



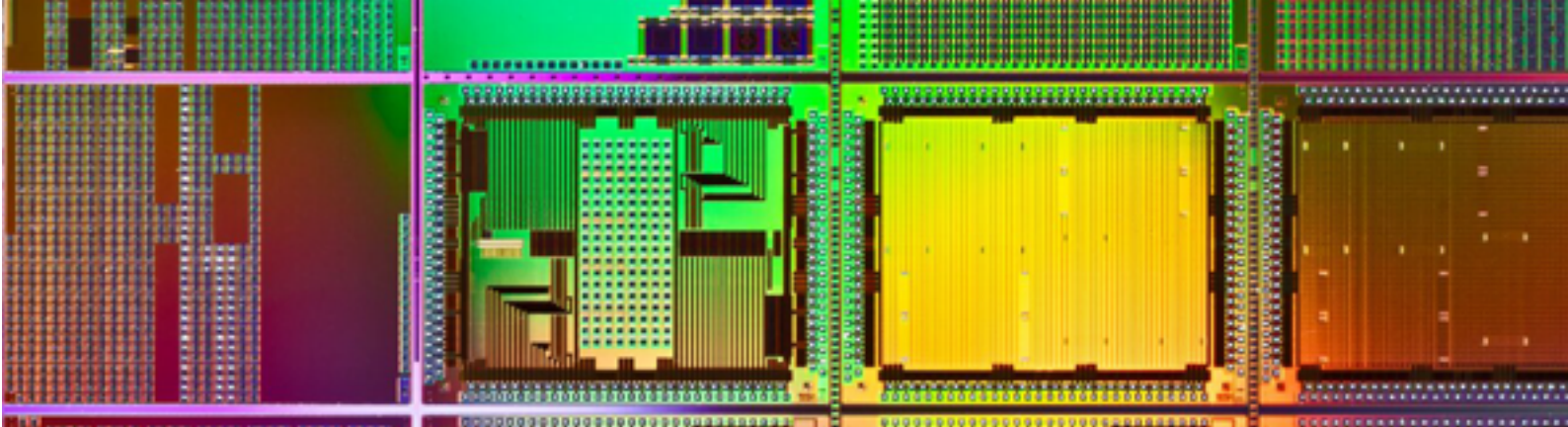
Qualification of UHP Gas Systems

SGS Gas Analysis Services (SGS GAS) has a vast knowledge of the gases industry. Our expertise in gas analysis testing and instrumentation facilitates our customers on a daily basis.

Unlocking the Potential of Your Semiconductor Fabrication Facility!

In the rapidly changing world of semiconductor fabrication, gas quality is not just important - it is paramount. Impurities lurking within gases can wreak havoc on process reactions, leading to yield issues that can impact profitability. Moreover, particles present in the environment can contaminate delicate wafers, causing defects that compromise product integrity.

GAS



At SGS GAS, we understand the high stakes involved in semiconductor fabrication. That is why we have developed a comprehensive mobile testing service specifically designed to qualify the top-of-the-line purification and filtration systems employed by semiconductor facilities worldwide.

Our mobile testing system is a game-changer, offering unparalleled versatility and reliability:

RESOURCES

Our mobile gas carts are equipped with advanced gas detection capabilities and hard-wired shutdown mechanisms for enhanced safety. Suitable for deployment in general areas, sub fabs, or clean rooms - wherever your facility needs us, we will be there. Each cart features an on board data collection system, empowering you with valuable trending capabilities to optimize system performance.

Our suite of analysers is tailored to meet the unique specifications of your facility and purification systems. A typical UHP gas cart includes:

- Peak Laboratories PP1-RCP: for trace detection of H₂ and CO.
- Peak Laboratories PP1-FID: for pinpointing trace levels of HCs, CO, and CO₂.
- Peak Laboratories PP1-PDHID: for precise measurement of trace N₂ and Ar.
- Servomex DF760: for accurate assessment of trace H₂O and O₂ levels.
- PMS HPGP or Laisair III: for detecting 0.1 micron particles with unparalleled precision.
- AeroTrak CPC9001: for capturing even the smallest 0.01 micron particles, ensuring your environment remains pristine.

These core services form the backbone of our commitment to delivering reliable and efficient solutions that optimize performance and ensure compliance with industry standards.

ANALYTICAL CAPABILITIES

Mobile equipment limit of detection:

Impurities	Matrix				
	Nitrogen	Argon	Oxygen	Hydrogen	Helium
Oxygen	45 ppt	45 ppt	N/A	45 ppt	45 ppt
Moisture	100 ppt	100 ppt	100 ppt	100 ppt	100 ppt
Methane	500 ppt	500 ppt	500 ppt	500 ppt	500 ppt
Non Methane HCs	800 ppt	800 ppt	800 ppt	800 ppt	800 ppt
Carbon Monoxide	300 ppt	300 ppt	300 ppt	5,000 ppt	300 ppt
Carbon Dioxide	800 ppt	800 ppt	800 ppt	800 ppt	800 ppt
Hydrogen	800 ppt	800 ppt	800 ppt	N/A	800 ppt
Nitrogen	N/A	3 ppb	3 ppb	3 ppb	3 ppb
Argon	5 ppb	N/A	N/A	5 ppb	5 ppb
Particulates	0.01 micron	0.01 micron	0.1 micron	0.1 micron	0.01 micron

ppt: parts per trillion
ppb: parts per billion

With access to cutting-edge technology, a wealth of industry knowledge and a global network of experts, SGS GAS analysis services are well-positioned to meet the diverse needs of our clients.

- Centre of expertise based in Ireland – knowledge built on one of the largest semiconductor plants in Europe.
- Global resource management organization.
- Expert professionals available for expatriation to facilitate local service development or short-term projects.

With SGS GAS by your side, you can rest assured that your purification and filtration systems are not just installed—they are optimised to perform at their peak, safeguarding your investment and ensuring the success of your semiconductor fabrication processes.

Contact us today to learn more about how our mobile testing service can elevate the performance of your semiconductor facility.

CONTACT US
IE.GAS.INFO@SGS.COM
WWW.SGS.COM/GAS

GAS ANALYSIS SERVICES IS NOW PART OF SGS, THE WORLD'S LEADING TESTING, INSPECTION AND CERTIFICATION COMPANY.

GAS

Member of the SGS Group