SCIENCE AND INDUSTRY
ANALYTICAL LABORATORIES

CryoService has many years experience in dealing with the organisations within the contract laboratory and general analytical markets and understands the ever changing demands put upon these companies, be this in terms of operational efficiencies, administration time, conformance to regulatory requirements or ensuring that laboratory space is maximised.

All of these need to be achieved without compromising quality and safety, whilst best value is always obtained.

With this in mind CryoService now has a suite of gases and products available to users, dependent upon their requirements. Typical examples of applications currently serviced are:-

- GC and GLC (Gas Chromatography and Gas Liquid Chromatography)
- ICP (Inductively Coupled Plasma)
- LC-MS (Liquid Chromatography Mass Spectrometry)

GASES

Argon

Typically used in ICP-OE and ICP-MS applications, CryoService has a wide range of liquid gas solutions which can be tailored to suit your needs. Features include:

- Storage vessels varying in size from 180 litres up to 6,000 litres capacity
- No down-times or run-outs, as associated with cylinders or cylinder packs when running large auto sampler batches. The storage vessel is permanently connected and even a small liquid argon vessel contains the equivalent of twelve traditional gas cylinders
- Managed cycle delivery schedule, which minimises user involvement. CryoService monitor usage and automatically adjust deliveries accordingly
- Mobile and static vessels supplied
- Removes the issue of manually handling high pressure cylinders

Nitrogen

Nitrogen is used in a wide range of applications, including GC and LC-MS. Our nitrogen offering is based upon two different technologies - for large high volume consumption there is a liquid vessel offering with the same features and benefits as our liquid argon range, or for smaller users there is our range of compact high purity generators. Our generators have the following features:

- Up to 3000ml/minute production capacity with 99.9995% purity
- Faststart system to ensure gas is produced within 30 minutes instead of 3-4 hours
- Rental of unit as standard, with integrated maintenance program
- PSA (Pressure Swing Absorption) technology utilised, which has a minimum life of 10 years, resulting in a more reliable generator with lower overall lifetime costs
- Economy and standby mode result in low operational costs and subsequently improve generator reliability

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CryoService
Gases for Science, Leisure and Industry

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Hydrogen

Heavily used as the fuel gas in GC applications, hydrogen can now be safely used as a carrier gas instead of helium due to our wide range of compact high purity generators. Our generators have the following features:

- Purity certification to 99.9995 as standard. (99.99999% available with purification kit)
- 200/400/600 ml/minute capability
- Patented Copper Nickel electrolytic cell, which is tolerant of water impurities
- No ongoing costs in replacing deionising bags
- High safety design due to low operating pressure (4 bar) and alarm levels within generator
- Safety shut off device as standard to prevent H2 leaks in the event of a GC column breakage
- Replaces manual handling and storage of high pressure, highly flammable cylinders

Hydrogen has many advantages over helium, not only from improved chromatography due to its high average linear velocity and flat van Deemter curve, but it is also more cost-effective and environmentally friendly than helium, which is extracted from diminishing natural gas sources. Laboratory generators use deionised water to produce hydrogen from an electrolytic process, providing a safe, clean, low cost and environmentally friendly solution.

Other Products and Services Available

- Personal Protective Equipment (PPE) – Glasses, Gloves, Aprons, Face Shields
- Health and Safety – CryoService can offer a range of services from advice on best practice in the design and storage of equipment using liquid nitrogen to full safety audits and a range of safety training courses (either classroom or internet based, dependent upon the users requirement)
- Free site audits to ensure customer sites have optimised delivery frequencies and appropriate on-site storage capacity in comparison to industry standards.

Overall

CryoService has a product offering for each laboratory type, from a single ICP-OE operating a few hours per day up to multi-departmental organisations carrying out both organic and inorganic analysis. With its experience and knowledge of laboratories we are able to provide cost-effective solutions to the traditional problems associated with laboratory gas supply.

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