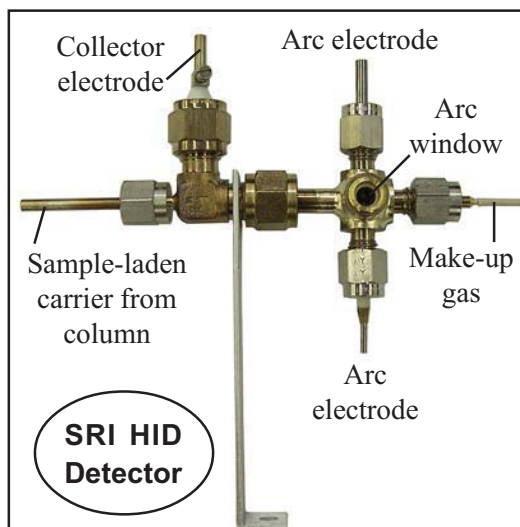


# HID - Helium Ionization Detector



- **Universal (except neon)**
- **Detect from 1-2% down to 10ppm**
- **Requires only helium carrier and make-up gas**
- **Perfect Complement to the TCD!**

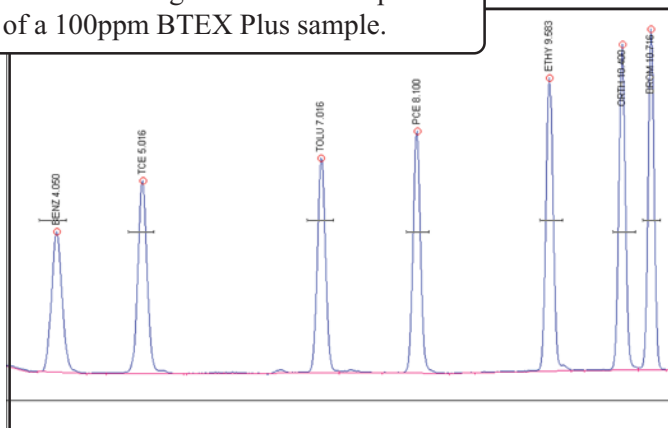
The Helium Ionization Detector is a “universal” detector which responds to all molecules except neon. The HID is particularly useful for volatile inorganics like NO<sub>x</sub>, CO, CO<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub> and H<sub>2</sub> which do not respond on the FID or other detectors. Unlike an FID, the HID needs no hydrogen or air. The HID requires only

helium carrier and make-up gas, and delivers sensitivity in the low ppm range. Many labs are reluctant to store hydrogen fuel gas for safety reasons, so the fact that the HID requires only helium is a significant advantage.

The HID is especially useful in combination with a Thermal Conductivity Detector. The TCD is not sensitive enough to detect low ppm concentrations, while the HID saturates in the low percent range. When using both detectors in series, it is possible to cover 10ppm to 100%.

Unlike other HID designs, the SRI HID can be heated to 350°C and can easily be disassembled for cleaning. The HID incorporates robust, easily serviceable electrodes which support a low current arc through the helium make-up gas flow. This elevates the surrounding helium to a metastable state. When the metastable helium molecules collide with sample molecules as they elute from the column, the sample molecules are ionized and attracted to a collector electrode, amplified, and output to the data system. Our HID features a window through which the low current arc is visible, so it is easy for the operator to verify that the detector is functioning.

This chromatogram shows the separation of a 100ppm BTEX Plus sample.



8690-0030

HID detector