

Praxair's Gas Grade Recommendations

Analytical Method/ Detector	Page Number	Carrier and Support Gases	Analytical Range Sensitivity		Type of Analysis Impurity Considerations
Gas Chromatography			< 100 ppm	> 100 ppm	
TCD (Thermal Conductivity Detector)	C44/45	N ₂	NI 5.5TG	NI 5.0UH	Universal Detector Atmospheric contaminants can oxidize the detector filament giving rise to negative peaks and reduced sensitivity.
	C30/31	He	HE 5.5TG	HE 5.0UH	
	C32/33	H ₂	HY 6.0RS	HY 5.0UH	
	C6/7	Ar	AR 5.5TG	AR 5.0UH	
FID (Flame Ionization Detector) Carriers Combustion Gases	C30/31	He	HE 5.5TG	HE 5.0UH/ HE 4.6Z	Organic Compounds Hydrocarbons in carrier and fuel gases can give rise to baseline noise and reduced detector sensitivity. Oxygen and water cause column deterioration and affect retention time on critical separations.
	C44/45	N ₂	NI 5.5TG	NI 5.0UH/ NI 4.8Z	
	C6/7	Ar	AR 5.5TG	AR 5.0UH/ AR 4.8Z	
	C32/33	H ₂	HY 6.0RS	HY 5.0UH/ HY 4.5Z	
	E5	40% H ₂ in He	IG FI2	IG FI1	
	E5	40% H ₂ in N ₂	IG FI4	IG FI3	
	C2/3	Air	AI 0.0 HC	AI 0.0HC	
ECD (Electron Capture Detector)	C30/31	He	HE 5.5EC/ HE 5.5TG	HE 5.5TG	Halogenated Compounds Detector response and column life are reduced by oxygen and water. Hydrocarbons and halocarbons can produce baseline noise, negative peaks and plumbing contamination.
	C44/45	N ₂	NI 5.5EC/ NI 5.5 TG	NI 5.5TG	
	E5	5% CH ₄ in Ar-ECD (P-5)	IG ECD1	IG ECD1	
	E5	10% CH ₄ in Ar-ECD (P-10)	IG ECD2	IG ECD2	
HID (Helium Ionization Detector)	C30/31	He	HE 5.5TG	HE 5.5TG	Universal Detector Atmospheric impurities can cause baseline noise signal polarity and reduced detector stability and sensitivity.
	C30/31	He Purge	HE 5.0UH	N/A	
FPD (Flame Photometric Detector)	C30/31	He	HE 5.5TG	HE 5.0UH	Sulfur or Phosphorous Compounds Organics can yield baseline noise and carbon dioxide can suppress detector response.
	C44/45	N ₂	NI 5.5TG	NI 5.0UH	
	C32/33	H ₂	HY 5.0UH	HY 5.0UH	
	C2/3	Air	AI 0.0 HC	AI 0.0Z	
PID (Photo Ionization Detector)	C30/31	He	HE 5.5TG	N/A	Selective Detector Dependent on UV Source Organics can yield baseline noise and carbon dioxide can suppress detector response.
	C44/45	N ₂	NI 5.5TG	N/A	
GC/MS (Mass Spectrometer)	C30/31	He	HE 5.5TG	HE 5.0UH	All Compounds Organics can yield baseline noise and carbon dioxide can suppress detector response.
	C44/45	N ₂	NI 5.5TG	NI 5.0UH	
	C6/7	Ar	AR 6.0RS/ AR 5.0 UH	AR 5.0UH	
DID (Discharge Ionization Detector)	C30/31	He	HE 6.0RS	N/A	Universal Detector Atmospheric impurities can cause baseline noise signal polarity and reduced detector stability and sensitivity.
	C30/31	He Purge	HE 5.0UH	N/A	
USD (Ultrasonic Detector)	C6/7	Ar	AR 5.0UH	AR 5.0UH/ AR 4.8Z	Universal Detector Atmospheric impurities can cause baseline noise signal polarity and reduced detector stability and sensitivity.
	C30/31	He	HE 5.0UH	HE 5.0UH/ HE 4.6Z	