

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

8900, Fax: 908 789 8922

Prep Standard - Chemical Standard Summary

Order ID :	P5296
Test :	TO-15
Prepbatch ID :	
Sequence ID/Qc Bate	ch ID: vl121824,vl121924,
Standard ID : AP2556,AP2558,AP2	560,AP2561,AP2562,
Chemical ID :	1137 MDI
, (1117, , (1100, , (1100, ,	(TIOT, WIDE,
Chemical ID : A1117,A1135,A1136,A	M137,MDL,





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Air STANDARD PREPARATION LOG

Recipe ID	<u>NAME</u>	NO.	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mahesh Dadoda
47	Internal Standard/Surrogate Mix-80 ppbv	AP2556	12/06/2024	01/04/2025	Semsettin Yesilyurt	None	None	12/20/2024

Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mahesh Dadoda
2396	TO-15 15 PPBV CAL MIX	<u>AP2558</u>	12/06/2024	01/04/2025	Semsettin Yesilyurt	None	None	12/20/2024

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





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Air STANDARD PREPARATION LOG

Recipe ID	<u>NAME</u>	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mahesh Dadoda
2396	TO-15 15 PPBV CAL MIX	<u>AP2560</u>	12/06/2024	01/04/2025	Semsettin Yesilyurt	None	None	12/20/2024

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

Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	Supervised By Mahesh Dadoda
2397	TO-15 -2 PPBV CAL.MIX	<u>AP2561</u>	12/06/2024	01/04/2025	Semsettin Yesilyurt	None	None	12/20/2024

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





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Air STANDARD PREPARATION LOG

Recipe ID 2668	NAME 0.5 PPBV CAL.MIX	NO. AP2562	Prep Date 12/06/2024	Expiration Date 01/04/2025	Prepared By Semsettin Yesilyurt	<u>ScaleID</u> None	PipetteID None	Supervised By Mahesh Dadoda 12/20/2024
FROM	29.00000psi of A1117 + 1.00000psi o	fAP2560 =	Final Quantit	y: 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	BC275465	07/16/2025	07/22/2024 / SAM	07/22/2024 / SAM	A1135
	Standard					

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



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-Difluorbenzene	1 ppm	0.979 ppm +/- 0.02 ppm	
Nitrogen	balance	balance	
	-		
18 1 2 1 5 1 E 1 E 1 E 1		NESS FAR BERNEY	S/2 T

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.



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

Certificate of Analysis

Customer:

ChemTech 284 Sheffield Street Mountianside, 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		

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

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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.



1750 East Club Boulevard

Durham, NC 27704 Phone: (919) 220-2570 Fax: (919) 220-4540

Certificate of Analysis

Customer:

ChemTech 284 Sheffield Street Mountianside, 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	Gravinicale Master Gas
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	

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Nitrogen	balance	balance	
R-22	500 ppb	497 ppb +/- 50 ppb 589 ppb +/- 50 ppb	
2-Methyl Naphthalene	500 ppb 500 ppb	473 ppb +/- 50 ppb	
o-Xylene p-Xylene	500 ppb	466 ppb +/- 50 ppb	
m-Xylene	500 ppb	479 ppb +/- 50 ppb	
Vinyl chloride	500 ppb	493 ppb +/- 50 ppb	
Vinyl bromide	500 ppb	491 ppb +/- 50 ppb	
Vinyl acetate	500 ppb	485 ppb +/- 50 ppb	
2,2,4- Trimethylpentane	500 ppb	475 ppb +/- 50 ppb	
1.3,5-Trimethylbenzene	500 ppb	484 ppb +/- 50 ppb	
1,2,4-Trimethylbenzene	500 ppb	480 ppb +/- 50 ppb	
1,1,2-Trichlorotrifluoroethane	500 ppb	481 ppb +/- 50 ppb	
Trichlorofluoromethane	500 ppb	494 ppb +/- 50 ppb	
Trichloroethylene	500 ppb	474 ppb +/- 50 ppb	
1,1,2-Trichloroethane	500 ppb	480 ppb +/- 50 ppb 481 ppb +/- 50 ppb	
1,1,1-Trichloroethane	500 ppb 500 ppb	480 ppb +/- 50 ppb	
1,2,4-Trichlorobenzene	500 ppb	477 ppb +/- 50 ppb	
Toluene	500 ppb	520 ppb +/- 50 ppb	
Tetrachloroethylene Tetrahydrofuran	500 ppb	473 ppb +/- 50 ppb	
1,1,2,2-Tetrachloroethane	500 ppb	470 ppb +/- 50 ppb	
1,1,1,2-Tetrachloroethane	500 ppb	530 ppb +/- 50 ppb	
Styrene	500 ppb	472 ppb +/- 50 ppb	
Propylene	500 ppb	494 ppb +/- 50 ppb	
n-Propylbenzene	500 ppb	525 ppb +/- 50 ppb	
Naphthalene	500 ppb	537 ppb +/- 50 ppb	
Methylene chloride	500 ppb	484 ppb +/- 50 ppb	
Methyl tertiary butyl ether	500 ppb	470 ppb +/- 50 ppb	
Methyl methacrylate	500 ppb	527 ppb +/- 50 ppb	
Methyl isobutyl ketone	500 ppb	479 ppb +/- 50 ppb	
Methyl ethyl ketone	500 ppb	482 ppb +/- 50 ppb	
Methyl Chloride	500 ppb	491 ppb +/- 50 ppb	
Methyl Bromide	500 ppb	530 ppb +/- 50 ppb 491 ppb +/- 50 ppb	
p-Isopropyl toluene	500 ppb 500 ppb	522 ppb +/- 50 ppb	
Isopropyl benzene	500 ppb	497 ppb +/- 50 ppb	
Isopropyl alcohol	500 ppb	471 ppb +/- 50 ppb	
2-Hexanone n-Hexane	500 ppb	477 ppb +/- 50 ppb	
Hexachloro-1,3-butadiene	500 ppb	475 ppb +/- 50 ppb	
n-Heptane	500 ppb	473 ppb +/- 50 ppb	
4-Ethyltoluene	500 ppb	472 ppb +/- 50 ppb	
Ethyl Chloride	500 ppb	492 ppb +/- 50 ppb	
Ethyl benzene	500 ppb	483 ppb +/- 50 ppb	
Ethyl Alcohol	500 ppb	550 ppb +/- 50 ppb	
Ethyl acetate	500 ppb	472 ppb +/- 50 ppb	
1,4-Dioxane	500 ppb	470 ppb +/- 50 ppb	
1,2-Dichlorotetrafluoroethane	500 ppb	466 ppb +/- 50 ppb 491 ppb +/- 50 ppb	
trans 1,3-Dichloropropylene	500 ppb 500 ppb	501 ppb +/- 50 ppb	
cis 1,3-Dichloropropylene	500 ppb	476 ppb +/- 50 ppb	
trans 1,2-Dichloroethylene 1,2-Dichloropropane	500 ppb	475 ppb +/- 50 ppb	
cis 1,2-Dichloroethylene	500 ppb	475 ppb +/- 50 ppb	
1,1-Dichlororethylene	500 ppb	479 ppb +/- 50 ppb	
1,2-Dichloroethane	500 ppb	483 ppb +/- 50 ppb	
	500 ppb	478 ppb +/- 50 ppb	

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.