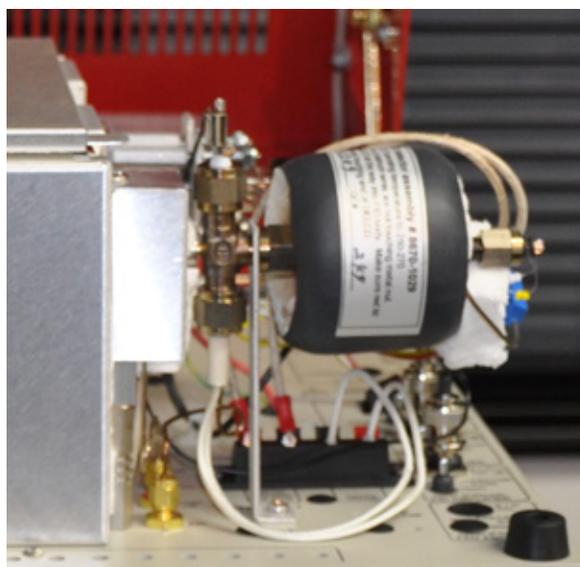
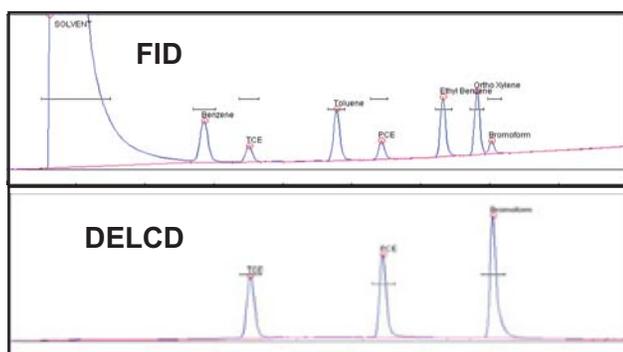


FID/DELCD Combination Detector

- The FID detects Hydrocarbons and the DELCD identifies which are Halogenated
- No Electrolytes needed for the DELCD
- High and Low sensitivity modes
- Detects to the Low ppm range



The FID/DELCD is one of the most useful detector combinations because it allows the operator to reliably identify hydrocarbon peaks detected by the FID as halogenated or not



The top FID trace shows the hydrocarbons in a 100ppm BTEX plus sample, while the bottom DELCD trace shows only the halogenated compounds. The DELCD completely rejects the large solvent peak.

While less sensitive than the ECD detector, the DELCD is much more selective, eliminating interferences which would complicate an ECD analysis. Sample preparation which might be required for ECD work is not required for the DELCD because of its total selectivity to chlorine and bromine, and because the FID pre-combusts any contaminants. In the high sensitivity mode (hydrogen off, using dry tank air), the DELCD can detect down to the low picogram range. In this mode, the DELCD is about 100 times more sensitive than when used with the FID exhaust in the low sensitivity mode.

The DELCD measures the ClO_2 present in the FID exhaust gas. Because the FID combusts the sample upstream of the DELCD, all hydrocarbons are converted to CO_2 and H_2O prior to the DELCD, thereby completely preventing large hydrocarbon peaks from contaminating the DELCD. Because the DELCD operates at close to 1000°C , it can tolerate the water saturated FID effluent and measure the chlorine or bromine content simultaneously with the FID hydrocarbon content measurement. This is especially beneficial for measuring chlorinated VOCs under a solvent peak, or in measuring PCB peaks obscured under large amounts of diesel fuel. This detector combination is often used with our Thermal Desorber or Purge & Trap, which concentrate the sample to achieve lower detection limits.

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FID/DELCD detector