



Introduction (continued)

Table II: Pure and Support Gas Grades for Process Gas Analyzers

Gas Analyzer	Selectivity	Gases Used	Recommended Matheson Grade for Detection Limits			
			10 ppb to 1 ppm	1 ppm to 100 ppm	100 ppm to 1%	1% to 100%
Chemiluminescent	NO, NO ₂	Air	Acid Rain CEM	Acid Rain CEM	Zero Gas	N/A
		Nitrogen	Acid Rain CEM	Acid Rain CEM	Zero Gas	N/A
Electrochemical Detectors	H ₂ S, NO, NO ₂ , SO ₂	Air	Acid Rain CEM	Acid Rain CEM	Zero Gas	N/A
		Nitrogen	Acid Rain CEM	Acid Rain CEM	Zero Gas	N/A
NDIR	CO, CO ₂ , SO ₂	Air	Acid Rain CEM	Acid Rain CEM	Zero Gas	Air, CO ₂ Free
		Nitrogen	Acid Rain CEM	Acid Rain CEM	Zero Gas	Zero Gas
NIR	Universal	Nitrogen	N/A	Matheson	UHP	HP
Paramagnetic	O ₂	Nitrogen	N/A	Oxygen Free	Matheson	UHP
Semiconductor Sensors	Flam-Ox	Air	N/A	N/A	Zero Gas	Dry
		Nitrogen	N/A	N/A	Prepurified	UHP
Total Hydrocarbon/FID	Hydrocarbons	Air	VOC Free	Ultra Zero	Vehicle Emission	N/A
		Nitrogen	VOC Free	Matheson	UHP	N/A
		Hydrogen	Research	Research	Zero	N/A
		FID Fuel	Ultra	Ultra	Zero	N/A

Gas Fill Volume Practices

Gas Compressibility Factors at 70°F and at stated gauge pressures, and from recognized industry sources, are used to verify cylinder contents. Ideal gas calculations may not apply.

In the calculation of Kpa pressure units, gauge pressure in psig is used. Where Kpa units are used, it is interpreted as Kpa (gauge).