

# Innovative gas supply solutions for analytical applications



## High purity, cost-effective industrial gas supply for uninterrupted operations

### Air Products' gas offerings for the analytical market

- Carrier gases
  - BIP helium, hydrogen, nitrogen
- ICP plasma gases
  - CryoEase argon, nitrogen
- Gases for general use
  - CryoEase nitrogen

### Applications

- Nuclear Magnetic Resonance (NMR)
- XRF spectrometers
- ICP-OES spectrometers
- ICP-MS spectrometers
- Electron microscopes
- Gas chromatographs
- GC-MS
- Atomic absorption spectrometers
  - Graphite
- Furnace purging and blanketing



A busy laboratory has numerous analytical gas requirements, for example, high purity gases for sensitive analysis or uninterrupted gases for continuous 24x7 gas usage.

Most laboratories are facing space constraints, therefore storing and changing the empty cylinders or managing the inventory can be a headache. Air Products' innovative CryoEase® Service is the perfect answer for these users – it matches the purity and reliability of cylinders or dewars, but in a more convenient format. A small cryogenic liquid tank is installed on site to eliminate the frequent cylinder change-out with your original supply system. Our stringent quality control of gas filling and use of equipment ensures the quality of gas which is being used by your expensive analytical instruments.

If you need higher purity gases for trace or sensitive analysis, Air Products' award winning BIP® purification technology with a unique Built-in Purifier enables you to use argon, nitrogen and helium that are up to 300 times purer than conventional 5.0 grade cylinder gases. With impurity levels as low as 10ppb oxygen and 20ppb moisture, BIP gases help avoid damaging the lifespan of laser equipment for better operation.



## Benefits of CryoEase N<sub>2</sub> or Ar

- **Cost effective**
  - High purity gas for large volume usage at economical prices
- **Guaranteed purity**
  - Gas comes directly from the plant with less handling
  - Good purity level for ICP and nitrogen carrier gases
- **Safer**
  - Fewer high pressure cylinders
  - No changing of valves and regulators
- **Ideal for limited space**
  - Unique onsite liquid storage with small footprint
- **Continuous gas supply**
  - Eliminates the need for daily cylinder changes
  - Automatic top up system via telemetry\*

\*optional

## Benefits of BIP He, Ar, N<sub>2</sub>

- **Guaranteed purity brought by our unique Built-In Purifier**
  - No cross contamination
  - Residual moisture and oxygen are purified
  - Even gas purity throughout
  - Low impurity level ensures longer equipment lifespan for GC column and detectors
  - Ideal for trace analysis of PPB or PPT thanks to the very low impurity level of oxygen and moistures
- **Cost effective**
  - Very low impurity level comparable to 6.0 grade gases at lower cost

## Flexible supply options to suit the needs of different volumes and space

Small volume

Large volume



Cylinder



Cylinder pack



CryoEase Service



Liquid bulk

## Need a customized calibration gas mixture?

### Air Products can offer...

Air Products blends gas mixtures from 2 to 80 components, from percentage level to parts per billion (PPB) or parts per million (PPM) level, for you to calibrate your equipment for optimal performance to meet all your quality control and regulatory compliance needs.

Our analytical gas supply solutions are suitable for many industries from: petrochemicals, automotive, to environmental and electronics.

For more information, please contact us at:

### Malaysia

Air Products Malaysia Sdn Bhd  
 Lot 54, Jalan Sungai Besar 26/7  
 Seksyen 26 (HICOM Sector B)  
 40000 Shah Alam  
 Selangor, Malaysia  
 T +603 5191 1836 (General enquiries)  
 T +603 5101 8785/  
 +603 5101 8624 (Sales enquiries)  
 F +603 5191 1832  
 mymktg@airproducts.com

### Singapore

Air Products Singapore Industrial Gases Pte Ltd  
 2 International Business Park  
 #03-20 The Strategy  
 Singapore 609930  
 T +65 6494 2240 (General enquiries)  
 T +65 6494 2173/  
 +65 6494 2296 (Sales enquiries)  
 F +65 6334 1005  
 mysgmkt@airproducts.com

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