PEAK LABORATORIES

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Peak Performer 1 FID

The Peak Performer 1 FID uses a highly sensitive Flame Ionization Detector (FID) which has been designed specifically for process applications in UHP gases. The FID is used to measure trace impurities down to part per billion levels, while offering a wide linear range for simple, accurate measurements. The PP1 technology has proven to offer a more cost-effective and user friendly alternative to other instruments for similar applications. In addition, **Peak Labs** practical experience and ability to customize to suit your applications makes **Peak Labs *your partner***, not just your supplier. Please contact us at Peak Laboratories or your local sales representative for custom applications and further information on our standard applications.

The Peak Performer 1 FID gas chromatograph (GC) can be optimized for your analytical needs in a variety of matrix gases. *Typical* applications are provided below:

- CH4, CO2, NMHC (non-methane hydrocarbons) in UHP bulk process gases (see Fig. 1).
- CH4 production in bio-reactors
- Atmospheric CH4 and NMOC / NMHC analysis

Performance *

Some standard detection limits (in parts per trillion)

	Matrix Gas	**N2, Ar, He**	**O2**	**Air****	**H2**
Impurity					
CH4: Methane		**500**	**500**	**500**	**500**
CO: Carbon Monoxide		**n/a**	**n/a**	**n/a**	**5 ppb**
CO2: Carbon Dioxide		**800**	**800**	**n/a**	**800**
NMHC: Non- methane hydrocarbons		**800**	**800**	**800**	**800**

All performance specifications are based on fully optimized PP1 FID with 5 cc sample loop on continuous analysis

- Unless specified, carrier gas is purified nitrogen.
- FID fuel gases are UHP grade < 1000 ppb impurities

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Accuracy

- + / - detection limit or 10% of reading, whichever is higher.

Range

- 10000 : 1

  Examples, 1 ppb – 10 ppm w/5 cc sample loop
  5 ppb – 50 ppm w/1 cc sample loop

Operation

Run time:

- 400 seconds < (depending on application)

Operating Temperature:

- 55 - 85 °F (13 - 30 °C)

Gas Supply Requirements:

1. Carrier:
- Purified nitrogen
- Supply pressure 70 – 110 psig with 5% stability

2. FID H2:
- 99.999% pure or purified: < 1000 ppb impurities
- Supply pressure 25 – 45 psig with 5% stability

2. FID Air:
- 99.999% pure or purified: < 1000 ppb impurities
- Supply pressure 5 – 45 psig with 5% stability

Data Collection / Communication (Standard)

- Backlit 3” x 5.25” touch screen
- Visual chromatogram and numerical results
- On-board integration with re-run capability
- Chromatograms collected and archived via standard 9 – pin com-port in .csv format (data is excel compatible)
- Printer port

Dimensions / Electrical

- 27” L x 17” W x 7” H
- 25 lbs.
- 115 VAC, 50 – 60 Hz / 220 VAC, 50-60 Hz
- 1.5 amp maximum

Accessories and other features

- trend outputs
- analysis averaging
- auto start/stop capability
- EZ Chrom compatible
- On column syringe injector adapter
- Dual sample stream option

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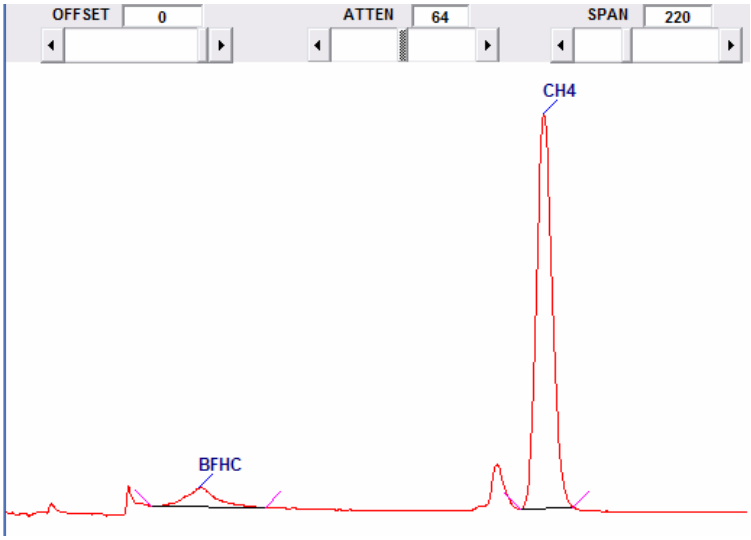
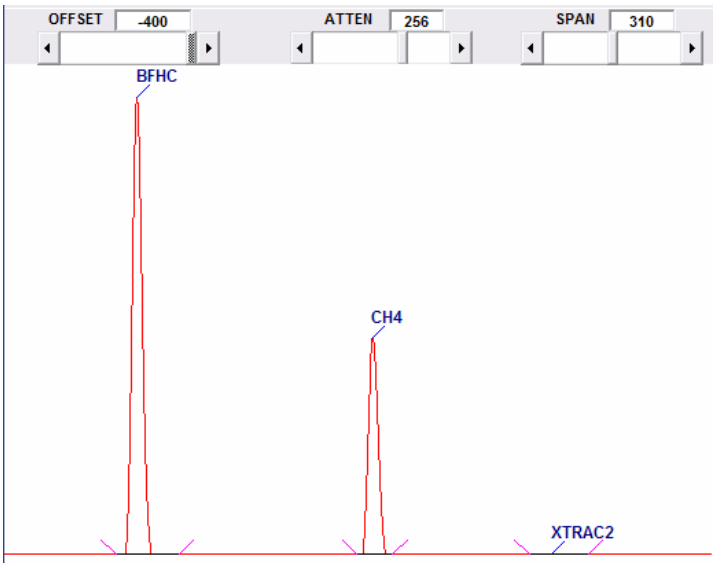


- **Carrier: Purified N2**
- **Sample : Continuous atmospheric air sample**
  - **2100 ppb CH4**
  - **8 ppb NMHC as CH4**

Figure 1. (Air Sample)



- **Carrier: Purified N2**
- **Sample: Multi-component standard):**
  - **5273 ppbv CH4**
  - **5146 ppbv NMHC**
  - **Balance N2**

Figure 2. (Span Gas)