Molecular Sieve 5A PLOT Columns

please **note**

Rt™-Msieve 5A PLOT columns are designed for efficient separation of Ar/O₂ and other permanent gases, including CH₄, C₂H₆, and CO.
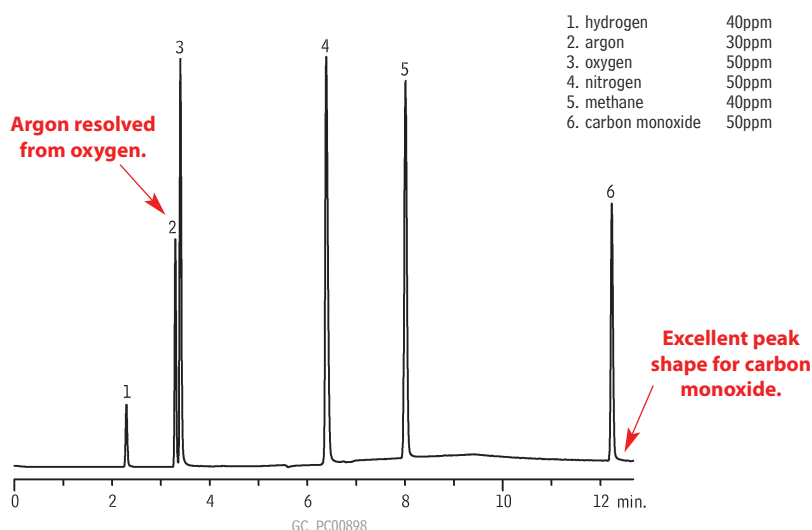
Rt™-Msieve 5A PLOT Columns

Rt™-Msieve 5A PLOT columns are designed for efficient separation of Ar/O₂ and other permanent gases, including CH₄, C₂H₆, and CO. Special coating and deactivation procedures ensure chromatographic efficiency and the integrity of the porous layer coating. The high surface area of the Rt™-Msieve is generated by the pore structure present in the molecular sieve. Only compounds that can enter the pores will be exposed to this surface and will be retained. Molecular sieves have very high retention, allowing separations of permanent gases at temperatures above ambient. Additionally, Restek's unique immobilization process guarantees that the uniform particles remain adhered to the tubing—even after continuous valve-cycling.

Our revolutionary molecular sieve 5A PLOT columns separate Ar/O₂ and H₂/He at ambient temperature or above (see figure). These columns also are an excellent choice for rapid separation of permanent gases in refinery or natural gas.

Our deactivation technology also allows the CO peak to elute as a sharp peak. This is in contrast with other suppliers where CO often tails badly and cannot be quantified below % levels.

tech tip

Because molecular sieve materials are very hydrophilic, they will adsorb water from the sample or carrier gas. Water contamination can have a detrimental effect on peak symmetry and can reduce the resolution of all compounds. If water contamination occurs, reactivate your Rt™-Msieve 5A PLOT column by conditioning at 300°C with dry carrier gas flow for 3 hours.

did you **know**?

ShinCarbon ST micropacked columns are another alternative for analyzing permanent gases.

See **page 116** for information.

Permanent gases on an Rt™-Msieve 5A PLOT column.

1. hydrogen 40ppm
2. argon 30ppm
3. oxygen 50ppm
4. nitrogen 50ppm
5. methane 40ppm
6. carbon monoxide 50ppm

Argon resolved from oxygen.

Excellent peak shape for carbon monoxide.

GC_PC00898

Column: Rt™-Msieve 5A, 30m, 0.53mm ID, 50μm (cat.# 19723)
Sample: permanent gases (ppm)
Inj.: 5μL sample loop, 6-port Valco valve, valve temp.: ambient
Inj. temp.: 200°C
Carrier gas: helium, constant flow
Linear velocity: 5mL/min.
Oven temp.: 27°C (hold 5 min.) to 100°C @ 10°C/min. (hold 5 min.)
Det.: Valco helium ionization detector @ 150°C

Rt™-Msieve 5A Columns (fused silica PLOT)

ID	df (μm)	temp. limits	15-Meter	30-Meter
0.32mm	30	to 300°C	19720	19722
0.53mm	50	to 300°C	19721	19723