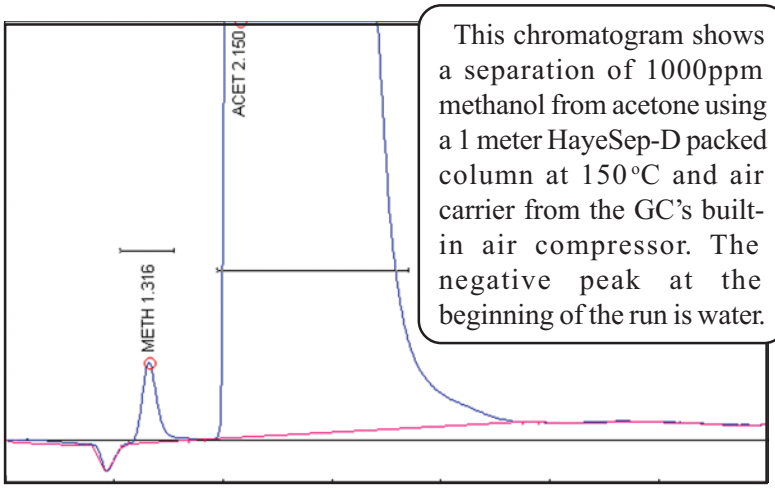
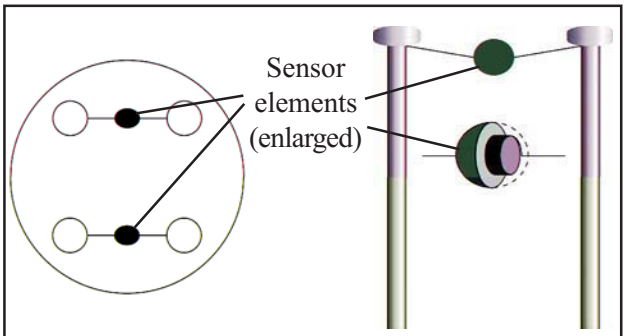
CCD - Catalytic Combustion Detector

- ***Detects Down to 500ppm***
- ***Hydrocarbon and Hydrogen Selective***
- ***Gasless Operating Capability***
- ***Inexpensive and Rugged***
- ***Built-in Spare!***



This chromatogram shows a separation of 1000ppm methanol from acetone using a 1 meter HayeSep-D packed column at 150°C and air carrier from the GC's built-in air compressor. The negative peak at the beginning of the run is water.



The CCD housing is about 1cm in diameter. Inside, there are 2 sensor elements consisting of a platinum wire embedded in a catalytic ceramic bead.

The CCD is about as sensitive as a TCD, but it has the hydrocarbon selectivity of an FID while capable of operating on air alone. Because the CCD needs no compressed gases like hydrogen or helium, it can be used in SRI's Gas-less™ GCs where a built-in, "whisper quiet" air compressor supplies the ambient air carrier gas.

The CCD can also be used as a hydrocarbon monitor in nonchromatographic applications where the CCD senses the total hydrocarbon content of a flowing air stream, or as a hydrogen/hydrocarbon leak detector.

The CCD detector sensor is rugged and can be expected to last a long time. A second sensor is included in the detector housing at no extra cost, providing a built-in replacement should the first sensor become inoperable. Replacement sensor sets install in minutes without tools and are very economical, making this detector a good choice for academic settings where the detector may be damaged by inexperienced operators.

The Catalytic Combustion Detector consists of a tiny coil of platinum wire embedded in a catalytic ceramic bead. A small electric current flows through the platinum coil, heating the ceramic bead to around 500°C. The CCD is maintained in an oxidative environment typically by using air carrier gas. When a hydrogen or hydrocarbon molecule impacts the hot bead, it combusts on the surface and raises the temperature and resistance of the platinum wire. This resistance change causes the detector output signal to change, thus producing a peak. The brass detector housing is mounted on a stainless steel bulkhead fitting, which is secured directly to the wall of the GC column oven.

8690-2007	**CCD detector**
8670-2007	**Replacement CCD detector housing (2 sensors in 1 housing)**