

Buck Model HC-404 Total Hydrocarbon Analyser

Perfect for EPA methods 418.1, 413.2 and the “NEW” 1664 Hexane Method.

Overview

The Model HC-404 is a self contained, fixed Infrared analyser designed for rapid, accurate analysis of Total Petroleum Hydrocarbons in Water, Soil and Sludge Samples



Features:

- Fixed wavelength 2924cm^{-1} (3.42 microns) allows for quick analysis without unnecessary scanning.
- Digital readout in %T and Absorbance, or in Concentration mode for direct ppm readings.
- Accommodates 10, 50, 100mm quartz cells for analysis to 1ppm or lower detection levels.
- Built-in scale expansion and extended linear range for high concentration, using a simple 3-step calibration.
- Peltier cooled PbSe Detector provides greater than 2500 to 1 Signal-to-noise Ratio, resulting in the very best detection levels and excellent instrument stability.
- Instrument simplicity and intuitive controls allow for immediate operation.



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Specifications:

Wavelength:	Fixed at 2924cm ⁻¹ (3.42 microns) with 30cm ⁻¹ (0.04 microns) Bandwidth.	Ranges:	0-100% Transmission 0-2 Absorbance Units 0 -1 and 0 - 0.1 Concentration.
Noise:	Signal-to-Noise Ratio better than 2500:1	Recorder Output:	Optional.
Drift:	0.01 Abs. Units per Hour.	Power Requirements:-	115v/230v ac 50-60Hz 80 Watts.
Accuracy:	± 1%	Weight:	20lbs
Response:	Switchable Damping		

Typical Applications:

Environmental-Water and Soil quality analysis;
UST closure testing

Industry- Monitoring waste water discharges

Laboratories - Screening samples for expected
organic content prior to analysis.

Automobiles - Monitoring service station
waste and water discharge

Oil Sites - Monitoring discharge of storage
tank washings.

Marine Transportation - Testing Bilge and
ballast discharge.

EPA Standard Methods: A brief synopsis

EPA 418.1 / 413.2 Freon Method

- Step 1 - Measure out 10 grams of soil or 100ml of water and acidify with HCL to minimise contaminates.
- Step 2 - Pipette in 10ml of Freon-113 or CC14 and combine it with the soil or water extract TPH materials.
- Step 3 - Transfer the clear solvent into a cuvette and place into the Instrument's Cell holder.
- Step 4 - The HC-404 will easily obtain sensitivity reading of 2 - 5ppm with a typical working range of >500ppm.

EPA 1664 Hexane Method

- Step 1 - Measure out 10 grams of soil or 100ml of water and acidify with HCL to minimise contaminates.
- Step 2 - Pipette in 10ml of Hexane and combine it with the soil or water extract TPH materials.
- Step 3 - Isolate the solvent layer from the top of the solution.
- Step 4 - Using a digital pipette, place 100 microlitres in the unique Buck Cavity Cell.
- Step 5 - Evaporate off the Hexane.
- Step 6 - Place the Cell into the Cell Holder of the Instrument.
- Step 7 - The residual oil / grease / H-C's in the bottom of the Cell will give detection limits of 20ppm in Hexane.
** Additional deposits can be made to obtain a better signal, and better sensitivity if necessary.

