

## 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%
<b>Chemiluminescent</b>	NO, NO <sub>2</sub>	Air	Acid Rain CEM	Acid Rain CEM	Zero Gas	N/A
		Nitrogen	Acid Rain CEM	Acid Rain CEM	Zero Gas	N/A
<b>Electrochemical</b>	H <sub>2</sub> S, NO,	Air	Acid Rain CEM	Acid Rain CEM	Zero Gas	N/A
<b>Detectors</b>	NO <sub>2</sub> , SO <sub>2</sub>	Nitrogen	Acid Rain CEM	Acid Rain CEM	Zero Gas	N/A
<b>NDIR</b>	CO, CO <sub>2</sub> , SO <sub>2</sub>	Air	Acid Rain CEM	Acid Rain CEM	Zero Gas	Air, CO <sub>2</sub> Free
		Nitrogen	Acid Rain CEM	Acid Rain CEM	Zero Gas	Zero Gas
<b>NIR</b>	Universal	Nitrogen	N/A	Matheson	UHP	HP
<b>Paramagnetic</b>	O <sub>2</sub>	Nitrogen	N/A	Oxygen Free	Matheson	UHP
<b>Semiconductor</b>	Flam-Ox	Air	N/A	N/A	Zero Gas	Dry
<b>Sensors</b>		Nitrogen	N/A	N/A	Prepurified	UHP
<b>Total Hydrocarbon/FID</b>	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).