



# Experis® Gas Mixtures

## High quality mixtures for accurate calibration

## Accurate, stable and traceable gas mixtures for complete peace of mind

The accuracy of your calibrated analysis equipment is essential to the quality of your products. What makes a difference to this accuracy is the calibration gases that you use to calibrate your instruments.

Air Products, a world-leading supplier of calibration gases, has been supplying high quality gas mixtures to the most demanding national laboratories, key gas metrology institutes and analytical equipment manufacturers for more than three decades. Combining the global expertise of our specialty gases Center of Excellence in Belgium with our local capabilities, we deploy world-class processes, equipment and techniques to serve customers in Southeast Asia. All our specialty gases facilities around the world are operated under a standardized state-of-the-art manufacturing and quality control system, with the same custom-built equipment, software and raw material sourcing process, offering complete peace of mind to customers.



**“Analytical equipment is improving in accuracy all the time – but even the best can’t be relied on without proper calibration.”**

**Ir. Peter Aernouts**  
Instrumentation Engineer  
Analytical Systems Elster-Instromet NV, Belgium

### Benefits of Experis gas mixtures

- Alignment with global and national standards with traceability
- Accurate analysis with uncertainties down to  $\pm 0.05\%$
- The lowest blend concentrations down to parts per billion (PPB) level
- Available from one to more than 70 components
- Stable mixtures with long shelf life (up to 10 years)
- Short delivery lead time with premix technology
- Lower delivery cost as gases are manufactured by a plant nearby



## World-class equipment, processes and techniques

- Standardized manufacturing and quality system around the globe
- State-of-the art environmentally-controlled calibration manufacturing hoods in “clean rooms”
- Gravimetric filling using highly accurate scales to minimize deviation
- Globally qualified raw material sourcing process
- Stringent cylinder sourcing policy for high quality cylinders
- Proprietary cylinder cleaning and preparation process to ensure gas purity
- A wide range of techniques including gravimetric, volumetric, premix, transmix and liquid blending



## Experis gas mixtures for diverse industries

Air Products offers four types of calibration mixtures:

Type	Details	Products	Industries
<b>Accredited mixtures</b>	Extremely high specifications for the most exacting applications. Gases are sent to third party accredited labs for verification	Mixtures accredited by Effectech UK	<ul style="list-style-type: none"><li>• Analytical &amp; Laboratories</li><li>• Automotive</li><li>• Chemicals &amp; Petrochemicals</li><li>• Detection &amp; Safety</li><li>• Electronics</li><li>• Engine Testing</li><li>• Environmental Control</li><li>• Food</li><li>• Forensic Science</li><li>• Gas Appliance Testing</li><li>• Natural Gas</li><li>• Pharmaceutical</li></ul>
<b>Calibration mixtures</b>	High accuracy certified mixtures for calibration of analyzer	<ul style="list-style-type: none"><li>• Environmental gases (SO<sub>2</sub>, NO<sub>2</sub>, H<sub>2</sub>S, etc)</li><li>• Automotive exhaust gases (SO<sub>2</sub>, NO<sub>2</sub>, H<sub>2</sub>S, etc)</li><li>• Detection and safety gases (50% UEL, e.g. 2% H<sub>2</sub>/N<sub>2</sub>)</li><li>• Petrochemical calibration mixtures (up to 35 components)</li></ul>	
<b>Electronics process mixtures</b>	Batch manufactured mixtures, with analytical verification of critical impurities, for electronics applications	<ul style="list-style-type: none"><li>• Electronics process gases (H<sub>2</sub>/N<sub>2</sub>)</li><li>• Analyzed high quality process mixtures used in production process like etching</li></ul>	
<b>Process mixtures</b>	Batch manufactured mixtures, using ultra high purity (UHP) gases as raw materials, for general process control applications	<ul style="list-style-type: none"><li>• Laser gas mixtures (CO<sub>2</sub> + H<sub>2</sub>, etc)</li><li>• Welding gas mixtures (CO<sub>2</sub> + Ar, etc)</li><li>• Leak testing gas mixtures (He + N<sub>2</sub>, etc)</li><li>• Heat treatment gas mixtures (H<sub>2</sub> + N<sub>2</sub>, etc)</li></ul>	



## Flexible and customized supply options

- Individual cylinders for calibration gases—for customized requirement
- Disposable mini cylinders for detector gases—for on-site measurement in safety and environment, etc
- 16-cylinder pallets for process gases—for larger volume
- A variety of 1L, 9L, 47L, 50L aluminum or steel cylinders
- A wide selection of valves and connection types

## Reliable service to bring you peace of mind

- Professional technical consultation on applications and gas usage
- Dedicated, specialist customer service and order management team
- Online APDirect Service for 24-hour access to critical information

### Case study: High quality calibration gas to save unnecessary CO<sub>2</sub> emissions tax

Power France emits 100,000 tons/year of CO<sub>2</sub>, and measures this with a low quality calibration gas with an uncertainty level of +/-2%. This means the CO<sub>2</sub> emitted could be erroneously measured to as high as 102,000 tons/year. With emissions tax at €55/ton, the company would have to pay €110,000 extra tax annually, which could be avoided by using a better quality calibration gas with lower uncertainty level.

For more information,  
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GENERATING A CLEANER FUTURE