

Portable Pid



The portable pid is used for hydrocarbon monitoring. It uses light to ionize hydrocarbons and detects them

The difference with an fid is that a pid lends itself particularly to the BTEX range of substance (Benzene, Toluene and Xylene)

To determine if a compound will be detected by a pid we need to look at the ionisation potential (ip) of the substance. If it is less than that of the lamp it will be detected. The manufacturer will publish a list of ip's for each compound

There are a range of approximately half a dozen portable unheated fids available in the UK market

In order to achieve satisfactory results we have laid down a few simple guidelines:

- 1, Ensure you have read the manual of your pid
- 2, Make sure the batteries are fully charged prior to use
- 3, Prior to going out in the field with your equipment, check the validity of the calibration certificate. Pids are normally calibrated with isobutylene (100ppm)
- 4, The day before you go into the field check the operational status of the pid – does it light ok, does it respond to gas,
- 5, Going into the field, there are two issues that all pids suffer from and awareness of these issues means they can be minimised:
 - A, portable pids don't respond to certain hydrocarbons, they are particularly not sensitive to methane
 - B, Moisture, water. It must be ensured that moisture / water is never allowed to enter the pid. Moisture will destroy the lamp
- 6, Keeping the instrument clean and working. A portable pid is an expensive analytical tool. It needs to be handled carefully and treated respectfully. An instrument that is covered with mud can hardly be expected to provide reliable data

Good Practice:

Use a controlled gas source of known concentration to validate your readings before and after a test.

Datalogging: There are logging and non logging pids

Sample Frequency: Make sure the fid logging matches the change in rate of your process. i.e you are not missing any emission points.

Monitoring range : Ensure you are working in a range of the fid that you can validate. Typically 0-15,000ppm

Post Monitoring : Pull clean dry air through the analyser to get a stable zero

Download and analyse data

Clean, calibrate and charge the fid. Make sure it is run every 2-3 weeks

Contact Environmental Monitoring 01539 727878 we can supply filters, calibration gas and tedlar bags