

## Aeroqual's PID versus GSS Sensors

Aeroqual produces three different types of sensor for measurement of volatile organic compounds (VOCs): PID, GSS VOC and GSS NMHC. These sensors have been designed to respond to a broad range of VOCs although they each display a unique sensitivity to certain VOCs or classes of hydrocarbon, see Table 1. However, the range of sensitivity of each sensor substantively overlaps with the others as shown qualitatively in Figure 1.

Generally only one type of VOC sensor would be included in an AQM60 air quality station due to the overlapping response characteristics. The most commonly chosen would be a PID sensor due to its wide sensitivity and excellent response to VOCs found in transport fuels.

**Table 1      Sensitivity of Aeroqual VOC sensors**

Sensor	Selectivity	Ambient gases
PID	Sensitive to wide range of gases but insensitive to some common gases eg propane, formaldehyde, alcohols	Aromatic hydrocarbons, fuels,
GSS NMHC	Most sensitive to hydrocarbons	Aromatic hydrocarbons, fuels, olefins
GSS VOC	Sensitive to wide range of gases	Hydrocarbons, alcohols, formaldehyde

**Figure 1      Qualitative diagram showing the range of compounds each Aeroqual VOC sensor responds to relative to each other.**

