

Instrument ID: MSVOA\_L

**Daily Analysis Runlog For Sequence/QC Batch ID # VL041725**

|              |                     |                   |                                              |
|--------------|---------------------|-------------------|----------------------------------------------|
| Review By    | Semsettin Yesilyurt | Review On         | 4/18/2025 4:23:02 PM                         |
| Supervise By | Maresh Dadoda       | Supervise On      | 4/18/2025 10:46:12 PM                        |
| SubDirectory | VL041725            | HP Acquire Method | TO15AIR.M HP Processing Method VL041725AIR.M |

| STD. NAME                | STD REF.#            |
|--------------------------|----------------------|
| Tune/Reschk              | AP2590               |
| Initial Calibration Stds | AP2598,AP2599,AP2600 |
| CCC                      | AP2598               |
| Internal Standard/PEM    | AP2590               |
| ICV/I.BLK                | AP2601               |
| Surrogate Standard       |                      |
| MS/MSD Standard          |                      |
| LCS Standard             |                      |

| Sr# | SampleID    | ClientID           | Data File Name | Date-Time         | Comment  | Operator | Status   |
|-----|-------------|--------------------|----------------|-------------------|----------|----------|----------|
| 1   | BFB         | BFB                | VL042348.D     | 17 Apr 2025 07:50 |          | SY/MD    | Ok       |
| 2   | VSTDICCC010 | VSTDICCC010        | VL042349.D     | 17 Apr 2025 09:44 |          | SY/MD    | Ok,M     |
| 3   | VSTDICC002  | VSTDICC002         | VL042350.D     | 17 Apr 2025 10:17 |          | SY/MD    | Ok,M     |
| 4   | VSTDICC001  | VSTDICC001         | VL042351.D     | 17 Apr 2025 10:48 |          | SY/MD    | Ok,M     |
| 5   | VSTDICC0.5  | VSTDICC0.5         | VL042352.D     | 17 Apr 2025 11:19 |          | SY/MD    | Ok,M     |
| 6   | VSTDICC0.1  | VSTDICC0.1         | VL042353.D     | 17 Apr 2025 11:50 |          | SY/MD    | Ok,M     |
| 7   | VSTDICC0.03 | VSTDICC0.03        | VL042354.D     | 17 Apr 2025 12:22 |          | SY/MD    | Ok,M     |
| 8   | VSTDICC015  | VSTDICC015         | VL042355.D     | 17 Apr 2025 12:54 |          | SY/MD    | Ok,M     |
| 9   | VSTDICV010  | ICVVL041725        | VL042356.D     | 17 Apr 2025 13:43 |          | SY/MD    | Ok,M     |
| 10  | VL0417ABL01 | VL0417ABL01        | VL042357.D     | 17 Apr 2025 14:23 |          | SY/MD    | Ok       |
| 11  | VL0417ABS01 | VL0417ABS01        | VL042358.D     | 17 Apr 2025 15:39 |          | SY/MD    | Ok,M     |
| 12  | Q1665-15    | IA-B14-1-3242025   | VL042359.D     | 17 Apr 2025 16:12 | Need 10X | SY/MD    | Dilution |
| 13  | Q1665-15DL  | IA-B14-1-3242025DL | VL042360.D     | 17 Apr 2025 16:44 |          | SY/MD    | Ok,M     |
| 14  | Q1668-01    | IA-B1-4-3252025    | VL042361.D     | 17 Apr 2025 17:17 | Need 4X  | SY/MD    | Dilution |
| 15  | Q1668-01DUP | IA-B1-4-3252025DUP | VL042362.D     | 17 Apr 2025 17:51 |          | SY/MD    | Ok,M     |
| 16  | Q1668-03    | IA-B1-3-3252025    | VL042363.D     | 17 Apr 2025 18:24 | Need 4X  | SY/MD    | Dilution |
| 17  | Q1668-04    | IA-B1-1-3252025    | VL042364.D     | 17 Apr 2025 18:58 |          | SY/MD    | Ok,M     |
| 18  | Q1668-02    | IA-B1-2-3252025    | VL042365.D     | 17 Apr 2025 19:31 |          | SY/MD    | Ok,M     |

Instrument ID: MSVOA\_L

**Daily Analysis Runlog For Sequence/QC Batch ID # VL041725**

| Review By                | Semsettin Yesilyurt  | Review On            | 4/18/2025 4:23:02 PM  |
|--------------------------|----------------------|----------------------|-----------------------|
| Supervise By             | Mahesh Dadoda        | Supervise On         | 4/18/2025 10:46:12 PM |
| SubDirectory             | VL041725             | HP Acquire Method    | TO15AIR.M             |
|                          |                      | HP Processing Method | VL041725AIR.M         |
| STD. NAME                | STD REF.#            |                      |                       |
| Tune/Reschk              | AP2590               |                      |                       |
| Initial Calibration Stds | AP2598,AP2599,AP2600 |                      |                       |
| CCC                      | AP2598               |                      |                       |
| Internal Standard/PEM    | AP2590               |                      |                       |
| ICV/I.BLK                | AP2601               |                      |                       |
| Surrogate Standard       |                      |                      |                       |
| MS/MSD Standard          |                      |                      |                       |
| LCS Standard             |                      |                      |                       |

|    |            |                     |            |                   |                       |       |          |
|----|------------|---------------------|------------|-------------------|-----------------------|-------|----------|
| 19 | Q1726-01   | IA-DUP-3-03312025   | VL042366.D | 17 Apr 2025 20:05 | Need 20X              | SY/MD | Dilution |
| 20 | Q1726-02   | IA-B2-6-03312025    | VL042367.D | 17 Apr 2025 20:38 | Need 20X              | SY/MD | Dilution |
| 21 | Q1726-03   | IA-B2-2-03312025    | VL042368.D | 17 Apr 2025 21:12 | Need 20X              | SY/MD | Dilution |
| 22 | Q1726-04   | IA-B2-5-03312025    | VL042369.D | 17 Apr 2025 21:45 | Need 20X              | SY/MD | Dilution |
| 23 | Q1726-05   | IA-B2-1-03312025    | VL042370.D | 17 Apr 2025 22:19 | Need 20X              | SY/MD | Dilution |
| 24 | Q1726-06   | IA-B2-3-03312025    | VL042371.D | 17 Apr 2025 22:52 | Need 20X              | SY/MD | Dilution |
| 25 | Q1726-07   | IA-B2-4-03312025    | VL042372.D | 17 Apr 2025 23:26 | Need 20X              | SY/MD | Dilution |
| 26 | Q1726-07DL | IA-B2-4-03312025DL  | VL042373.D | 17 Apr 2025 23:57 | Need 40X              | SY/MD | Dilution |
| 27 | Q1668-01DL | IA-B1-4-3252025DL   | VL042374.D | 18 Apr 2025 00:28 |                       | SY/MD | Ok,M     |
| 28 | Q1668-03DL | IA-B1-3-3252025DL   | VL042375.D | 18 Apr 2025 00:59 |                       | SY/MD | Ok,M     |
| 29 | Q1726-01DL | IA-DUP-3-03312025DL | VL042376.D | 18 Apr 2025 01:30 | Need 40X              | SY/MD | Dilution |
| 30 | Q1726-02DL | IA-B2-6-03312025DL  | VL042377.D | 18 Apr 2025 02:01 | Need 40X              | SY/MD | Dilution |
| 31 | Q1726-03DL | IA-B2-2-03312025DL  | VL042378.D | 18 Apr 2025 02:32 | Need 100X             | SY/MD | Dilution |
| 32 | Q1726-04DL | IA-B2-5-03312025DL  | VL042379.D | 18 Apr 2025 03:03 | Need 40X              | SY/MD | Dilution |
| 33 | Q1726-05DL | IA-B2-1-03312025DL  | VL042380.D | 18 Apr 2025 03:34 | Need further dilution | SY/MD | Dilution |
| 34 | Q1726-06DL | IA-B2-3-03312025DL  | VL042381.D | 18 Apr 2025 04:05 | Need further dilution | SY/MD | Dilution |

M : Manual Integration

## Prep Standard - Chemical Standard Summary

**Order ID :** Q1668

**Test :** TO-15

**Prepbatch ID :**

**Sequence ID/Qc Batch ID:** vI041725,

**Standard ID :**

AP2590,AP2598,AP2599,AP2600,AP2601,

**Chemical ID :**

A1117,A1135,A1136,A1137,

## 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 | <a href="#">AP2590</a> | 03/21/2025       | 04/21/2025             | Semsettin Yesilyurt | None           | None             | Maresh Dadoda        |
|                  |                                         |                        |                  |                        |                     |                |                  | 04/03/2025           |

**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 | <a href="#">AP2598</a> | 04/16/2025       | 05/17/2025             | Semsettin Yesilyurt | None           | None             | Maresh Dadoda        |
|                  |                       |                        |                  |                        |                     |                |                  | 04/18/2025           |

**FROM** 1455.00000SCCM of A1117 + 45.00000SCCM of A1136 = 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> |
|------------------|-----------------------|------------------------|------------------|------------------------|---------------------|----------------|------------------|----------------------|
| 2397             | TO-15 -2 PPBV CAL.MIX | <a href="#">AP2599</a> | 04/16/2025       | 05/17/2025             | Semsettin Yesilyurt | None           | None             | Maresh Dadoda        |
| 04/18/2025       |                       |                        |                  |                        |                     |                |                  |                      |

**FROM** 26.00000psi of A1117 + 4.00000psi of AP2598 = 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 | <a href="#">AP2600</a> | 04/16/2025       | 05/17/2025             | Semsettin Yesilyurt | None           | None             | Maresh Dadoda        |
| 04/18/2025       |                  |                        |                  |                        |                     |                |                  |                      |

**FROM** 29.00000psi of A1117 + 1.00000psi of AP2598 = 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                                                        | <a href="#">AP2601</a> | 04/16/2025       | 05/17/2025             | Semsettin Yesilyurt | None           | None             | Mahesh Dadoda<br>04/18/2025 |
| <u>FROM</u>      | 1455.00000SCCM of A1117 + 45.00000SCCM of A1137 = 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

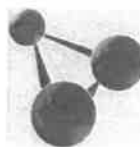
QA Signature: 

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            |  |
|                                |         |                    |  |
|                                |         |                    |  |

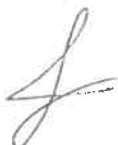
**NOTES:** Blend Tolerance: +/- 20 %  
Analytical Tolerance: +/- 10 %  
Traceability: NIST by weight set. NIST Traceability No MT001810.  
Internal Standards by analysis  
Reactive Mixtures: Analyzed twice with required agreement between analyses of 2%.  
Required wait time between analyses of >7 days.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

**Analyst Name:** Joseph A. Ernst

**QA Signature:** 

**Signature:**

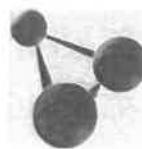
**Date:** 07/16/2024



\*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

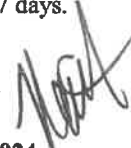
| Customer Number | Ship VIA | Job No.    | Customer PO | Mixture Type |
|-----------------|----------|------------|-------------|--------------|
| 00107092NJ      | Best Way | 040424-003 | 240404-10   | Gravimetric  |

| 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            |  |
|                                |         |                    |  |
|                                |         |                    |  |

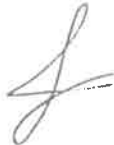
**NOTES:** Blend Tolerance: +/- 20 %  
Analytical Tolerance: +/- 10 %  
Traceability: NIST by weight set. NIST Traceability No MT001810.  
Internal Standards by analysis  
Reactive Mixtures: Analyzed twice with required agreement between analyses of 2%.  
Required wait time between analyses of >7 days.  
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.