



APPLICATION NOTES

Issue: *Periodic in-house check of gas chromatograph operation*

Solution: *M Series to verify flow and pressure for multiple gases*

In gas chromatographs (GCs) materials are detected at molecular level by preparing a sample of the material that is "carried" on a gas stream into the GC. The carrier gas flow stream is sent into small capillary flow tubes and then into detectors to sense and quantify the suspected materials. These carrier and capillary flow rates are critical to the correct performance of the gas chromatograph. The flow rates and pressures through the various gas flow paths vary by manufacturer's specifications.

Alicat Scientific has recognized the need for an accurate and versatile device that is capable of verifying these critical aspects of a GC's performance, for multiple gases, and pressures. The Alicat mass meter M series with optional battery pack creates a portable flow measurement device for each of these parameters. The multifunctional graphical display is the heart of Alicat's ideal fit for this application.

The display features combine to provide multiple benefits in one compact device:

- ◆ Calibration for 14 of the most common gases
- ◆ Verification of mass measurement on the input and vent of the GC
- ◆ Verification of volumetric measurement on the vent of the GC
- ◆ Verification of the pressure on the inlet and vent of the GC

The application of the Alicat meter as a tool to verify correct operation of a GC is further augmented by the attributes of Alicat gas flow products, including:

- ◆ ± 1% Full Scale Accuracy for precise measurements
- ◆ ± 0.5% Full Scale Repeatability for consistent measurements
- ◆ 10mS or faster response to changes in flow, pressure or temperature
- ◆ 100: 1 Turndown Ratio allows one unit to cover the capillary and carrier gas flow ranges
- ◆ RS-232 Serial Output of all four parameters and selected gas for data logging to any PC, PDA or other device with HyperTerminal® capacity.

With the multiple features built into one, compact, portable device, the Alicat can be an invaluable tool in the verification of demanding and critical GC analysis.

The most popular models for this use are:

M Series Meters:	M-20SCCM-D /5M	with BPACK
	M-500SCCM-D /5M	with BPACK