichlorodifluoromethane (R12)	500 ppb	499 ppb +/- 50 ppb	

1,1-Dichloroethane	500 ppb	483 ppb +/- 50 ppb	
1,2-Dichloroethane	500 ppb	488 ppb +/- 50 ppb	
1,1-Dichlororethylene	500 ppb	484 ppb +/- 50 ppb	
cis 1,2-Dichloroethylene	500 ppb	480 ppb +/- 50 ppb	
trans 1,2-Dichloroethylene	500 ppb	479 ppb +/- 50 ppb	
1,2-Dichloropropane	500 ppb	481 ppb +/- 50 ppb	
cis 1,3-Dichloropropylene	500 ppb	507 ppb +/- 50 ppb	
trans 1,3-Dichloropropylene	500 ppb	457 ppb +/- 50 ppb	
1,2-Dichlorotetrafluoroethane	500 ppb	496 ppb +/- 50 ppb	
1,4-Dioxane	500 ppb	475 ppb +/- 50 ppb	
Ethyl acetate	500 ppb	477 ppb +/- 50 ppb	
Ethyl Alcohol	500 ppb	513 ppb +/- 50 ppb	
Ethyl benzene	500 ppb	488 ppb +/- 50 ppb	
Ethyl Chloride	500 ppb	497 ppb +/- 50 ppb	
4-Ethyltoluene	500 ppb	477 ppb +/- 50 ppb	
n-Heptane	500 ppb	478 ppb +/- 50 ppb	
Hexachloro-1,3-butadiene	500 ppb	480 ppb +/- 50 ppb	
2-Hexanone	500 ppb	482 ppb +/- 50 ppb	
n-Hexane	500 ppb	476 ppb +/- 50 ppb	
Isopropyl alcohol	500 ppb	502 ppb +/- 50 ppb	
Isopropyl benzene	500 ppb	507 ppb +/- 50 ppb	
p-Isopropyl toluene	500 ppb	515 ppb +/- 50 ppb	
Methyl Bromide	500 ppb	496 ppb +/- 50 ppb	
Methyl Chloride	500 ppb	499 ppb +/- 50 ppb	
Methyl ethyl ketone	500 ppb	487 ppb +/- 50 ppb	
Methyl isobutyl ketone	500 ppb	484 ppb +/- 50 ppb	
Methyl methacrylate	500 ppb	512 ppb +/- 50 ppb	
Methyl tertiary butyl ether	500 ppb	474 ppb +/- 50 ppb	
Methylene chloride	500 ppb	489 ppb +/- 50 ppb	
Naphthalene	500 ppb	506 ppb +/- 50 ppb	
n-Propylbenzene	500 ppb	510 ppb +/- 50 ppb	
Propylene	500 ppb	499 ppb +/- 50 ppb	
Styrene	500 ppb	477 ppb +/- 50 ppb	
1,1,1,2-Tetrachloroethane	500 ppb	515 ppb +/- 50 ppb	
1,1,2,2-Tetrachloroethane	500 ppb	475 ppb +/- 50 ppb	
Tetrachloroethylene	500 ppb	478 ppb +/- 50 ppb	
Tetrahydrofuran	500 ppb	504 ppb +/- 50 ppb	
Toluene	500 ppb	482 ppb +/- 50 ppb	
1,2,4-Trichlorobenzene	500 ppb	485 ppb +/- 50 ppb	
1,1,1-Trichloroethane	500 ppb	485 ppb +/- 50 ppb	
1,1,2-Trichloroethane	500 ppb	485 ppb +/- 50 ppb	
Trichloroethylene	500 ppb	479 ppb +/- 50 ppb	
Trichlorofluoromethane	500 ppb	499 ppb +/- 50 ppb	
1,1,2-Trichlorotrifluoroethane	500 ppb	486 ppb +/- 50 ppb	
1,2,4-Trimethylbenzene	500 ppb	485 ppb +/- 50 ppb	
1,3,5-Trimethylbenzene	500 ppb	489 ppb +/- 50 ppb	
2,2,4- Trimethylpentane	500 ppb	480 ppb +/- 50 ppb	
Vinyl acetate	500 ppb	490 ppb +/- 50 ppb	
Vinyl bromide	500 ppb	496 ppb +/- 50 ppb	
Vinyl chloride	500 ppb	507 ppb +/- 50 ppb	
m-Xylene	500 ppb	484 ppb +/- 50 ppb	
o-Xylene	500 ppb	471 ppb +/- 50 ppb	
p-Xylene	500 ppb	477 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:**	+/- 10 %
	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: 10/01/2025

*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
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1750 East Club Boulevard
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Phone: (919) 220-2570
Fax: (919) 220-4540

A 1143
Rec 10/13/25

Certificate of Analysis

Customer:

ChemTech
284 Sheffield Street
Mountianside, NJ 07092

Cylinder Number: BC785565
Cylinder Size/CGA: 170/180
Fill Pressure: 1815 PSIA
Gas Volume: 110 liters
Date of Mfg: 10/01/2025
Expiration Date: 10/01/2026
Lot Number: 051925-001B

Ship To : Chemtech
284 Sheffield Street
Mountainside, NJ 07092

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00107092NJ	Best Way	051925-001	Email051925	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Acetone	500 ppb	525 ppb +/- 50 ppb	Gravimetric Master Gas
Acetonitrile	500 ppb	525 ppb +/- 50 ppb	
Acrolein	500 ppb	534 ppb +/- 50 ppb	
Acrylonitrile	500 ppb	530 ppb +/- 50 ppb	
Allyl chloride	500 ppb	517 ppb +/- 50 ppb	
Benzene	500 ppb	492 ppb +/- 50 ppb	
Benzyl Chloride	500 ppb	497 ppb +/- 50 ppb	
Bromodichloromethane	500 ppb	518 ppb +/- 50 ppb	
Bromoform	500 ppb	503 ppb +/- 50 ppb	
1,3-Butadiene	500 ppb	512 ppb +/- 50 ppb	
tert-Butyl alcohol	500 ppb	523 ppb +/- 50 ppb	
n-Butyl benzene	500 ppb	510 ppb +/- 50 ppb	
sec-Butyl benzene	500 ppb	520 ppb +/- 50 ppb	
tert-Butyl benzene	500 ppb	520 ppb +/- 50 ppb	
Carbon disulfide	500 ppb	493 ppb +/- 50 ppb	
Carbon tetrachloride	500 ppb	515 ppb +/- 50 ppb	
Chlorobenzene	500 ppb	500 ppb +/- 50 ppb	
Chlorodibromomethane	500 ppb	496 ppb +/- 50 ppb	
Chloroform	500 ppb	500 ppb +/- 50 ppb	
2-Chlorotoluene	500 ppb	523 ppb +/- 50 ppb	
Cyclohexane	500 ppb	491 ppb +/- 50 ppb	
1,2-Dibromoethane	500 ppb	499 ppb +/- 50 ppb	
1,2-Dichlorobenzene	500 ppb	518 ppb +/- 50 ppb	
1,3-Dichlorobenzene	500 ppb	497 ppb +/- 50 ppb	
1,4-Dichlorobenzene	500 ppb	498 ppb +/- 50 ppb	
Dichlorodifluoromethane (R12)	500 ppb	516 ppb +/- 50 ppb	

1,1-Dichloroethane	500 ppb	500 ppb +/- 50 ppb	
1,2-Dichloroethane	500 ppb	505 ppb +/- 50 ppb	
1,1-Dichlororethylene	500 ppb	501 ppb +/- 50 ppb	
cis 1,2-Dichloroethylene	500 ppb	497 ppb +/- 50 ppb	
trans 1,2-Dichloroethylene	500 ppb	496 ppb +/- 50 ppb	
1,2-Dichloropropane	500 ppb	498 ppb +/- 50 ppb	
cis 1,3-Dichloropropylene	500 ppb	525 ppb +/- 50 ppb	
trans 1,3-Dichloropropylene	500 ppb	473 ppb +/- 50 ppb	
1,2-Dichlorotetrafluoroethane	500 ppb	513 ppb +/- 50 ppb	
1,4-Dioxane	500 ppb	492 ppb +/- 50 ppb	
Ethyl acetate	500 ppb	494 ppb +/- 50 ppb	
Ethyl Alcohol	500 ppb	523 ppb +/- 50 ppb	
Ethyl benzene	500 ppb	505 ppb +/- 50 ppb	
Ethyl Chloride	500 ppb	515 ppb +/- 50 ppb	
4-Ethyltoluene	500 ppb	494 ppb +/- 50 ppb	
n-Heptane	500 ppb	495 ppb +/- 50 ppb	
Hexachloro-1,3-butadiene	500 ppb	497 ppb +/- 50 ppb	
2-Hexanone	500 ppb	499 ppb +/- 50 ppb	
n-Hexane	500 ppb	493 ppb +/- 50 ppb	
Isopropyl alcohol	500 ppb	520 ppb +/- 50 ppb	
Isopropyl benzene	500 ppb	518 ppb +/- 50 ppb	
p-Isopropyl toluene	500 ppb	524 ppb +/- 50 ppb	
Methyl Bromide	500 ppb	514 ppb +/- 50 ppb	
Methyl Chloride	500 ppb	517 ppb +/- 50 ppb	
Methyl ethyl ketone	500 ppb	504 ppb +/- 50 ppb	
Methyl isobutyl ketone	500 ppb	501 ppb +/- 50 ppb	
Methyl methacrylate	500 ppb	523 ppb +/- 50 ppb	
Methyl tertiary butyl ether	500 ppb	491 ppb +/- 50 ppb	
Methylene chloride	500 ppb	506 ppb +/- 50 ppb	
Naphthalene	500 ppb	517 ppb +/- 50 ppb	
n-Propylbenzene	500 ppb	519 ppb +/- 50 ppb	
Propylene	500 ppb	516 ppb +/- 50 ppb	
Styrene	500 ppb	494 ppb +/- 50 ppb	
1,1,1,2-Tetrachloroethane	500 ppb	525 ppb +/- 50 ppb	
1,1,2,2-Tetrachloroethane	500 ppb	492 ppb +/- 50 ppb	
Tetrachloroethylene	500 ppb	495 ppb +/- 50 ppb	
Tetrahydrofuran	500 ppb	510 ppb +/- 50 ppb	
Toluene	500 ppb	499 ppb +/- 50 ppb	
1,2,4-Trichlorobenzene	500 ppb	502 ppb +/- 50 ppb	
1,1,1-Trichloroethane	500 ppb	502 ppb +/- 50 ppb	
1,1,2-Trichloroethane	500 ppb	503 ppb +/- 50 ppb	
Trichloroethylene	500 ppb	496 ppb +/- 50 ppb	
Trichlorofluoromethane	500 ppb	517 ppb +/- 50 ppb	
1,1,2-Trichlorotrifluoroethane	500 ppb	503 ppb +/- 50 ppb	
1,2,4-Trimethylbenzene	500 ppb	502 ppb +/- 50 ppb	
1,3,5-Trimethylbenzene	500 ppb	506 ppb +/- 50 ppb	
2,2,4- Trimethylpentane	500 ppb	497 ppb +/- 50 ppb	
Vinyl acetate	500 ppb	507 ppb +/- 50 ppb	
Vinyl bromide	500 ppb	514 ppb +/- 50 ppb	
Vinyl chloride	500 ppb	515 ppb +/- 50 ppb	
m-Xylene	500 ppb	501 ppb +/- 50 ppb	
o-Xylene	500 ppb	488 ppb +/- 50 ppb	
p-Xylene	500 ppb	494 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:**	+/- 10 %
	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: 10/01/2025

*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.