

# Gas Chromatography

## Useful Information

Instrument: GOW-MAC Instrument Co. Series 600

### Column:

<i>Position</i>	Column 1
<i>Material</i>	Stainless steel
<i>Dimensions</i>	6.0 ft (1.83 m) length, 1/8 inch outer diameter, 2.1 mm inner diameter
<i>Matrix</i>	80/100 Chromosorb W HP (acid washed and silanized diatomaceous earth)
<i>Matrix active group</i>	10% Carbowax 20 M Polyethylene glycol [-CH <sub>2</sub> CH <sub>2</sub> O-] <sub>n</sub> Strongly polar Temperature range of 40-250°C

Carrier gas: Helium

Detector: Thermal conductivity detector (TCD)

### Method:

<u>Initial parameters</u>	
<i>Flow pressure</i>	45 psi
<i>Injector temperature</i>	150°C
<i>Oven temperature</i>	100°C
<i>Detector temperature</i>	150°C
<i>Sample size</i>	1 μL

(Your group may modify the method parameters as you wish, but keep in mind that changing the injector and detector temperatures will eat up a large portion of your allotted time with the instrument.)

### Notes:

1. Under the Chrom Perfect computer program, make sure that the instrument is “Ready” and not “Off line” and that you “Claim” the work station before you run your samples.
2. Turn ON the detector filament before data collection (this is accomplished under the Control tab on the instrument’s home page screen).
3. Be sure that the appropriate carrier gas is reaching the instrument.
4. Be sure during the entire course of data collection that the “TCD Carrier 1” gauge is reading *constant* and *above 0*. If, during a run, the pressure drops to 0, the septum in the injector port needs to be replaced.