

NYSDEC Experience with Synspec BTEX Instrument

New York State Department of
Environmental Conservation

National Air Monitoring Conference

November 4, 2009

Gaylord Opryland Hotel - Nashville, TN



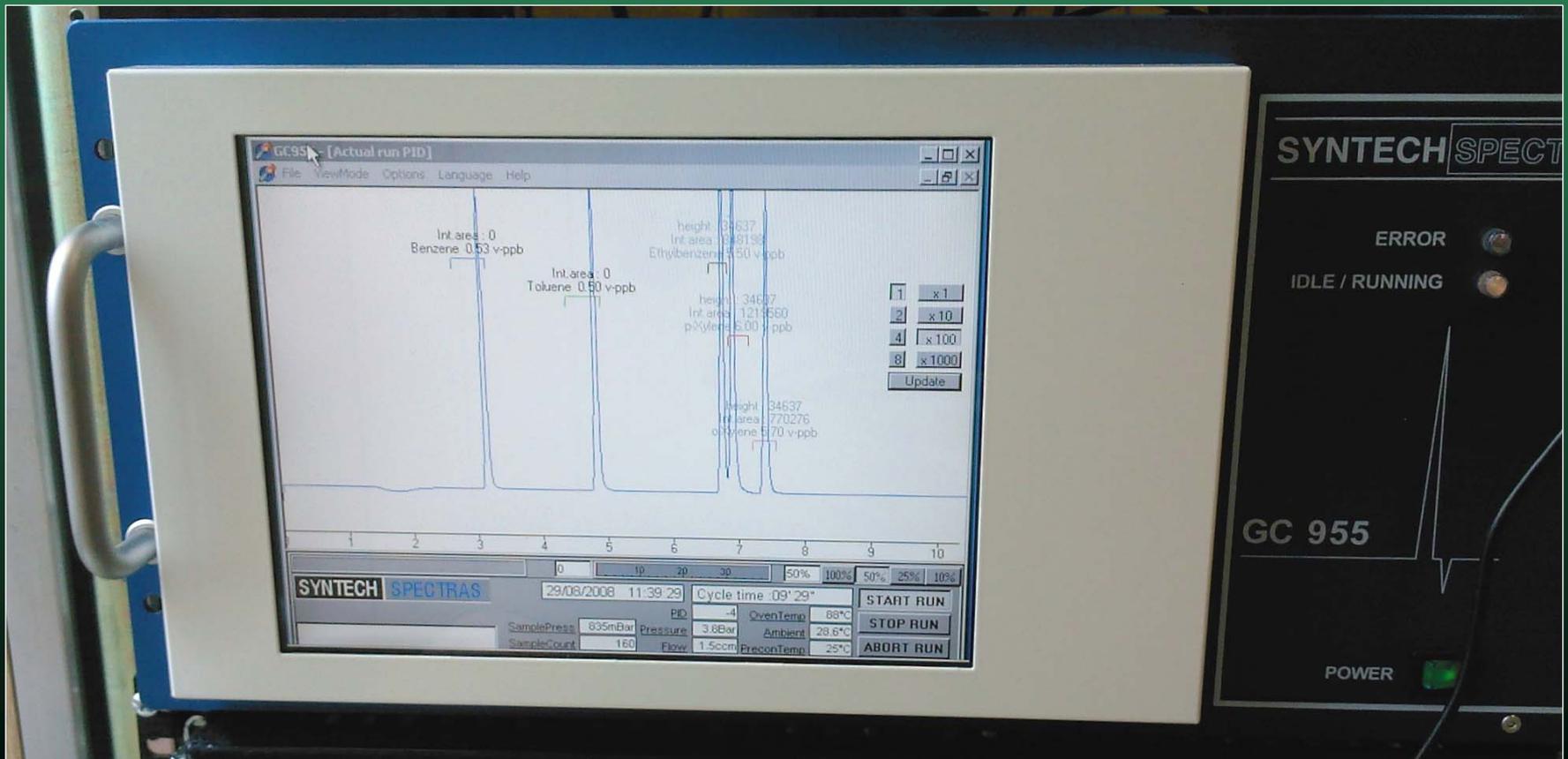
What Is It ?



Synspec GC955

Field Gas Chromatograph setup to measure BTX compounds every 15 minutes.

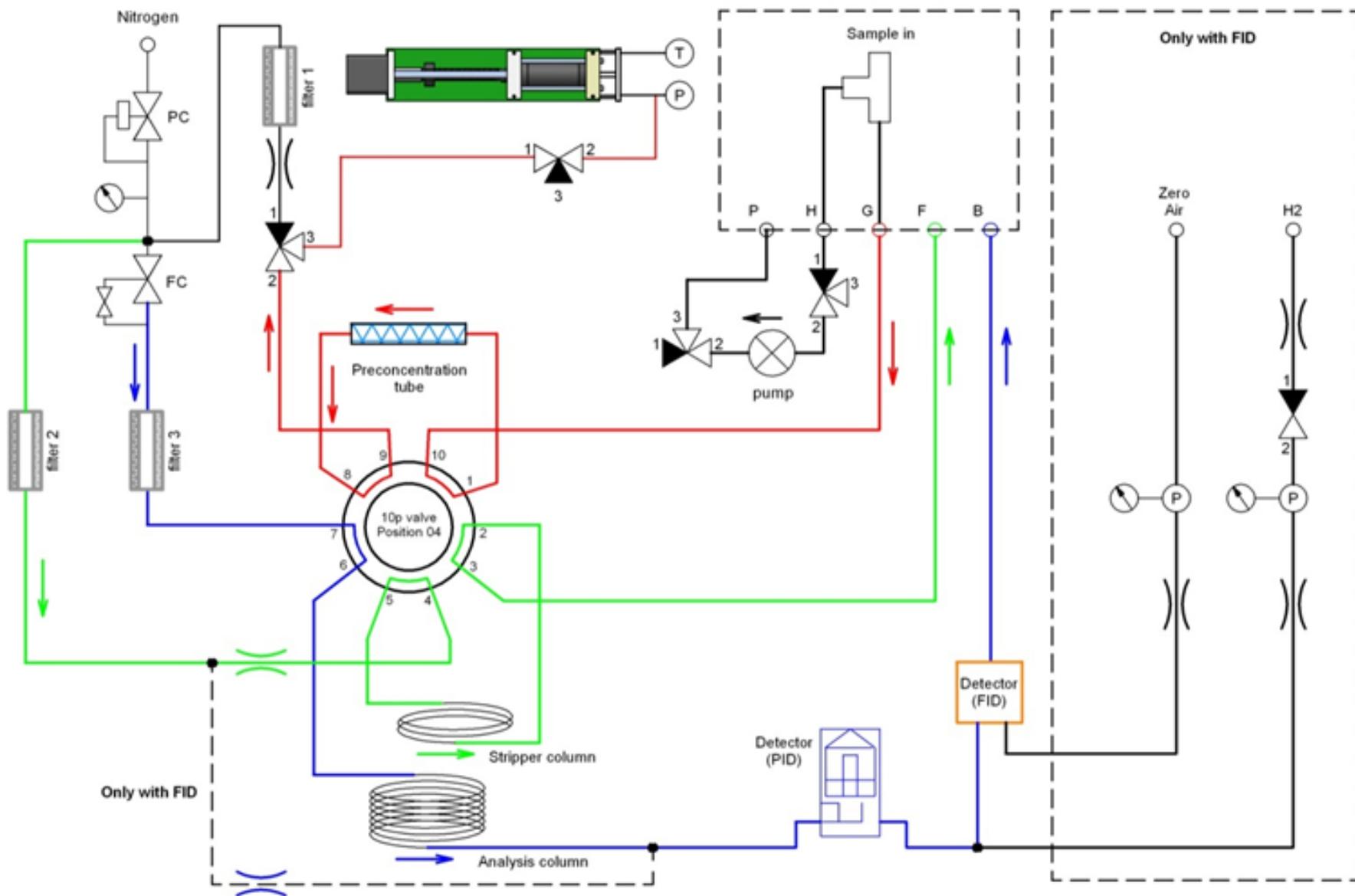
(benzene, toluene, m/p-xylene, ethylbenzene, o-xylene)



System with cooled preconcentration and capillary column



SAMPLING/ANALYSIS



INJECT/STRIP

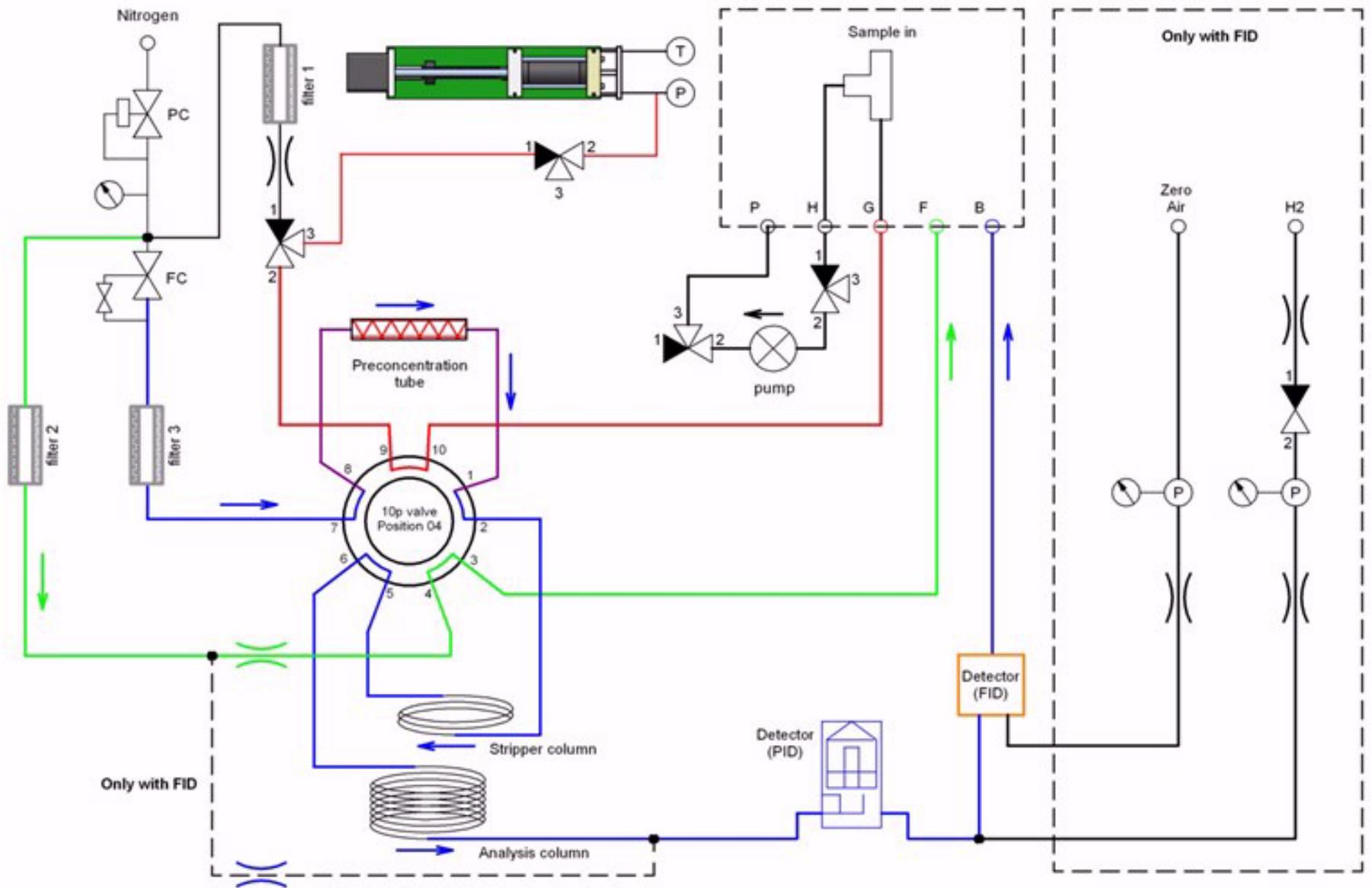
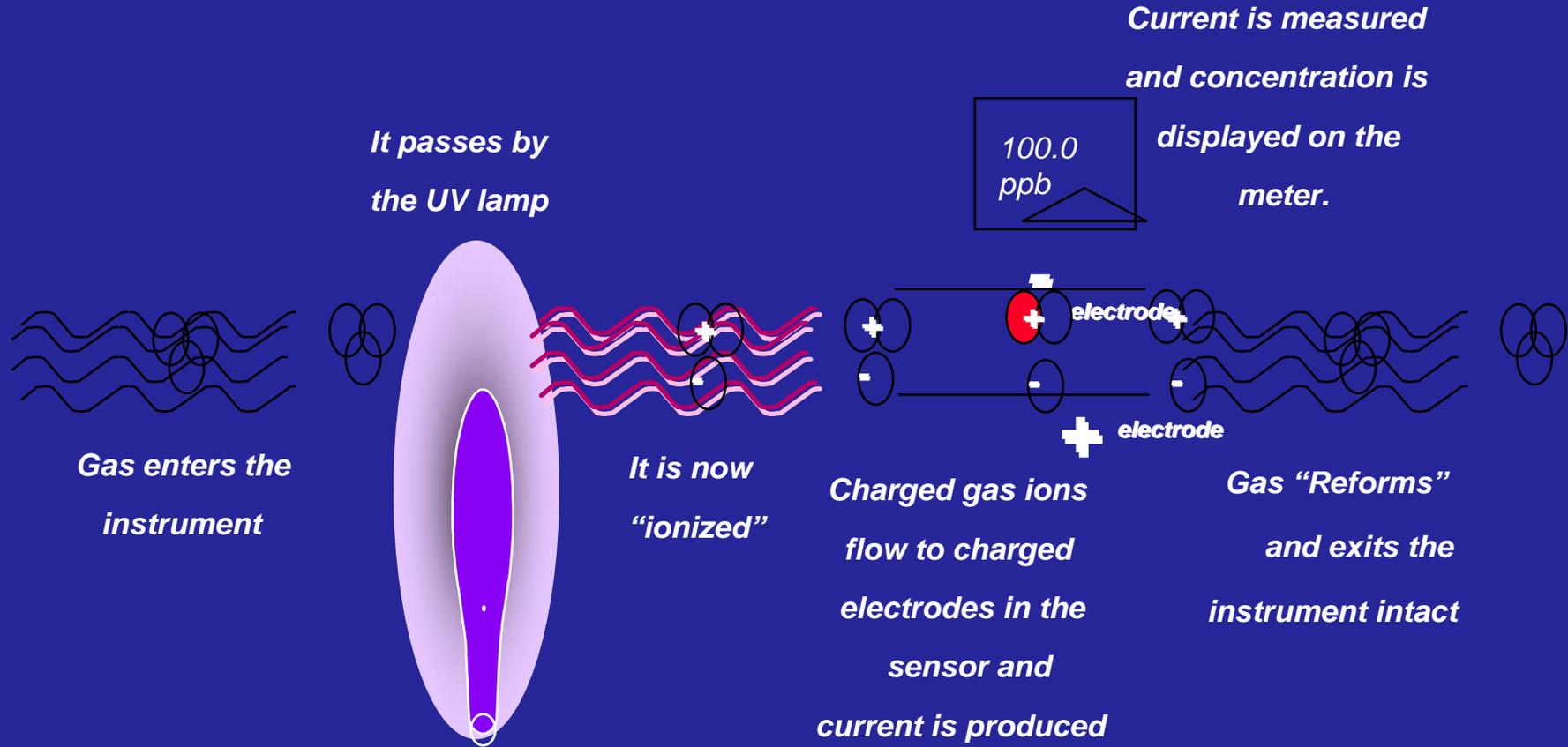


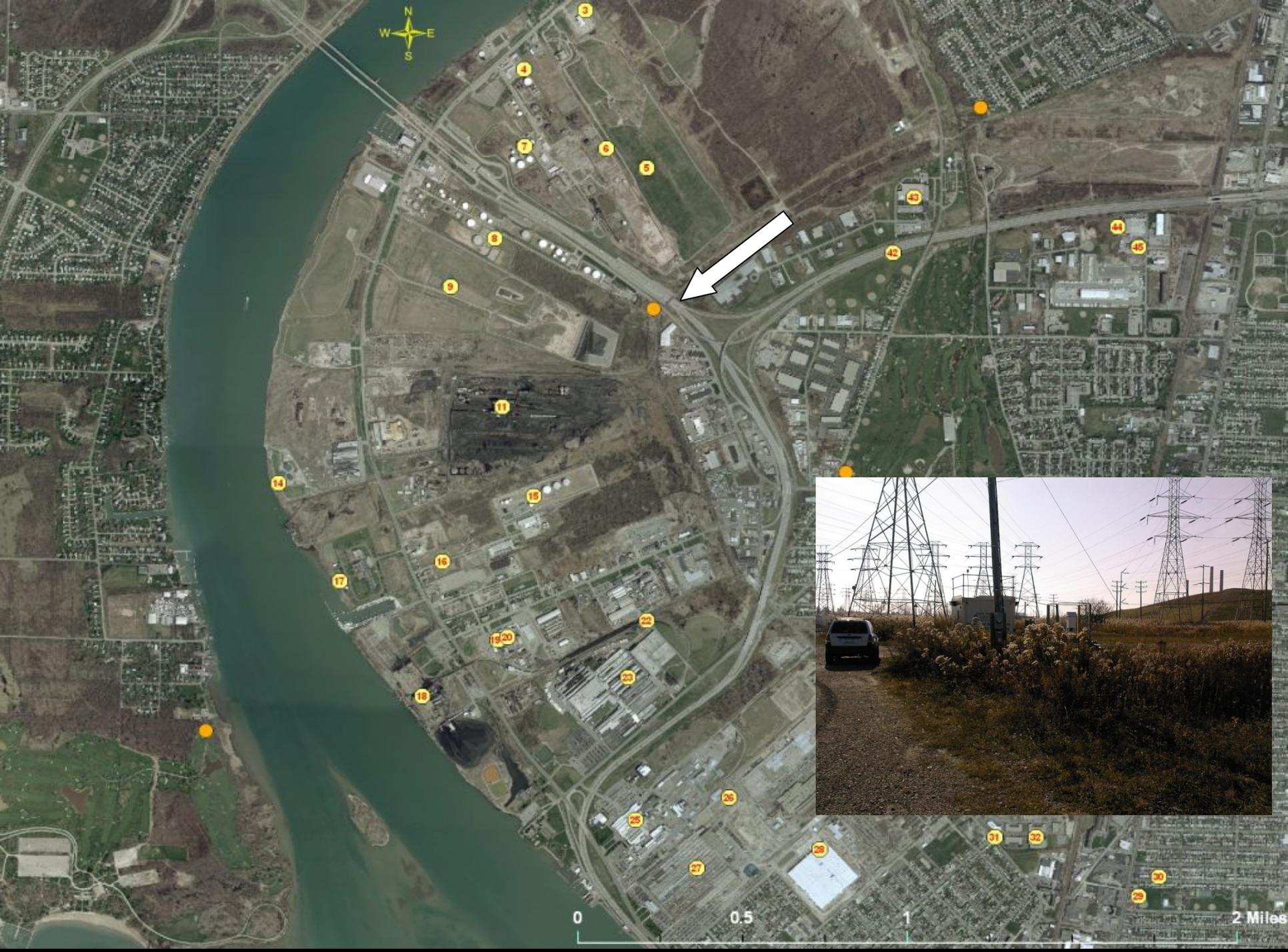
Photo ionisation detector

- An ionising UV-lamp, alternative to standard flame ionisation
- Needs no flame with hydrogen and clean air
- Not destructive
 - combination with other detectors possible
- **Sensitive** to a range of compounds
 - For aromates 100x more than FID
- **Insensitive** to a range of compounds
 - Gives a selectivity, but also a limitation

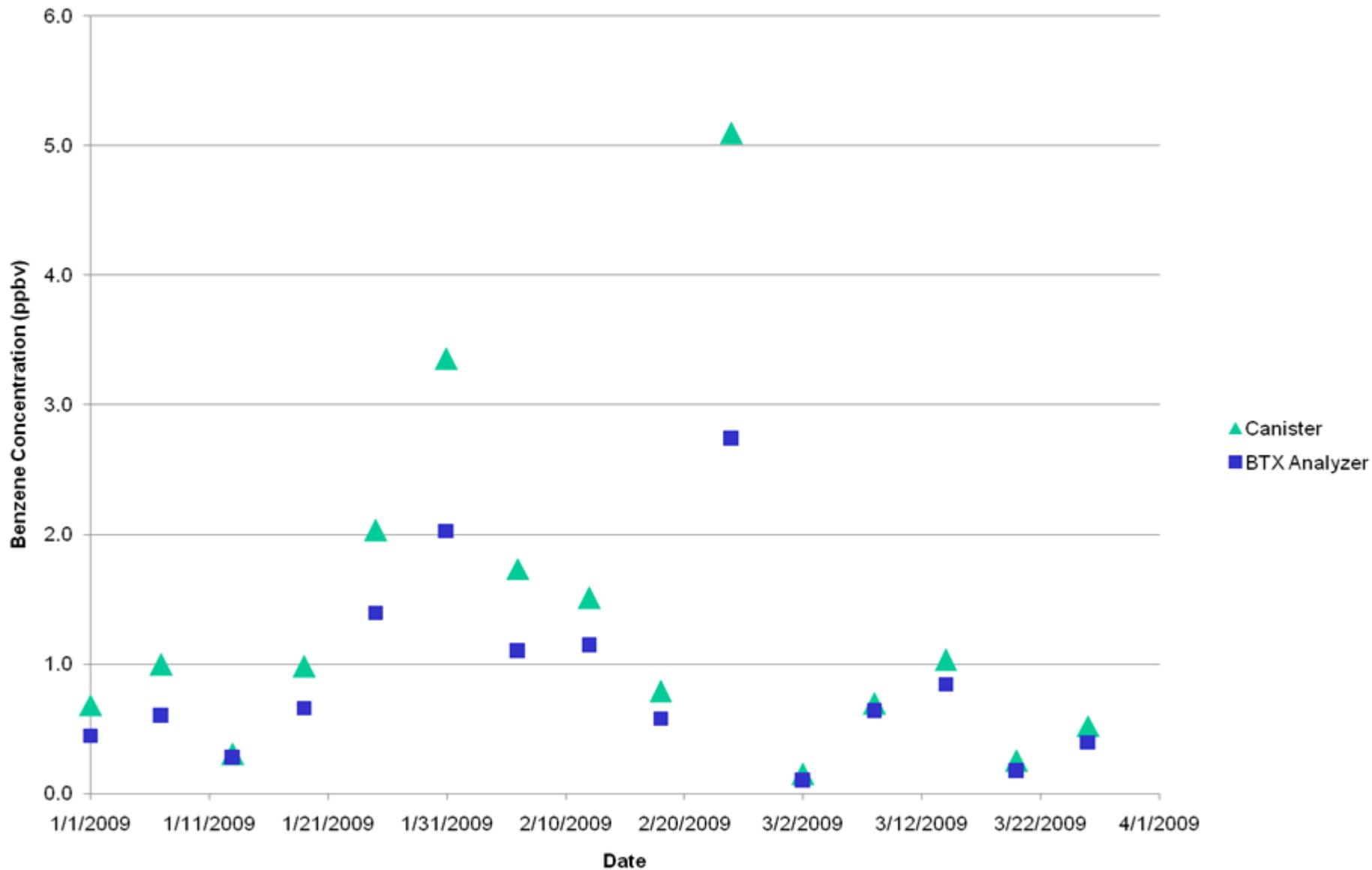


Principle of PID

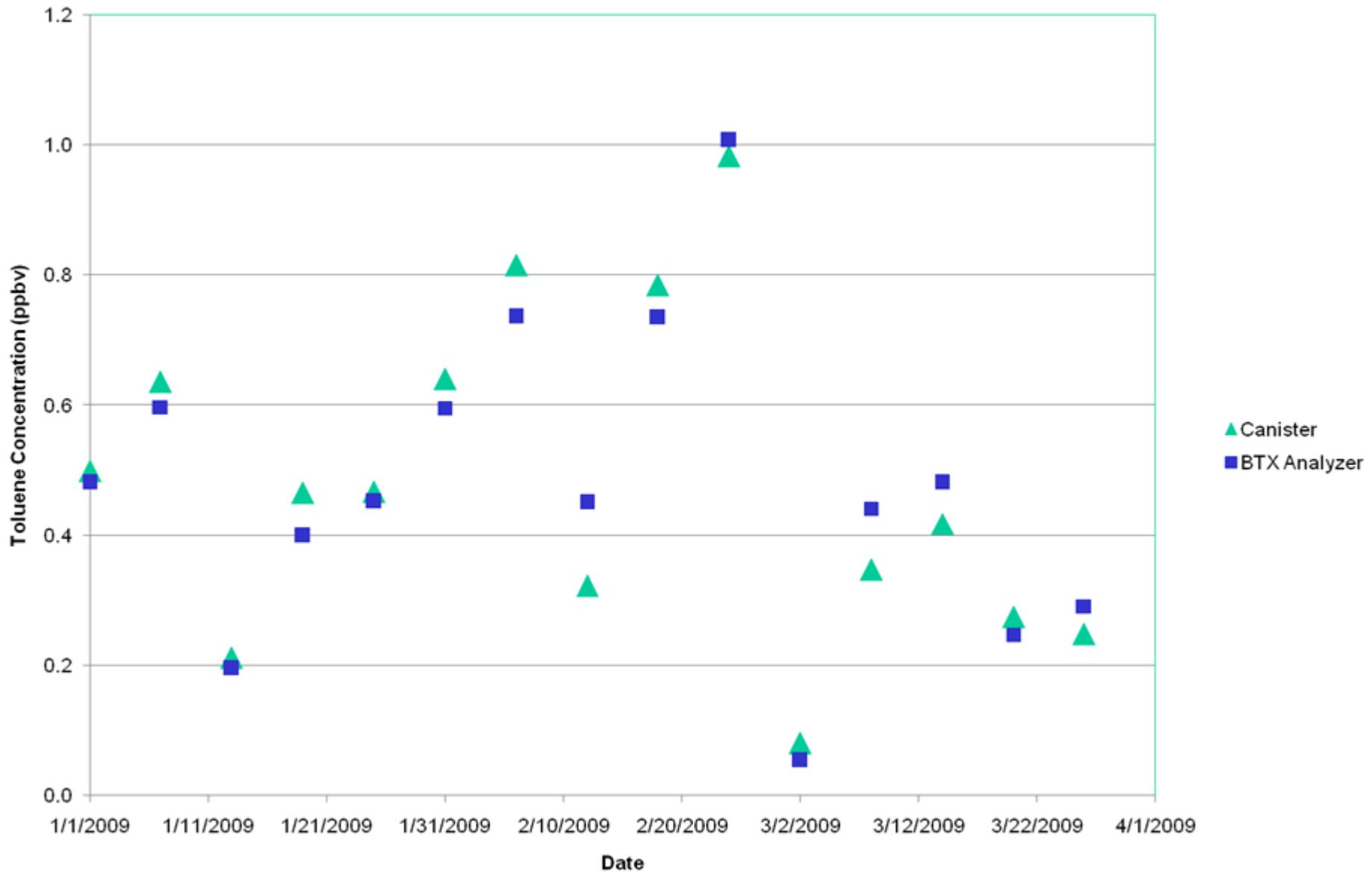




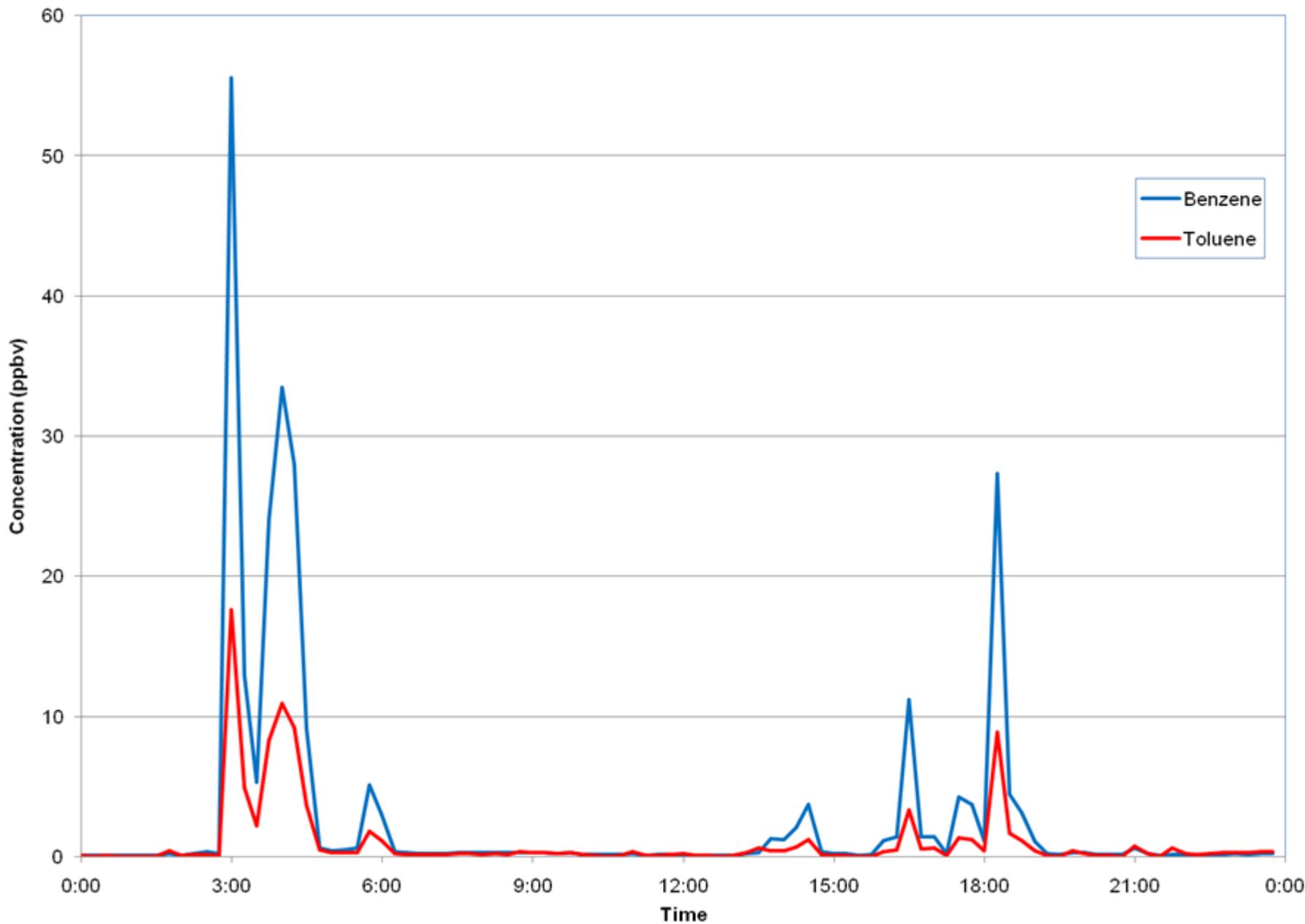
Benzene 24-Hour Comparison TO-15 Canister Analysis vs GC955 Analyzer in Tonawanda, NY



Toluene 24-Hour Comparison TO-15 Canister Analysis vs GC955 Analyzer in Tonawanda, NY

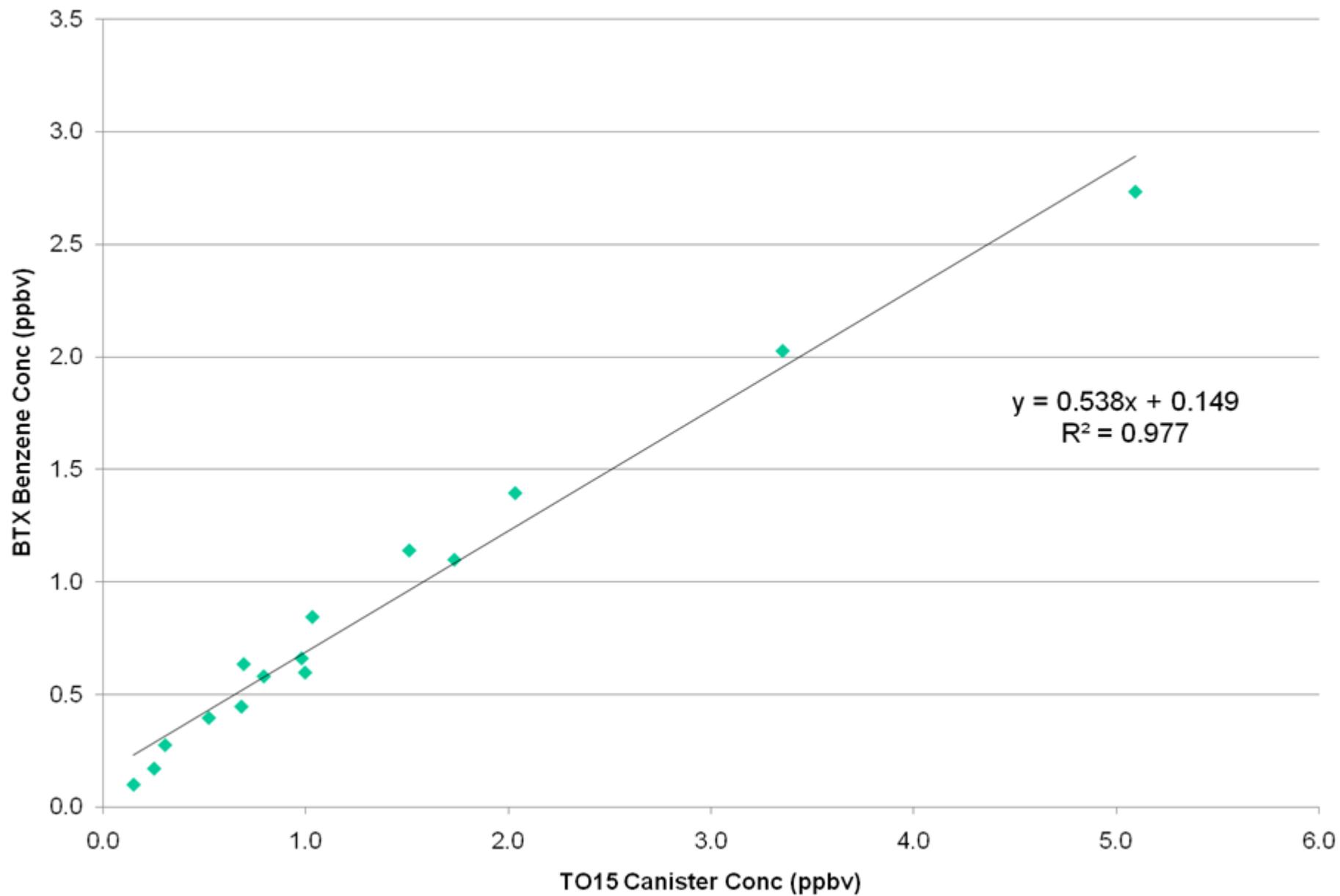


2/24/09 Tonawanda, NY 15 Minute Benzene & Toluene Conc





Benzene BTX vs Can



Toluene BTX vs Can

