



WHO WE ARE:

A Premier Global Manufacturer of Certified Reference Materials for the Hydrocarbon, Natural Gas, Refining, Chemical and Biofuels Industries.

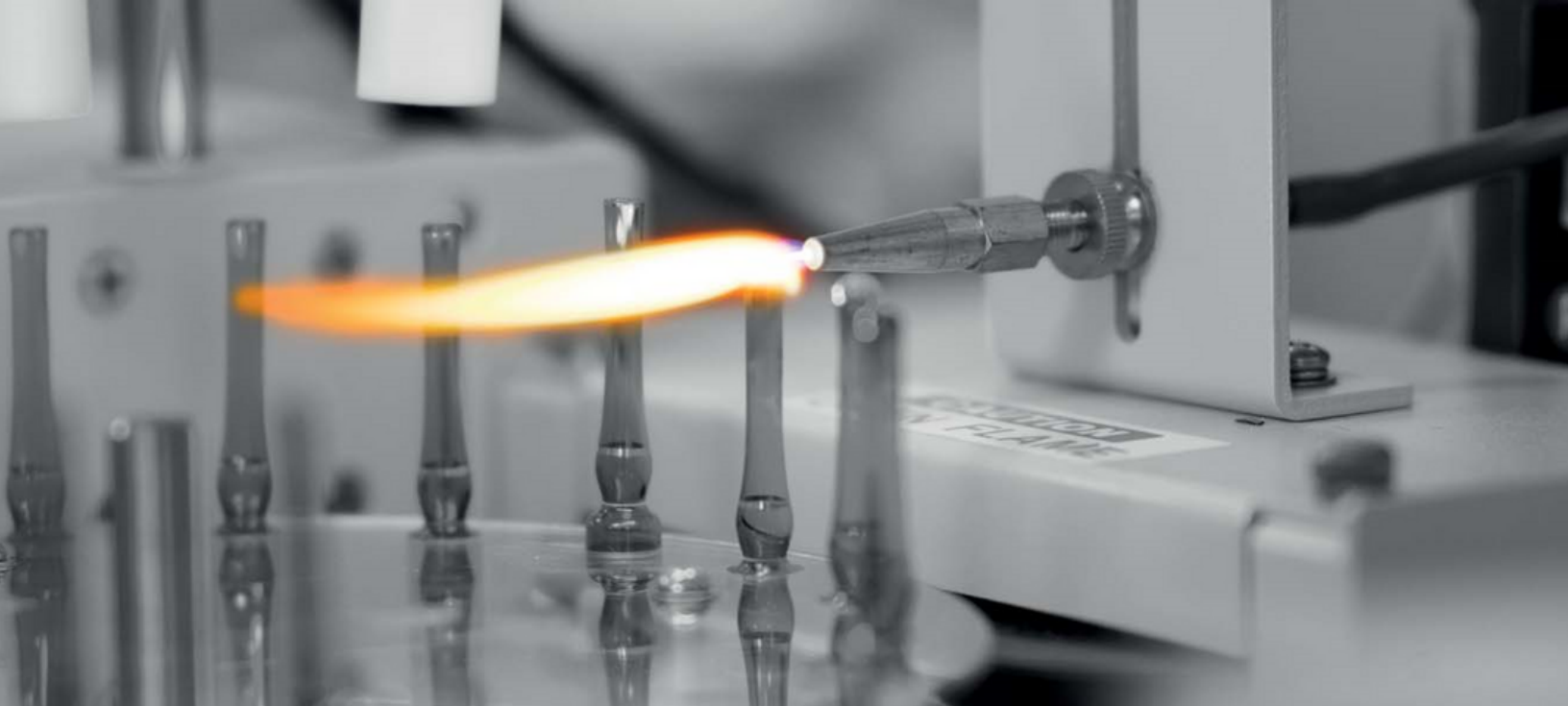
MEASUREMENT & METROLOGY – WHY IT MATTERS

At DCG Partnership, reference materials are manufactured using processes and techniques to yield high quality, precision and accurate materials for our customers. We do not produce any standard that we cannot analytically verify in our lab.

WHAT WE OFFER:

- CALIBRATION REFERENCE MATERIALS IN CYLINDERS
- CALIBRATION REFERENCE MATERIALS IN AMPOULES
- PROFICIENCY TESTING PROGRAMS (PTP)
- REGULATORS & SWITCHOVER MANIFOLD SYSTEMS
- CYLINDERS
- HEATED PRODUCTS
- CUSTOM REFERENCE MATERIALS & SPECIALTY MIXES





For over 30 years, DCG Partnership 1, LTD. (DCG) has been delivering best-in-class certified reference materials (CRMs) and reference materials (RMs) to the petroleum, petrochemical, chemical and natural gas industries. Headquartered in Pearland, Texas, our diverse customer base includes leading domestic and global energy companies who regularly confront a wide variety of technical, commercial, and regulatory challenges. Customers rely on DCG products – along with the deep expertise and experience of DCG personnel – to help meet quality and commercial demands for their processes and product streams.

Staying true to our quality roots we are an accredited laboratory with more than 60+ methods on our scope for both ISO 17025 (analytical laboratory) and ISO 17034 (manufacturing) certified reference materials. In 2021, DCG added ISO 17043 (proficiency testing) as an accredited provider for proficiency testing. DCG also provides a variety of reference materials, custom blends, regulators and cylinders, and heated products.

Elevate your standards by partnering with us today.



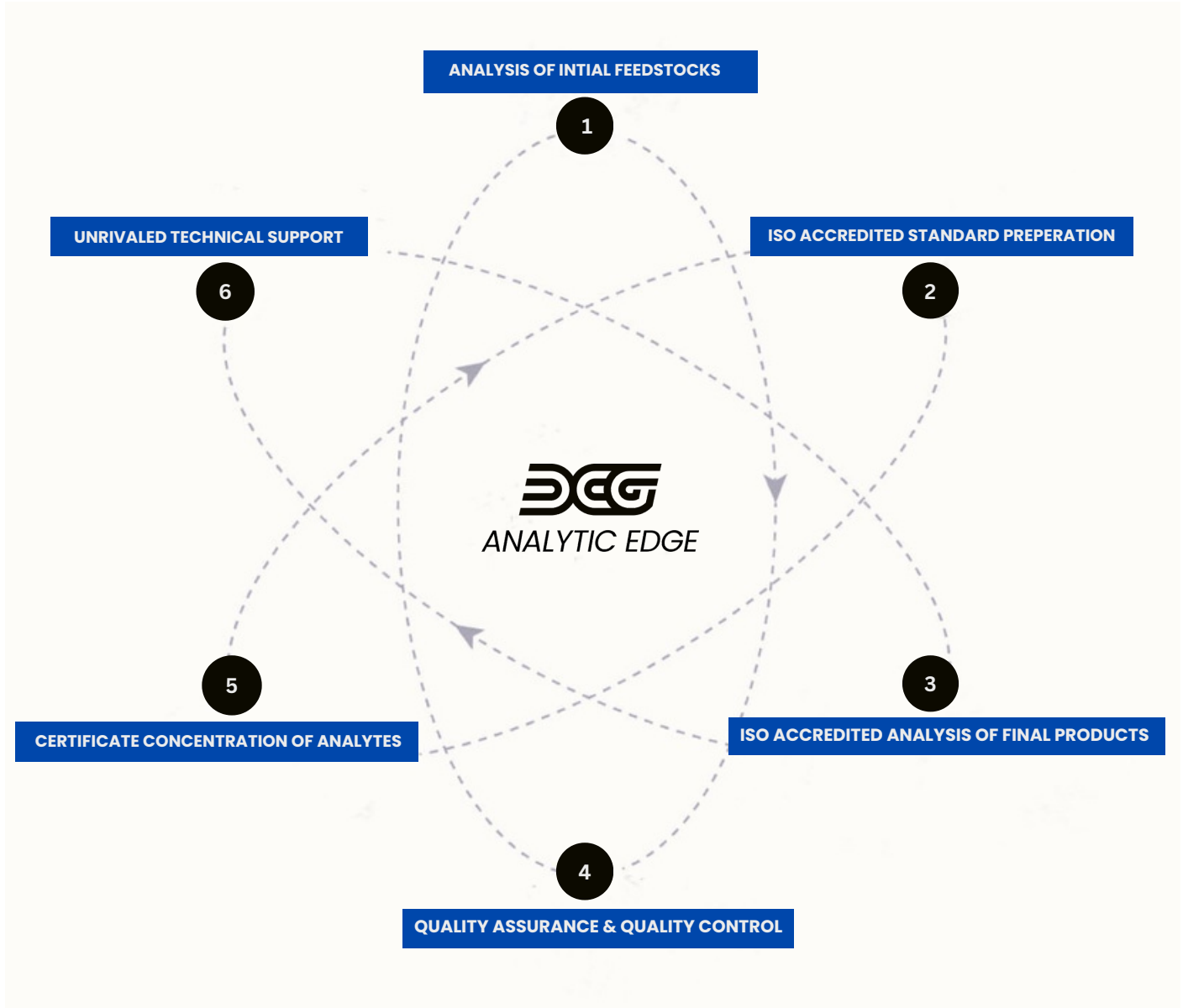


ANALYTIC EDGE

MEASUREMENT AND METROLOGY

The DCG ANALYTIC EDGE includes:

- Analysis of initial feedstocks – purities and impurities of feedstock
- ISO accredited standard preparation – prepared gravimetrically.
- ISO accredited analysis of final products – certified reference materials are analyzed per ISO 17025 accredited methods.
- Quality assurance and quality control – consistent performance and continuous improvement to achieve the highest quality products and analyses possible.
- Certificate of product concentration of analytes – gravimetric preparation, analytical verification, and quality assurance protocols
- Unrivalled technical support – understand customer needs and provide solutions that work.



Acetaldehyde in LPG

Refinery Gas Reference Materials

- Custom Refinery Gas Standards
- Refinery Gas Standards with Hydrogen Sulfide
- Refinery Gas Standards # 1, 2, 3, 5 & 7 in one-liter refillable cylinders

Butane/Gasoline Reference Materials

1,3-Butadiene Reference Materials

- Refined and Crude BD

Butane/Propane and Butane Reference Materials

- C4's with Olefins
- Mixed C4's
- High Purity iC4
- High Purity nC4

Ethane Reference Materials

- Custom ethane mixes
- CO, CO2 in ethane

Ethane/Propane (E/P) and Ethylene Reference Materials

- CO, CO2, Ethylene
- High Purity Ethylene
- Hydrogen/Ethylene
- Oxygen/Nitrogen/Ethylene

Hexanes Plus Fractions (gravimetrically prepared and verified by one or more analytical techniques)

- Hexanes Plus NP: Designed for C6+ backflush applications for which the desired C6+ breakdown is 69.5% C6, 23% C7, 6% C8, 1.5% C9
- Hexanes Plus CE: Designed for C6+ backflush applications for which the desired C6+ breakdown is 45% C6, 35% C7 & 20% C8
- Hexanes Plus BF: Designed for C7+ backflush applications and contains six C6s, C7, C8, C9, C10
- Hexanes Plus EX: Designed for extended analysis applications, contains 50+ compounds from C6 – C10
- Other Hexanes Plus

Liquefied Petroleum Gas Reference Materials

- Custom Reference Materials

Low Level Oxygenate Reference Materials

- In n-Butane
- In Isooctane
- Other matrices upon request

Methane/Hydrogen Reference Materials

Natural Gas Reference Materials

- Containing Hydrogen Sulfide
- Containing Carbon Dioxide (including high concentrations)
- Containing Ethane (including high concentrations)
- Containing Hexanes Plus Backflush
- Containing Hexanes Plus Extended Analysis
- BTU Reference Materials
- Specific Gravity Reference Materials
- BTEX Reference Materials
- NG Standards 1, 2 & 3 available in 1L, LP2.5, LP5 and LP239 refillable cylinders

Natural Gas Liquid Reference Materials

- NGL # 5 & 6 Y-Grade
- E/P Reference Materials
- Condensate Reference Materials
- Hexanes Plus NP: Designed for C6+ backflush applications for which the desired C6+ breakdown is 69.5% C6, 23% C7, 6% C8, 1.5% C9
- Hexanes Plus CE: Designed for C6+ backflush applications for which the desired C6+ breakdown is 45% C6, 35% C7 & 20% C8
- Hexanes Plus BF: Designed for C7+ backflush applications and contains six C6s, C7, C8, C9, C10.
- Hexanes Plus EX: Designed for extended analysis applications, contains 50+ compounds from C6 – C10
- Other Hexanes Plus
- Custom Reference Materials

Nitrogen Reference Materials

Total Organic Nitrogen Reference Materials

- Gas Phase (N2, He, C1, C2, Ethylene, C3, Propylene Matrices)
- Liquid Phase (LPG & Liquid Hydrocarbon Matrices)

Speciated Organic Nitrogen Reference Materials

- Gas Phase (N2, He, C1, C2, Ethylene, C3, Propylene Matrices)
- Liquid Phase (LPG & Liquid Hydrocarbon Matrices)

Oxygen in Nitrogen or Helium

- ppm to % levels

Propane/Propylene and Propylene Reference Materials

- Low CO, CO2, Propylene
- Low O2, H2, N2, Propylene
- H2S, COS, Propylene
- Methanol/ Propylene
- High purity Propylene

Propane Reference Materials

- Propane with Olefins
- High Purity Propane

Refinery Gas Reference Materials

- RFG standards 1, 2, 3, 5, & 7 available in 1L, LP2.5 and LP5 refillable cylinders
- Refinery Gas Reference Materials with Hydrogen Sulfide

Sulfur Reference Materials

Total Sulfur Reference Materials

- Gas Phase (N2, He, C1, C2, Ethylene, C3, Propylene Matrices)
- Liquid Phase (LPG & Liquid Hydrocarbon Matrices)

Speciated Sulfur Reference Materials

- Gas Phase (N2, He, C1, C2, Ethylene, C3, Propylene Matrices)
- Liquid Phase (LPG & Liquid Hydrocarbon Matrices)

Total Fluoride in n-Butane

- ≥ 2 ppm Total Fluoride from 2-Fluoropropane in n-Butane by weight
- Other matrices upon request

Custom Standards available upon request



REFERENCE MATERIALS IN AMPOULES

ANALYTIC EDGE

Ampoule Reference Materials for Sulfurs	
ASTM D2622	Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry
ASTM D3120	Trace Quantities of Sulfur in Light Petroleum Hydrocarbons by Oxidative Micro Coulometry
ASTM D3246	Sulfur in Petroleum Gas by Oxidative Micro Coulometry
ASTM D4045	Sulfur in Petroleum Products by Hydrogenolysis and Rateometric Colorimetric
ASTM D4294	Sulfur in Petroleum and Petroleum Products by Energy Dispersive X-Ray Fluorescence Spectrometry
ASTM D4735	Trace Thiophene in Refined Benzene between 0.5- 5.0 ppm by FPD
ASTM D5453	Total Sulfur in Light Hydrocarbons, Motor Fuels & Oil by Ultraviolet Fluorescence
ASTM D5623	Sulfur Compounds in Light Petroleum by GC & Sulfur Selective Detection (also available in cylinders)
ASTM D6212	Total Sulfur in Aromatic Compounds by Hydrogen analysis and Rateometric Colorimetry
ASTM D6313	Total Sulfur in Aromatic Compounds by Hydrogen analysis and Sulfur Specific Difference Photometry
ASTM D6334	Sulfur in Gasoline by Wavelength Dispersive X-Ray Fluorescence
ASTM D6428	Total Sulfur in Liquid Aromatic Hydrocarbons and their Derivatives by Oxidation Combustion & Electrochemical Detection
ASTM D6445	Sulfur in Gasoline by Energy-Dispersive Fluorescence Spectrometry
Ampoule Reference Materials for Nitrogens	
ASTM D4629	Trace Nitrogen in Liquid Petroleum Hydrocarbons by Syringe/Inlet Oxidation Combustion and Chemiluminescence Detection
ASTM D5762	Nitrogen in Petroleum and Petroleum Products by Boat-Inlet Chemiluminescence
ASTM D6069	Trace Nitrogen in Aromatic Hydrocarbons by Oxidation Combustion & Reduced Pressure Chemiluminescence Detection
ASTM D6366	Total Trace Nitrogen and its derivatives in Liquid Aromatic Hydrocarbons by Oxidative Combustion & Electrochemical Detection
Ampoule Reference Materials for Oxygenates	
ASTM D4815	Determination of MTBE, ETBE, TAME, DIPE, tertiary-Amyl Alcohol and C1 to C4 Alcohols in Gasoline by GC
ASTM D5599	Determination of Oxygenates in Gasoline by Gas Chromatography and Oxygen Selective Flame Ionization Detector
	Low Level Oxygenate Standard
Custom Reference Materials available upon request	





PROGRAMS & ACCREDITATIONS

ANALYTIC EDGE

PROFICIENCY TESTING PROGRAMS (PTP)

DCG Partnership will help custom design your proficiency test program for inter-laboratory and intra-laboratory applications.

Ampoule Reference Materials

- Total Sulfur
- Sulfur Speciation
- Total Nitrogen
- Nitrogen Speciation
- Oxygenates
- Aromatics
- Olefins
- Petrochemical GC
- Petrochemical GC-MS
- Chloride
- Fluoride
- Amines in Water
- Methanol in Biodiesel
- Total Acid Number
- Pour Point
- Cloud Point
- Pure Hydrocarbons for:
 - Vapor Pressure
 - Distillation
 - Flash Point

Accessories

- Braided stainless steel pigtails
- Stainless steel tubing
- CGA connections & fittings
- Cylinder bench brackets & floor stands
- Flowmeters

Safety Accessories

- Cylinder Carts
- Brackets
- Stands

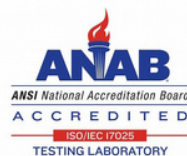
ISO ACCREDITATIONS

DCG Partnership has formed a strategic partnership with ANSI National Accreditation Board (ANAB) and has been approved for and maintains accreditation to ISO 17025, ISO 17034 & ISO 17043 standards, demonstrating technical competence for reference material (RM) production, testing, and as a provider of proficiency testing programs.

These accreditations affirm the commitment of DCG Partnership to its customers to consistently produce high quality products by developing materials using the most stringent standards recognized worldwide, equipping laboratories with the certified reference materials (CRM) and reference materials (RM) required to be successful.

For accreditations visit:

<https://dcgpartnership.com/iso-accreditations/>



Brass Regulators

- Single stage & double stage with brass barstock body and 316L stainless steel diaphragm
- Single stage & double stage with chrome-plated brass forged body with 316L stainless steel diaphragm
- In-line regulator with brass barstock body and 316L stainless steel diaphragm
- Lecture bottle regulators
- Regulators for one-liter steel cylinders

Stainless Steel Regulators

- Single stage & double stage with 316L stainless steel barstock body and 316L stainless steel diaphragm
- In-line regulator with stainless steel barstock body and 316L stainless steel diaphragm
- Lecture bottle regulators
- Regulators for one-liter aluminum cylinders
- Vaporizing regulator, single stage stainless steel
- Specialty regulators/application

Automatic Switchover Manifold Systems Brass and 316L Stainless Steel Components

- Automatic Switchover System with pressure switches and brass components with or without remote alarm
- Automatic Switchover System with pressure switches and 316L stainless steel components with or without remote alarm
- Automatic Switchover System with pressure transducers with brass and 316L stainless steel components with or without remote alarm
- Protocol Switchover Station
- Automatic Switchover System, liquid primary with high pressure reserve and brass components
- Automatic Switchover System, liquid primary with high pressure reserve and 316L stainless steel components
- Automatic Switchover System with brass components with or without tee purge valves
- Automatic Switchover System with 316L stainless steel components with or without tee purge valves

Accessories

- Braided stainless steel pigtails
- Stainless steel tubing
- CGA connections & fittings
- Cylinder bench brackets and floor stands
- Flowmeters

CYLINDERS

Aluminum, High Pressure with tapered threads

- 1 AL (1 Liter Aluminum) with aluminum CGA 170 valve, 3.2" X 12", 4 lbs.
- AL 30: 7.25" X 21", 20 lbs.
- AL 80: 7.25" X 40", 40 lbs.
- AL 150: 8" X 53", 60 lbs.

Steel, High Pressure with tapered threads

- Size 200: 9" X 56", 120 lbs.
- Size 300: 9.25" X 60", 135 pounds

Low Pressure Steel with tapered threads

- LP 2.5: 8" X 18", 20 lbs.
- LP 5: 12" X 18", 20 lbs.
- LP 239: 15" X 48", 75 lbs.

Constant Pressure Cylinders

- 300 cc Constant Pressure Cylinder
- 500 cc Constant Pressure Cylinder
- 1000 cc Constant Pressure Cylinder
- Carry Case for Constant Pressure Cylinders

CGA Fittings for Valves Safety Accessories

- Cylinder Carts
- Cylinder Brackets
- Cylinder Stands





HEATED PRODUCTS

ANALYTIC EDGE

- Heated Blankets (insulation jackets for gas cylinders)
- Heat Trace Lines
- Heated Sample Transfer Lines
- Master Temperature Controller box (MTC) and Constant Pressure / Constant Volume Cylinder Heat Blankets

CUSTOM REFERENCE MATERIALS AND SPECIALTY MIXES

Custom reference materials and specialty gas solutions are gravimetrically prepared via ISO 17034 manufacturing practices and analyzed on state-of-the-art instrumentation with analytical techniques applied specifically for the properties of the material.

Feedstocks are procured with tight specifications and verified by both documentation and analysis. Detailed impurities are quantified and used by the blending chemists to calculate gravimetric blends.

Gravimetric blends are prepared and analyzed versus quality control specifications based on each individual mixture. Each step of the DCG manufacturing process contains proprietary techniques refined during our 30+ years' experience of reference material and specialty gas manufacturing and analysis.

DCG manufactures many gas and liquid phase reference materials and specialty mixes to meet the specific needs of our customers. We pride ourselves on our ability to partner with our customers to create unique, practical solutions that fit customers' needs.

Our technical team consists of various analytical backgrounds and partners with customers to:

- Define the need.
- Scope the project
- Research and propose possible solutions.
- Select the best solution.
- Create the reference material.
- Analyze the reference material.
- Verify our internal results.
- Validating the "fit for purpose" with the customer.

It is our Mission to ensure the quality, accuracy and precision of the calibration and verification reference materials utilized by our customers at an affordable price. Responding to the need of our customers to have superior quality and affordable reference materials, DCG has created bundled packages to reduce the overall cost. It is our goal to support our customers' needs and meet the growing demand for accurate results at reduced levels of quantitation.

For Sales Inquiries:

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ANALYTIC EDGE

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