

# Mobile Analytical Services (MAS)



## Overview

- Our MAS team is ISO9001 certified for 'Purity analysis of Industrial Gases', assuring consistent performance and independent 3rd party validation
- Mobile Analytical Chemists trained to operate throughout Europe – allows a fast and efficient response
- Dedicated analytical services team located in central UK, focused on supporting the high technology manufacturing industries
- Over 120 customers already relying on Air Products' mobile analytical services
- Specialised in supporting industries such as: engineering; bulk chemical; laboratories; welding; military; energy.
- With over 50 years of analytical chemistry experience within the team
- Air Products industry leadership in safety, drives the highest confidence in our work procedures
- Standard services and custom solutions are available
- Air Products' MAS routine testing services are an alternative to costly permanent onsite analytical equipment

**Air Products' Mobile Analytical Services (MAS) offering is a state-of-the-art, laboratory supported, on-site testing service for Industrial Gases. Analysis provided from full purity down to trace-levels of impurities.**

MAS are an integral part of the Air Products – APEX (Purging Services) and Customer Engineering operations which gives direct access to advanced analytical equipment, wider engineering capabilities, safety training and operational experience.

Founded in 1940, Air Products is a world-leading Industrial Gases company. The Company's core industrial gases business provides atmospheric and process gases and related equipment to manufacturing markets, including refining and petrochemical, metals, electronics, and food & beverage. Air Products is also the world's leading supplier of liquefied natural gas process technology and equipment.

## Specialist High Technology industries (electronics/semiconductor, military, nuclear, aerospace, etc.)

### Minimise contamination, maximise yield

- Air Products provides state-of-the-art analysers able to meet the analytical requirements of the 'high-tech' manufacturer.
- System qualification – After construction, UHP gas lines must be purged and then analysed to prove cleanliness. Our mobile analytical services can perform this requirement, targeting the critical impurities: moisture; oxygen; hydrocarbons; particles etc.
- Process gas qualification – New installations are known to initially release contaminants, such as during purifiers/filters settling period. Our service is designed to validate the system using actual process gas under process conditions - or by temporary inert gas purging.
- UHP Gas system certification from source to the tool, to your specifications, utilising inert gas purging techniques and purifier/filter manifold technologies
- Analysis of trace impurities to low detection levels (ppt (part per trillion) levels if required)
- Utilisation of latest analysers ensures quality satisfaction at the lowest levels of detection demanded by the industry. Technologies available, include; Cavity Ring Down Spectroscopy (CRDS), Fourier Transform InfraRed (FTIR), Mass Spectrometry (MS) and Gas Chromatography (GC)

# Pharmaceutical/Medical

## Minimise contamination, maximise quality

Along with state-of-the-art analysers, Air Products has the experience to help with regulatory approval of gas systems.

- From % to ppt (part per trillion), Air Products' MAS is designed to fulfil gas analysis requirements for quality compliance
- Regulatory authorities are placing more focus upon quality assurance of all utilities that come into contact with a product. During the product manufacturing process, the full distribution system should be of concern and not just the gas source and especially the point of use.
- We are positioned to analyse your gas systems beyond the standards required by the major agencies (or as stated in the European and British pharmacopoeia's) at the point of use.
- Quality is assured by routine equipment calibration traceable to national standards, maintenance, servicing and procedures, all of which are controlled through our ISO certified systems with regular internal and external GMP and MHRA audits.
- Provide analysis services as part of your installation/operation/performance qualification (IQ, OQ, PQ) systems validation

Typical Impurities		Bulk Gas					
		Argon	Helium	Hydrogen	Nitrogen	Oxygen	Air
Moisture	H <sub>2</sub> O	√	√	√	√	√	√
Argon	Ar	Purity	√	√	√	√	√
Hydrogen	H <sub>2</sub>	√	√	Purity	√	√	√
Nitrogen	N <sub>2</sub>	√	√	√	Purity	√	√
Oxygen	O <sub>2</sub>	√	√	√	√	Purity	√
Hydrocarbons	C <sub>x</sub> H <sub>x</sub>	√	√	√	√	√	√
Carbon Dioxide	CO <sub>2</sub>	√	√	√	√	√	√
Carbon Monoxide	CO	√	√	√	√	√	√
Nitrogen Oxides	N <sub>x</sub> O <sub>x</sub>	√	√	√	√	√	√
Compounds	up to 200 amu	√	√	√	√	√	√
Particulates	0.1µm to 5.0µm	√	√	√	√	√	√

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# Capabilities

On-site range of analytical capabilities backed up by sample analysis at our Carrington 'Tracelab' laboratory, with the reassurance of ISO certification

- System qualification – thorough testing to provide certification of compliance
- Troubleshooting – quick response to gas related site issues
- Quality Assurance – ability to certify to customer requirements, backed by our ISO approved systems
- Custom Solutions – provide non-standard solutions, analysis and services
- Gas System Analytical Consultants – team of experts to work with our customers to offer advice prior to work being undertaken
- Air Products backed engineering solutions
- Assistance with regulatory validation requirements
- Independent third-party testing – provision of samples to additional Laboratory resources
- Sample collection done by fully trained Air Products MAS Chemists
- Gas quality Assays and Product Identification
- Air Sampling and analysis
- Custom applications

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