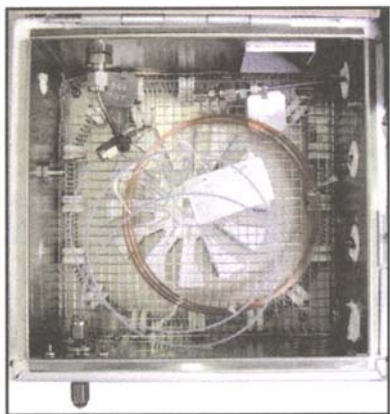


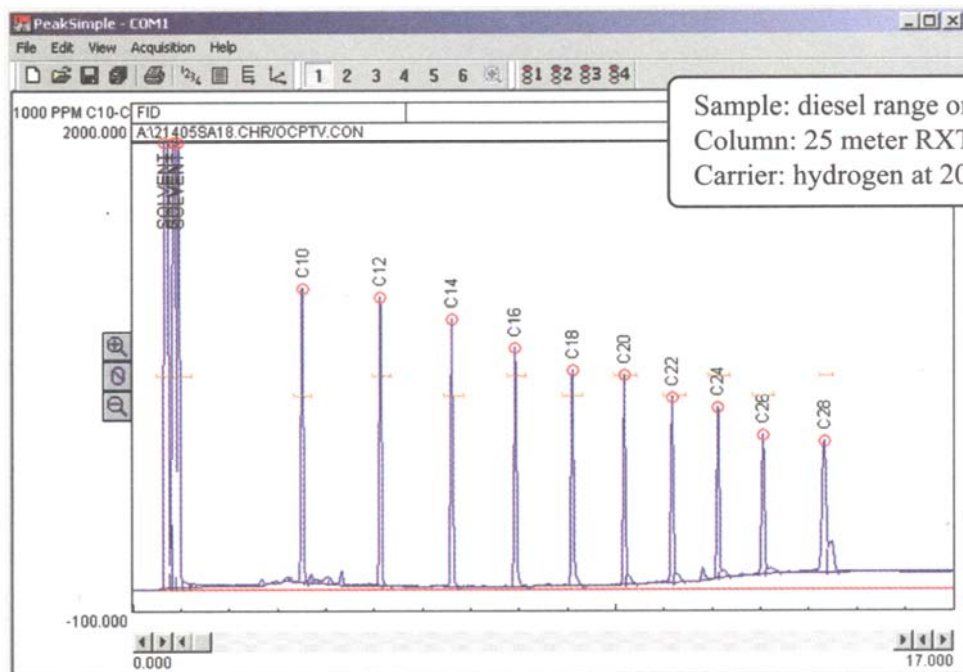
On-Column PTV Injector



- *Inject Larger Volumes onto Narrow Bore Columns*
- *Concentrate Sample and Focus Peaks*
- *Simpler than Split/Splitless Injectors*
- *Less Bulky than Conventional PTVs*
- *Great for Semivolatile Samples*

The On-Column PTV is a resistively heated precolumn, which is connected to your narrow bore column with a special, electrically insulated split "T" inside the GC column oven. The 5 micron nonpolar phase in the OCPTV precolumn has a high capacity to absorb high boiling compounds, and is stable at high temperatures. Like in-tube SPME, the precolumn discriminates in favor of high boiling semivolatile analytes, concentrating them in the phase. Like the Split/Splitless injector, the OCPTV has a split vent and needle valve for venting solvent while concentrating sample. Unlike a normal Heated Split/Splitless injector, the OCPTV vents the solvent without expanding it to a gas. Therefore, the OCPTV is capable of larger liquid injections than a regular heated split/splitless injector.

The GC operator injects sample via syringe through the on-column injection port with the split vent open to vent the solvent. After injection and solvent venting, the precolumn heats up while the carrier gas flows through it to sweep focused analytes from the precolumn to the analytical column. At this point, the precolumn is hotter than the column oven. The temperature difference between the hotter precolumn and cooler analytical column causes the analytes to focus on the analytical column, resulting in sharp peaks on the chromatogram.



This chromatogram was generated by an SRI GC equipped with an OCPTV injector and an FID detector. A 25 meter narrow bore capillary column was used to separate 100ppm diesel range organics (DRO).

8690-0037

On-Column PTV Injector for GC