

GAS PURIFICATION



GAS-SPECIFIC PURIFIERS AND CONTAMINANT TRAPS

From VICI Metronics

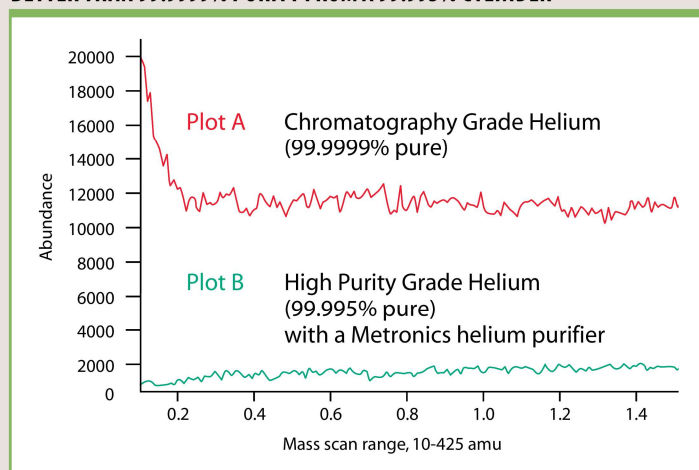
GAS SPECIFIC PURIFIERS AND CONTAMINANT TRAPS

- Speedy ROI – produce better than 99.9999% purity from a 99.995% cylinder
- Provide point-of-use gas purification of helium, hydrogen, methane, nitrogen, carbon dioxide, or air
- Reduce gas impurities from high ppm to low ppb levels
- Decrease baseline noise and increase GC/MS sensitivity
- Replace three traps with one purifier

Gas purity is critical to GC performance. Several types of contaminants are detrimental – notably moisture, hydrocarbons, and oxygen. VICI Metronics gas purifier modules are designed to be placed in-line with the GC carrier or detector gas supply to remove these contaminants from the analytical gases prior to their entering the GC. Gas purification is optimized by a multiple bed format. Each bed functions at a lower contaminant concentration, resulting in a series of contaminant concentration gradients across the length of the gas purifier.

VICI Metronics gas purifiers dramatically reduce contaminant levels and absorb a greater variety of contaminants than other gas purification products. Advanced materials and design features guarantee that the modules will

BETTER THAN 99.9999% PURITY FROM A 99.995% CYLINDER



produce gases that are at least a factor of ten higher than a 99.9999% “chromatography grade” cylinder of gas when the purifier is supplied by a 99.995% cylinder. The cost difference between the two grades of gas will pay for the cost of the gas purifier several times over during its operating life.

SEE ALSO

Helium and nitrogen purifiers 216-217

GAS PURIFICATION



Gas specific purifiers

Description	1/8" fitting	1/4" fitting
Helium purifier	P100-1	P100-2
Hydrogen purifier	P200-1	P200-2
Nitrogen purifier	P300-1	P300-2
Nitrogen purifier for LC/MS apps	P310-1	P310-2
Purifier for nitrogen generators	P350-1	P350-2
Air purifier	P400-1	P400-2
Methane purifier*	P500-1	P500-2
Carbon dioxide (gas) purifier	P600-1	P600-2
Carbon dioxide (liquid) purifier	P700-1	P700-2

*12" long

Contaminant traps

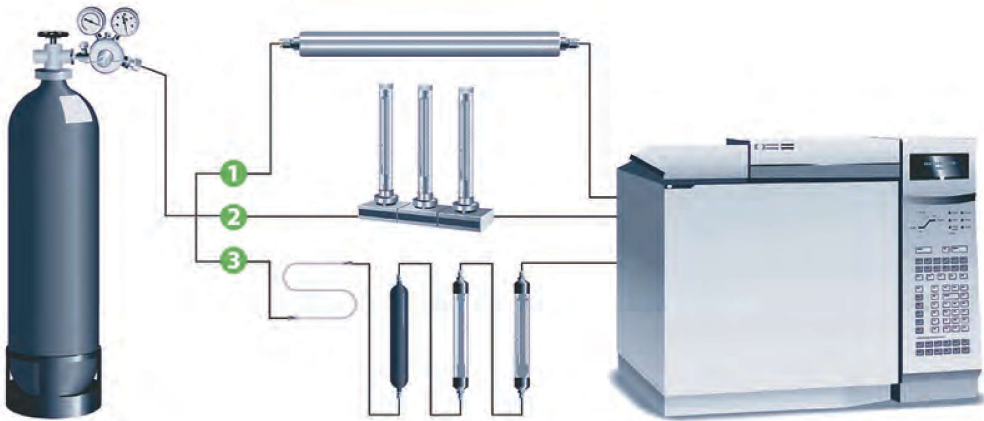
Description	1/8" fitting	1/4" fitting
Moisture trap	T100-1	T100-2
Hydrocarbon trap	T200-1	T200-2
Oxygen trap	T300-1	T300-2
Sulfur trap*	T400-1	T400-2
Sulfur trap	T401-1	T401-2
Mercury trap*	T700-1	T700-2

SPECIFICATIONS

22.5" long x 1.5" diameter
(Purifiers with * are 12" long)
Max inlet pressure 1000 psi (6895 kPa)
Recommended flow 500 ml/min
Capacity 30000 l with 50 ppm impurities at inlet

FITTINGS AND GAS PURITY

Every connection in your gas delivery system has the potential for leaks; the more fittings you have, the greater the potential. Using ① a VICI Metronics purifier or trap minimizes the number of fittings as compared to ② a typical manifold system or ③ contaminant trap configuration with multiple components.



PPB AT OUTLET

BASED ON 50 PPM NOMINAL INLET CONCENTRATION LEVEL

	CO	CO ₂	O ₂	H ₂ O	Sulfur compounds	Non-methane hydrocarbons
Helium purifier	<1	<1	<1	<1	<1	<3
Hydrogen purifier	<1	<1	<1	<1	<1	<3
Air purifier				<1		<3
Methane purifier	<1	<1	<1	<1	<1	<3
Nitrogen purifier	<1	<1	<1	<1	<1	<3
Nitrogen purifier for LC/MS apps				<25	<25	<25
Purifier for nitrogen generators				<25	<25	<25
Moisture trap				<1		
Hydrocarbon trap						<3
Oxygen trap			<1	<1		
Sulfur trap				<1	<1	