

## COMPETITIVE COMPARISON Tiger Optics' Prismatic™ vs. Gas Chromatograph

ATTRIBUTES	PRISMATIC	GAS CHROMATOGRAPH								
Support Gases	None	Carrier gas Flow balance gas Detector gases (below)								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Detector</th> <th style="width: 50%;">Required Gases</th> </tr> <tr> <td style="background-color: #A9A9A9;">Thermal Conductivity</td> <td style="background-color: #A9A9A9;">Reference, make-up</td> </tr> <tr> <td style="background-color: #A9A9A9;">Helium Ionization</td> <td style="background-color: #A9A9A9;">Helium, make-up</td> </tr> <tr> <td style="background-color: #A9A9A9;">Flame Ionization</td> <td style="background-color: #A9A9A9;">Hydrogen, air, make-up</td> </tr> </table>	Detector	Required Gases	Thermal Conductivity	Reference, make-up	Helium Ionization	Helium, make-up	Flame Ionization	Hydrogen, air, make-up
		Detector	Required Gases							
		Thermal Conductivity	Reference, make-up							
		Helium Ionization	Helium, make-up							
Flame Ionization	Hydrogen, air, make-up									
Purifiers, Columns, Valves										
Detector consumables										
Hardware Consumables	None	Purifiers, Columns, Valves Detector consumables								
Sample Handling	Requires sufficient flow & 15-125 psig inlet pressure	Requires precise flow & pressure control for reproducible sampling								
Measurement	Online, continuous	Discrete. Typically 5 minutes per injection, 3+ injections per result								
Calibration	None (absolute measurement)	Frequent. Time-consuming. Calibration gases & expensive standards required								
Measurement Robustness	High. Self-adjusting zero and laser-lock features maintain accuracy	Low. Column changes and temperature changes lead to peak retention shifts								
Ease of use	Simple	Skilled operator required								