

Buck Model HC-404 Total Hydrocarbon Analyzer

Perfect for EPA methods 418.1, 413.2 and the "NEW" 1664 Hexane method.

Overview

The Model HC-404 is a self contained, fixed infra-red analyzer designed for rapid, accurate analysis of total petroleum hydrocarbons in water, soil and sludge samples.



Features:

- Fixed wavelength 2924cm^{-1} (3.42μ) 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 1 ppm 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.

LABEQUIP

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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/hour	Power Requirements:	115V/230 V.A.C. 50-60Hz 80 Watts
Accuracy:	± 1 %	Weight:	20 lbs.
Response Time:	10seconds in Damping 1 and 40seconds in Damping 2	Dimensions:	14" W x 11" D x 10" H

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 minimize contaminates.

Step 2- Pipette in 10ml of Freon-113 or CCl₄ and combine it with the soil or water to 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- Repeat step 1 exactly as instructed in the 418.1/413.2 Freon method above.

Step 2- Pipette in 10ml of Hexane and combine it with the soil or water to extract TPH materials.

Step 3- Isolate the solvent layer from the top of the solution.

Step 4- Using a digital pipette, place 100µl in the unique Buck cavity cell.

Step 5- Evaporate off the hexane.

Step 6- Place the cell in 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.