

➤ **Purity**

➤ **Accuracy**

➤ **Stability**

➤ **Peace of Mind**

Experis® Ultra High Purity gases

For more accurate analyses and longer-lasting analytical equipment

- **Specifically designed for the analytical user**
- **Contain ultra low levels of impurities**
- **When combined with BIP® technology you are guaranteed the purest, most stable gas**
- **Accurate analyses are ensured, giving you greater peace of mind**

➤ **Experis® Gases**

Whatever your application, be it chemical analysis or process control, our Experis® gas UHP range offers you the optimum gas solution. Acetylene, Air, Argon, Carbon Dioxide, Helium, Hydrogen, Nitrogen, and Oxygen are available with a range of purity levels. They can be supplied in a cylinder size to suit your specific requirements, from small 0.4 litre cylinders to packs of 18 large cylinders.

➤ **Certified Purity**

It is not just the ultra high purity of the gas that offers peace of mind, but also the certainty of knowing the maximum level of specific impurities contained in the gas. Understanding which impurities, and at what level, interfere with your specific analysis, enables us to provide you with a range of gases and grades which enable you to achieve the most accurate results. Our Experis® gases specialists can assist you in selecting the optimum gas for your application. All Experis® UHP gases come with certified maximum impurity levels and, of course, our quality assurance systems are ISO 9000 certified. The Experis® Pharma grade gases are produced to comply fully with the European Pharmacopoeia and Good Manufacturing Practice part II, ensuring peace of mind for producers of APIs and pharmaceuticals.

➤ **BIP® cylinders**

Our unique BIP® cylinders, using a patented method for removing impurities as the gas is withdrawn from the cylinder, offer the very highest purity levels for the most demanding laboratory applications. Every BIP® Nitrogen, Helium and Argon cylinder contains less than 10ppb of oxygen and less than 20ppb of water, making them 300 times purer than typical UHP gases. Now the BIP® technology has been extended to Hydrogen with less than 100ppb of oxygen, less than 20ppb of water and less than 10ppb of THC. BIP® technology gives you the ultimate zero gas; this means longer chromatographic column life, ultra low dew points and zero process contamination.

➤ **Gas Equipment**

The use of specially designed and engineered gas control equipment ensures that gas reaches the point of use not only at the required purity, but also at the required pressure and flow rate. At Air Products, we use our expertise in UHP gases and their applications to offer you a comprehensive range of gas control equipment, including regulators and manifolds. All equipment is designed to the highest standards and is extensively leak-tested. We also offer an extensive design, build and install service giving you complete peace of mind whatever your application.



Ultra High Purity Gases: standard specifications

Other sizes, purities or analyses available on request. Please contact Air Products

Grade	Specifications (in ppm molar when not specified)						Purity	Cylinder size*						Certificate of conformity
								Cylinders			Packs			
								30	51		200 bar	300 bar		
Acetylene	PH₃	H₂S												C₂H₂
Premier	10	10				2.6	✓	✓						Batch
Synthetic Air	H₂O		THC¹	CO+CO₂	NOx/NH₃/SO₂/H₂S									Air
Zero (20.9% O ₂ +/-1%)	3		0.2	1		4.8	✓	✓	✓					Batch
Zero Plus (20.9% O ₂ +/-0.2%)	0.5		0.05	0.1	ND ³	6.0	✓	✓						Individual
Argon	H₂O	O₂	THC¹	CO+CO₂	N₂		0.4	10	47	11x47	12x50			Ar
Premier	2	1.5	0.1		4	5.2	✓		✓	✓				Batch
BIP [®]	0.02	0.01	0.1	0.1	1	5.7		✓	✓		✓			Batch
BIP [®] Plus	0.02	0.01	0.05	0.05	0.3	6.6			✓					Individual
Nitrogen	H₂O	O₂	THC¹	CO+CO₂	H₂	CFC²		10	47		12x50			N₂
Premier	2	3	0.5				5.2		✓					Batch
BIP [®]	0.02	0.01	0.1	0.5	1		5.7	✓	✓		✓			Batch
BIP [®] ECD	0.02	0.01	0.1	0.5	1	0.001	5.7		✓					Batch
BIP [®] Plus	0.02	0.01	0.05	0.05	0.05		6.8		✓		✓			Individual
Pharma NEW	2	3		1+1			5.2		✓		✓			Batch
Carbon dioxide	H₂O	O₂	THC¹	CO	N₂		0.4	10	47	50	11x47	12x50		CO₂
Premier	7	10	5	2	25	4.5	✓	✓	✓		✓			Batch
Premier Liquid	7	10	5	2	25	4.5		✓	✓					Batch
UltraPure	2	0.5	0.1	0.5	2	5.5			✓					Individual
UltraPure Liquid	2	0.5	0.1	0.5	2	5.5			✓					Individual
Helium	H₂O	O₂	THC¹	CO+CO₂	N₂	H₂	CFC²	10	47		11x47	12x50	18x50	He
Premier	2	1	0.5		5			5.2		✓				Batch
BIP [®]	0.02	0.01	0.1	0.5	1			5.7	✓	✓		✓	✓	Batch
BIP [®] ECD	0.02	0.01	0.1	0.5	1		0.001	5.7		✓				Batch
BIP [®] Plus	0.02	0.01	0.05	0.05	0.1	0.1		6.7		✓		✓	✓	Individual
Hydrogen	H₂O	O₂	THC¹	CO+CO₂	N₂				10	47	11x47	17x50		H₂
Premier Plus	2	1	0.1	0.5	5			5.2		✓	✓	✓	✓	Batch
UltraPure	1	0.5	0.1	0.5	2			5.5			✓			Batch
UltraPure Plus	0.5	0.1	0.05	0.05	0.2			6.0		✓	✓	✓		Individual
BIP[®] NEW	0.02	0.1	0.01	0.5	2			5.7			✓			Batch
BIP[®] Plus NEW	0.02	0.1	0.01	0.05	0.2			6.6			✓	✓		Individual
Oxygen	H₂O		THC¹	CO+CO₂	N₂	H₂		0.4	10	47	11x47			O₂
Premier	3		1	1	10	1		4.5			✓			Batch
UltraPure	1		0.5	0.5	5	0.5		5.2	✓	✓	✓	✓		Batch
UltraPure Plus	0.5		0.1	0.1	0.4	0.1		5.8		✓	✓	✓		Individual
Pharma NEW	5			1+1				4.5			✓	✓		Batch

*Equivalent water capacity in litres, details below

Description of the cylinder sizes

Watercapacity	Air Products code	Description	Approximate contents ⁴
0.4 L	X0.4S	Lecture bottle Steel	0.1m ³
10 L	X10S	Steel cylinder	2m ³
30 L	X30S	Steel cylinder	5m ³
47 L	X47S	Steel cylinder	10m ³
51 L	X51S	Steel cylinder	10m ³
11x47 L	11X47S	11 cyl. bank	110m ³
12x50 L	12X50S	12 cyl. bank	120m ³
17x50 L	17X50S	17 cyl. bank	170m ³
18x50 L	18X50S	18 cyl. bank	235m ³

Remarks:

- In purity shorthand the first digit refers to the number of 9's and the second digit to the following number. For example, 5.2 means 99.9992% overall purity, 6.0 means 99.99990% overall purity.
- Other sizes, qualities and analyses available on request
- Usual filling pressure (unless specified): 200 bar.g
- The above data can be subject to changes
- ¹ THC = as CH₄
- ² CFC = hydrocarbons
- ³ ND = non detectable
- ⁴ Except for CO₂

United Kingdom

Air Products PLC
2 Millennium Gate, Westmere Drive
Crewe CW1 6AP
Tel 0800 389 02 02
Email apukinfo@airproducts.co.uk

Ireland

Air Products Ireland Ltd
Unit 950, Western Industrial Estate
Killeen Road, Dublin 12
Tel 1800 99 50 29
Email ieinfo@airproducts.com

tell me more
www.airproducts.co.uk
www.airproducts.ie