

Gas Grade Selection Table for Gas Chromatography (GC)

Detector	Minimum Gas Grade Recommended for Your Limit of Detection			
	Trace (0–1 ppm)	1–1,000 ppm	1,000 ppm–1%	1%–100%
FID (Flame Ionization Detector)				
Helium	Research	UPC	UPC	UHP
Nitrogen	Research	UPC	UPC	UHP
Hydrogen	Research	UPC	UPC	UHP
Air	Ultra Zero	Ultra Zero	Zero	Zero
Carbon Dioxide	SFC/SFE	SFC/SFE	SFC/SFE	SFC/SFE
ECD (Electron Capture Detector)				
Carbon Dioxide	SFC/SFE	SFC/SFE	SFC/SFE	SFC/SFE
P5	ECD	ECD	ECD	N/A
Nitrogen	Research	Research	UPC	N/A
Helium	Research	Research	UPC	N/A
TCD (Thermal Conductivity Detector)				
Helium	Research	Research	UPC	UHP
Nitrogen	Research	UPC	UPC	UHP
Argon	Research	UPC	UHP	UHP
Hydrogen	Research	UPC	UHP	UHP
FPD (Flame Photometric Detector)				
Nitrogen	Research	UPC	N/A	N/A
Helium	Research	UPC	N/A	N/A
Hydrogen	Research	UPC	N/A	N/A
Air	Ultra Zero	Ultra Zero	N/A	N/A
PID (Photoionization Detector)				
Argon	UPC	UPC	UPC	N/A
Nitrogen	UPC	UPC	UPC	N/A
Helium	UPC	UPC	UPC	N/A
Hall® (Electrolytic Conductivity Detector)				
Helium	Research	UPC	N/A	N/A
Hydrogen	Research	UPC	N/A	N/A
Nitrogen	Research	UPC	N/A	N/A
Air	UPC	UPC	N/A	N/A
MSD (Mass Selective Detector)				
Helium	Research	UPC	UPC	UHP
Nitrogen	Research	UPC	UPC	UHP
Hydrogen	Research	UPC	UPC	UHP
Argon	Research	UPC	UHP	UHP
HID (Helium Ionization Detector)				
Helium	Research	Research	N/A	N/A
Helium Purge	UPC	UPC	N/A	N/A
DID (Discharge Ionization Detector)				
Helium	Research	Research	Research	N/A
Helium Purge	UPC	UHP	UHP	N/A
USD (Ultrasonic Detector)				
Argon	Research	Research	UPC	UHP
Helium	Research	Research	UPC	UHP
SCD (Sulfur Chemiluminescent Detector)				
Hydrogen	UPC	UPC	UHP	N/A
Air	Ultra Zero	Ultra Zero	Zero	N/A
PFPD (Pulsed Flame Photometric Detector)				
Hydrogen	Research	UPC	N/A	N/A
Air	Ultra Zero	Ultra Zero	N/A	N/A
Nitrogen	Research	UPC	N/A	N/A
Helium	Research	UPC	N/A	N/A
PDD (Pulsed Discharge Detector)				
Helium	Research	Research	UPC	N/A
He Purge	UPC	UHP	UHP	N/A
2% Argon/Helium	Research	Research	UPC	N/A
2% Krypton/Helium	Research	Research	UPC	N/A
2% Xenon/Helium	Research	Research	UPC	N/A

BIP® technology (an Air Products innovation) gases are available for argon, helium and nitrogen. For gas chromatography, *BIP* technology represents the best choice for purity. See the Special Applications section for more details.