

CSL[®]



SETTING STANDARDS

ISO/IEC 17025 Accredited Testing Laboratory by NABL vide certificate no. TC-10571

ABOUT US

180 + EMPLOYEES

20 years of experience in calibration gas and analytical industry

100% INDIGENOUSLY

developed cylinder filling facility & state of the art quality check lab for 5000 units per month

10000 SQFT

facility to produce calibration gas standards

500 + GAS STANDARDS

per month being supplied to related to pollution monitoring equipment manufacturers and end users

80% MARKET SHARE

for disposable calibration gas cylinders in India

EXPORTING TO

40+ countries with 11 stock points and channel partners

500 + COMPANIES

Buy **CALIPORT** to keep them & their customers safe

3000 +

DISPOSABLE GAS CYLINDERS

CALIPORT being shipped per month (Domestic + Exports)





Chemtron Science Laboratories Pvt. Ltd.



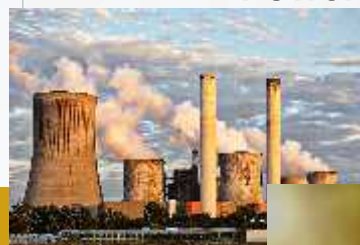
R&D & Education institutes



Oil & Gas



Steel & Cement



Power



Chemicals & Fertilizers

INDUSTRIES SERVED



Marine (Vessels)



Essential Oils & Nutraceuticals



Horticulture



OEM (GC/GAS Analysers/Detectors)

CALIBRATION GAS STANDARDS

For Oil & Gas, Refinery and Petrochemicals Process Analysers

NIST | **NPL** National Physical Laboratory **Traceable | High Precision | Accurate**



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Refinery Laboratory and Process Analyzer Calibration Gas Standards

Sulphur Species Blend

Sulphides, Mercaptans, and Other forms of Sulphur Species in PPM or PPB level filled with Balance in Helium or Hydrocarbon Gas

Natural Gas Standard

Ethane, Propane, Butanes, Pentanes, Hexane, Heptane, Octane, Nonane, and other higher alkanes, nitrogen, Carbon dioxide, helium, Aromatics balance Methane(CH₄)

RGA Standards

Combination of C1 to C8 Hydrocarbons with various Permanent gases, eg. % or ppm of methane, Acetylenes, Ethane, Ethylene, Propane, Propylene, Butanes, Butylene and its isomers, pentanes, pentene, nitrogen, Argon/Oxygen, Hydrogen, Carbon Monoxide, Carbon dioxide, 1,3 Butadiene, propadiene and other hydrocarbons as per requirement

LPG Gas Standards

Ethane/Propane/Butanes/Pentanes mix in % and other Hydrocarbons as per Demand

Calibration Gas Standard for Methanizer Gas Chromatography :

CO/CO₂/Methane Balance Hydrogen



60L @500PSI
118L @ 1000PSI

Petrochemical Calibration Gas Standards

Polymer Plants Standards

- Gas Standards for Impurity profile in Propylene or Ethylene as Balance, eg. PPM of various Hydrocarbons, Sulfur components and permanent gases in Propylene
- Oxygenates In Ethylene
- PPM/PPB Sulfur Components in Propylene/Propane/Methane/Butane

Butene /Butadiene/Aromatics Plant Standards

- Gas Blends of PPM & % Methane, Ethane, Ethylene, Propane, Propylene Butadienes, Ethyl Acetylene, Vinyl Acetylene, Cis-2 Butene, Trans-2-Butene, Isobutylene, 1-Butene & Vinyl Cyclohexene
- Liquid Blends of BTEX and Other Aromatics and Higher Alkanes
- Liquid and Gas Blends of Impurity profile in 1,3 Butadiene
- Liquid and Gas Blends of Impurity profile in 1-Butene
- Liquid Blends for LPG analysis
- Other Customized Liquid Blends of C4&C5

Gas Standards for Mud-Logging Analyzers

- C1 to C5 Combination of PPM and % in Nitrogen
- Standards for Analysis of Impurities in Natural Gas



DISPOSABLE GAS CYLINDERS TYPICAL GAS MIX



17L
@ 250 PSI



34L
@ 500 PSI



60L
@ 500 PSI



118L
@ 1000 PSI



12L
@ 175 PSI

Gas	Type	Nature of Gas	Composition	Shelf Life (Months)
QUAD1	PPM/%	Reactive	25ppm H2S/50ppm CO/50% LEL CH4/12% O2/N2	24
QUAD2	PPM/%	Reactive	25ppm H2S/50ppm CO/50% LEL i-C4/12% O2/N2	24
QUAD3	PPM/%	Reactive	25ppm H2S/100ppm CO/50% LEL CH4 /18% O2/N2	24
H2S	PPM/%	Reactive	5/10/25/50/100/200 PPM H2S Bal N2/AIR	24
Other Combinations are being produced as per required compositions				24
AIR	Zero	Non Reactive	99.999 % (Zero 20.8% bal N2) AIR	36
N2	Zero	Non Reactive	99.999 % (Zero) N2	36
C1	LEL	Non Reactive	10/20/25/30/50 % LEL CH4 Bal Air	36
C3	LEL	Non Reactive	20/25/30/50 % LEL Propane Bal Air	36
H2	LEL	Non Reactive	20/25/50 % LEL Hydrogen Bal Air	36
iC4	LEL	Non Reactive	25/50 % LEL iso-Butane Bal Air	36
O2	%	Non Reactive	10/12.5/18/20.9 Vol/Vol Oxygen Bal N2	36
C1	%	Non Reactive	1.0/8.0 % /50% v/v CH4 Bal N2	36
CO	PPM	Non Reactive	5/10/25/50/100/500 PPMV CO Bal N2/AIR	24
CO2	%	Non Reactive	2.0/2.5/5.0 Vol/Vol Carbon Di Oxide Bal N2	36
iC4	%	Non Reactive	8 % or 10% Vol/Vol iso-Butane Bal N2	36
C1	PPM	Non Reactive	10/25/50/100 PPMV CH4 Bal N2	24
CO2	PPM	Non Reactive	200/500/750/1000 PPMV CO2 Bal N2	24
H2	PPM	Non Reactive	100/500/1000 PPMV Hydrogen Bal Air	24
iC4	PPM	Non Reactive	20/50/75/100 PPMV iso-Butylene Bal AIR	24
NO	PPM	Reactive	5/10/25/50/100/900 PPMV NO Bal N2	24
NO2	PPM	Reactive	5/10/25/50/ PPMV NO2 Bal N2	24
SO2	PPM	Reactive	5/10/25/50/75/100 PPMV SO2Bal N2/Air	24
CL2	PPM	Reactive	5/10/25/50/100 PPMV Chlorine Bal N2/Air	9
HCL	PPM	Reactive	5/10/25/50/100 PPMV HCl Bal N2/Air	9
NH3	PPM	Reactive	10/25/50/100 PPMV Ammonia Bal N2/Air	12
R-OH	PPM	Reactive	100/200/500 PPM Ethanol Bal N2	24

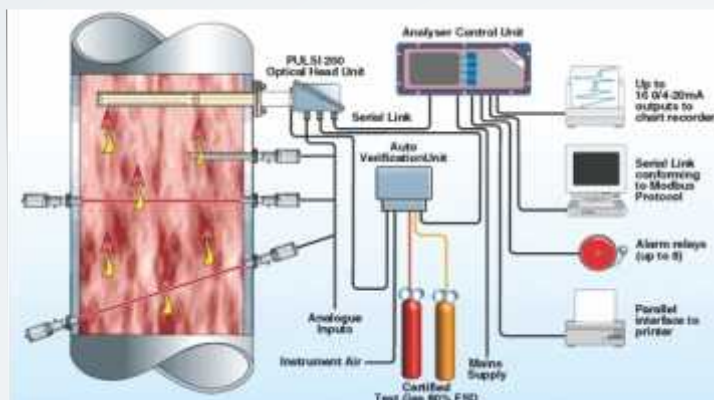
CYLINDER CAPACITIES & SIZE

MODEL#	DIMS (mm) / WT(kg)	Gas Vol (LITERS)	Cylinder W/C (LITERS)	PRESSURE
CALIPORT-118	365 X 90 / 1.2	118	1.6/1.7	1000 PSI
CALIPORT-60	365 X 90 / 1.2	60	1.6/1.7	500 PSI
CALIPORT-60HP	250 X 65/ 0.6	60	0.5	1800 PSI
CALIPORT-34AC	350 X 65 / 0.8	34	1.0	500 PSI
CALIPORT-34LX	340 X 60 / 0.8	34	0.85	600 PSI
CALIPORT-17	350 X 65 / 0.8	17	1	250 PSI
CALIPORT-17HL	250 X 65/ 0.6	17	0.5	500 PSI

CALIBRATION GAS STANDARDS FOR CEMS/AQMS/AUTOMOTIVE

Environmental Calibration Gas standards

Typical Application of Certified Calibration Gas in CEMS



Typical Certified Calibration Gas Standards

- 5 to 2000 PPM of NO, CO, SO₂ each in Nitrogen
- 5 to 2000 ppm of NO_x, CO, SO₂, O₂, Methane/propane each and 10 to 50 % CO₂ in Nitrogen
- 5 to 2000 ppm of Benzene, Toluene, xylene & its isomers in Nitrogen
- O₂, CO and CO % in Nitrogen
- PPB levels of NO, SO₂, Methane, BTEX each in Nitrogen
- Other customized Calibration Gas Blends

Traceability Standards

- To meet customer and regulatory requirements for analytically
- Traceable calibration mixtures, Chemtron offers Standards, which are analytically certified directly against NIST SRMs with accuracy of min. +/-1%, within a comprehensive quality system

Most Common Components used

- AMMONIA (NH₃)
- CARBON DIOXIDE (CO₂)
- HYDROGEN SULFIDE* (H₂S)
- METHANE* (CH₄)
- NITRIC OXIDE* (NO)
- CARBON MONOXIDE* (CO)
- OXYGEN (O₂)
- PROPANE (C₃H₈)
- SULFUR DIOXIDE* (SO₂)
- VARIOUS MERCAPTANS
- BTEX
- 55 to 60 Hydrocarbon components for Ozone Precursor Gas Std.

"NIST Traceability"



Cylinder Package

SN	W/C	MOC	Max W/P	Gas Vol.	Valve
	Liters		Kg/Cm ² /Psi	Liters	
1	47	Steel	150/2175	7000	BS4/BS3
2	35	Aluminum	150/2200	5250	BS4/BS3
3	20	Aluminum	150/2200	3000	BS4/BS3
4	10	Aluminum	140/2030	1400	BS4/BS3
5	10	Steel	150/2175	1500	BS4/BS3
6	3	Steel	120/1740	360	BS4/BS3
7	3	Aluminum	120/1740	360	BS4/BS3
8	1.6	Aluminium	70/1000	112	C10

Chemtron offers wide range of speciality Gasequipment including Pressure regulator designed especially for Speciality Gas Mixtures

We recommend to use Double Stage SS 316 Pressure regulator for above gases



* On Demand CGA and DIN Valve can be supplied

CALIBRATION GAS STANDARDS & SAMPLING BOTTLES FOR DGA/TOGA

Equipment & Gas Standards for Dissolved Gas Analysis of Transformer Oil

Transformer Oil Sampling Bottles

SN	Volume ml	Length mm	Diameter mm	Weight Kgs
1	500	300	89	1.5
2	1000	400	89	1.9
3	1500	500	89	1.5
4	2000	570	89	1.9
5	2500	670	89	1.5

Features

- Made from SS316 Schedule PIPE & Caps
- Pressure Tested by Inert Gases
- Needle Valves Pressure Rating -3000 PSI
- Hydrogen Loss maximum 5% per week
- Supplied with on demand 1 meter Flexible Tube and Carrying Handle



CALIBRATION GAS STANDARD FOR DISSOLVED GAS ANALYSIS

Application

Calibration of GC with FID and TCD
Portable Gas Analyzer for DGA

Gas Mix

PPM of Hydrogen, Methane, Ethylene, Ethane, Acetylene,
Carbon Monoxide, Carbon Dioxide, Oxygen, Nitrogen
Balance Argon

Types

5 ppm, 10 ppm, 100 ppm, 500 ppm and 1000 ppm
of Hydrocarbons

Traceability

Gas Mixtures is filled by Gravimetric Method and weights and
and scale balances used are traceable to NPL-UK

Cylinder Types

3 liter or 10 Liter Aluminum or Carbon Steel Cylinders
We also offer Portable 0.5 Liter Cylinder with Mini Pressure Regulator



Chemtron offers wide range of speciality Gas equipment including Pressure regulator designed especially for Speciality Gas Mixtures

We recommend to use Double Stage SS 316 Pressure regulator for above gases with 10 liter Cylinders

CALIBRATION GAS STANDARDS FOR CDQC

Calibration Gas Standards for Carbon Dioxide Quality Check Analyzers

Standards for Total Hydrocarbon Impurities

- Std #1** 20 to 80 PPM Methane /Propane
Balance Carbon Dioxide or Nitrogen
- Std #2** 20 to 30 PPM Methane, Ethane, Ethylene,
Propane, Propylene, i-Butane, n-Butane,
i-Pentane, n-Pentane, Butenes,
1-Pentene, n-Hexane
Balance Nitrogen

Accuracy : +/-2 Stability : 18 Months

Standards for CO/NO and NH3 Analyzer

- Std #1** CO:1 to 4 PPM Balance CO2
- Std # 2** NO: 1 to 4 PPM Balance CO2
- Std #3** NO: 100 to 250 PPM Balance Nitrogen
- Std #4** Ammonia: 1 to 4 PPM Balance Nitrogen

Standards for Oxygen Analyzer

- Std #1** 20 to 40 PPM of Oxygen Balance CO2

Standards for Trace Sulphur Analyzer

- Std #1** 100 to 500 PPB Carbonyl Sulphide
Balance Carbon Dioxide
- Std# 2** 5 to 10 PPM Hydrogen Sulphide
Balance Nitrogen
- Std# 3** 500 PPB Each of Hydrogen Sulphide,
Carbonyl Sulphide and Mercaptans
in Balance Nitrogen Or Helium

Accuracy : +/- 3 to 10% Stability: 12 months

Standards for Aromatics & Oxygenates Impurities

- Std #1** 80 to 100 PPB of Benzene, 1 to 10 PPM
of Methanol & 150 to 500 PPB
of Acetaldehyde Balance Nitrogen
- Std # 2** 5 to 10 PPM Each of Methanol &
Ethanol in Nitrogen
- Std #3** 100 PPB Each of Benzene, Toluene, Xylene,
Ethyl Benzene, 10 ppm of Methanol and
200 PPB of Acetaldehyde in Balance Nitrogen

Other feasible combination standards can be prepared as per requirement

SN	W/C	MOC	Max W/P	Gas Vol.	Valve
	Liters		Kg/Cm2 /Psi	Liters	
1	47	Steel	150/2175	7000	BS4/BS3
2	35	Aluminum	150/2200	5250	BS4/BS3
3	20	Aluminum	150/2200	3000	BS4/BS3
4	10	Aluminum	140/2030	1400	BS4/BS3
5	10	Steel	150/2175	1500	BS4/BS3
6	3	Steel	120/1740	360	BS4/BS3
7	3	Aluminum	120/1740	360	BS4/BS3
8	1.6	Aluminium	70/1000	112	C10



- Chemtron offers wide range of speciality Gas equipment including Pressure regulator designed especially for Speciality Gas Mixture
- We recommend to use Double Stage SS 316 Pressure regulator for above gases

PRESSURE REGULATORS



Double Stage /Single Stage - SS

- Inlet Pressure: 0 - 280 Bar or Kg/Cm2
- Outlet Pressure : 0 - 16 Bar or Kg/Cm2
- MOC: Body SS316
- Pressure Gauges: 2" Dial SS316
- Seat: SS316 ■ Diaphragm: SS316 ■ Relief Valve: SS316 ■ Seat Packing: PTFE
- Number of Ports: 6 ■ Port Size: 1/4" NPT F
- Flow Capacity, Cv : 0.6 ■ Helium Leak Rate : 1x10(-6) ■ Flow Rate : 0 – 200 LPM



Double Stage / Single Stage SS High Pressure Piston Type

- Inlet Pressure: 0 - 400 Bar or Kg/Cm2
- Outlet Pressure: 0 - 400 Bar or Kg/Cm2
- All Wet Parts MOC:SS316
- Number of Port : 6
- Port Size: 1/4" NPT F
- Outlet Flow: 100 to 800 LPM



Flow Regulators

- Fixed Flow Regulator (SS/Brass) – 0.5LPM , 1LPM, 1.5LPM, 2 LPM
- Variable Flow Regulator (SS) with flow meter (0-1.5LPM)
- Demand Flow Regulator (SS)



C10 Valves

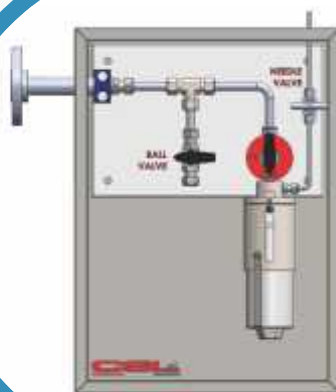
- For Disposable /Portable Calibration Gas Cylinders
- MOC: SS /Aluminium ■ Inlet Connection : 1" -14UNF / ¼" NPTM

PROCESS SAMPLING SYSTEMS



Closed Type Sampling System With Sample Cooler

Sampling Systems for Hazardous or Toxic Liquids

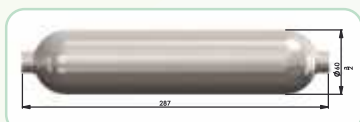


Sampling Systems for LPG & Flashing Liquids

SAMPLING CYLINDERS & ACCESSORIES



Sampling Cylinder – 300 cc



Sampling Cylinder – 500 cc



Sampling Cylinder – 1000 cc

SAMPLING CYLINDERS

Sr. no.	Capacity	Design pressure (PSI)	End Connections
1	300 cc	1800	NPTF ¼" or ½"
2	300 cc	5000	NPTF ¼" or ½"
3	500 cc	1800	NPTF ¼" or ½"
4	500 cc	5000	NPTF ¼" or ½"
5	1000 cc	1800	NPTF ¼" or ½"
6	1000 cc	5000	NPTF ¼" or ½"

- MOC: SS 316 / INCONEL / MONEL / OTHER ALLOYS

- SPECIAL COATING : SULFINERT/TEFLON (INTERNAL)

- Type 1 – Welded : Welded With End Caps

- Type 2 - Formed Spun (Seamless)



QUICK RELEASE COUPLINGS

- Pressure Ratings: 3000 PSI / 5000 PSI
- Connection : NPT / Tube
- Seat Material : Viton/Teflon/Buna N



NEEDLE VALVES

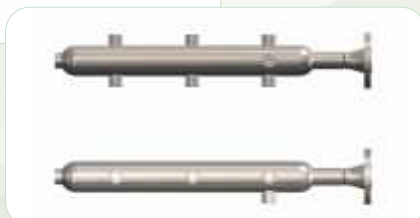
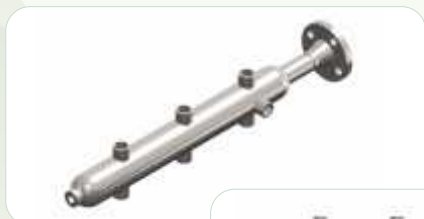
- Pressure Ratings: 3000 PSI / 5000 PSI
- Connection : Tube / NPT /BSP
- Seat Material : Viton/Teflon/Buna



CONDENSATE POT

Features:

- MOC: SS316/L
- High/Low Pressure Rating Options
- Available in 0.5L to 5 L
- Exotic Materials like INCONEL / MONEL
- Designed to ASME VIII Div I
- Available for Connection of ¼" NPT , ½" NPT, ¼" BSP & ½" BSP



AIR HEADER MANIFOLDs

Features:

- MOC: SS316/L
- High/Low Pressure Rating Options
- Exotic Materials like INCONEL / MONEL
- Designed to ASME VIII Div I
- Inlet Connection – Flanged (Raised Face or Ring Type)
- Available for Connection for Drain & Distribution Ports of ¼" NPT , ½" NPT, ¾" NPT, ¼" BSP & ½" BSP & ¾" BSP
- Ball Valves of Suitable Sizes are available

HUBS & DISTRIBUTORS



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