



for **more** info

Questions about which carrier gas purifier to use?

Call 800-356-1688 or 814-353-1300, ext. 4, or contact your Restek representative to discuss your application with our technical service chemists.

Why do I need to use traps and where should I install them?

Carrier gas must contain less than 1ppm of oxygen, water vapor, or any other trace contaminant, to prevent column degradation, shortened column lifetime, and increased stationary phase bleed. Contaminants cause ghost peaks to appear during temperature programming and degrade the validity of analytical data. Make-up gas also should be contaminant-free, or baseline fluctuations and excessive detector noise can occur; detector gases should be free of water and hydrocarbons, or excessive baseline noise can result. Gas purifiers remove these contaminants from gas sources, thereby improving system performance.

Moisture Removal

Moisture in carrier gas lines will prematurely degrade oxygen and hydrocarbon traps and increase detector noise (particularly with ECDs). As a precaution, we highly recommend installing a moisture trap before the hydrocarbon and oxygen traps on all carrier gas lines. Our favorite trap is the Super-Clean™ Ultra-High Capacity Moisture Filter (cat.# 22028, pg. 234).

Hydrocarbon Removal

Use a hydrocarbon trap if your gas has a potential source of hydrocarbon contaminants (e.g., an oil pump in an air compressor) or if you suspect you are observing carrier gas ghost peaks. Install the hydrocarbon trap after the moisture trap, to prevent moisture from degrading the hydrocarbon-trapping ability of the activated carbon in the hydrocarbon trap. We recommend the Super-Clean™ Ultra-High Capacity Hydrocarbon Filter (cat.# 22030, pg. 234).

Oxygen Removal

Oxygen is a column killer. It is present even in UHP gases, as minute leaks at fittings allow oxygen to influx against the concentration gradient. There are many choices for oxygen removal—the Super-Clean™ Ultra-High Capacity Oxygen Filter (cat.# 22029, pg. 234) is popular with Restek chemists. Because oxygen can enter a gas line at any fitting, the oxygen trap should be the last connection before the gas line enters the chromatograph.

tech tip

Carrier Gas Purity

Carrier gas should contain less than 1ppm of oxygen, moisture, or other trace contaminants, to prevent column degradation, increase column lifetime, and decrease stationary phase bleed.

The expense of using high-purity gases in combination with carrier gas line purifiers will be offset by longer column lifetime and less GC maintenance.

did you know?

Trap replacement made simple!

Try the Super-Clean™ Triple Filter Carrier Gas Cleaning Kit (cat.# 22019, pg. 234) —it removes moisture, hydrocarbons, and oxygen in one easy-to-change, economical cartridge.