

MODERNWATER

PetroFLAG®

Hydrocarbon Test Kit for Soil

Rapid and simple field testing procedure for broad range hydrocarbon contamination in soil which is most sensitive to heavier hydrocarbons such as oils and greases.

PetroFLAG is an environmentally safe, inexpensive, field portable test to determine the total petroleum hydrocarbons in soil. It is both safe and easy to use.

PetroFLAG does not distinguish between aromatic and aliphatic hydrocarbons, but quantifies all fuels, oils, and greases as total hydrocarbons. Analysis of a 10 gram soil sample is performed using three simple steps: extraction, filtration, and analysis.

The PetroFLAG system is completely field portable. Everything needed to perform ten soil tests can be conveniently carried to the job site in a briefcase size carrying case. The PetroFLAG meter is a light-weight, rugged hand-held unit powered by a 9-volt alkaline battery. The meter is menu driven for ease of use and utilises an EEPROM memory system. Fifteen response factors are built into the analyser depending on the analyte of interest. Response factors correlate to fuels ranging from weathered gasoline to heavy crude oil. The results are shown in ppm on an LCD display screen.

PetroFLAG has been assigned a USEPA SW-846 Draft Method 9074.

- Quantitative or semi-quantitative results for up to 14 fuels
- Test up to 10 samples at once
- Detection range 10 - 10,000 ppm (fuel type dependent)
- Dexsil patented chemistry
- EPA SW-846 Method# 9074



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Specificity

The PetroFLAG hydrocarbon in soil test kit is used in conjunction with the PetroFLAG analyser to allow users to select the response factor that is appropriate for the suspected contaminant at each site. The following are response factors and Method Detection Limits for common hydrocarbons:

PETROFLAG (PPM)		
Hydrocarbon Type	MDL	Response Setting
Transformer Oil	15	10
Grease	15	9
Hydraulic Fluid	10	8
Transmission Fluid	19	8
Motor Oil	19	7
#2 Fuel Oil	25	7
#6 Fuel Oil	18	6
Diesel Fuel	13	5
Gear Oil	22	5
Low Aro. Diesel	27	4
Penn. Crude Oil	20	4
Kerosene	28	4
Jet A	27	4
Weathered Gas	1000	2

Basic Test Procedure

- Prepare soil extraction tube and developer vial by labeling with sample ID.
- Weigh 10 grams of soil into labeled tube.
- Set timer for 5 minutes. Add extraction solvent to labeled tube. Shake and incubate for 1 minute.
- Pour free liquid from labeled tube into syringe barrel, add plunger and dispense into 6 ml vial.
- Add extraction solvent to developer solution. Shake for 10 seconds.
- Set timer for 10 minutes.
- Read results of developed samples in PetroFLAG Analyser. Select pre-programmed response factor.



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Test kit components

- 12 blue-capped polypropylene soil tubes
- 12 polypropylene filter assemblies
- 12 screw capped developer vials
- 11 break-top vials containing soil extraction solvent
- adhesive labels
- 1 break-top vial containing calibration solution
- 12 metal spatulas

Storage & precautions

- Shelf life typically one year from date of manufacture, with specific kit expiration date information provided on product packaging.
- Components can be stored and operated at room temperature.
- Extraction solvent and calibration standards contain methanol.
- PetroFLAG analyser must be used at temperatures from 4°C to 45°C.

Required test materials

- PetroFLAG analyser contains: 10 soil reagents, calibration standards, digital-hand held analyzer, digital balance, timer and carry case.

Part #
7065400

Required test equipment

- PetroFLAG soil 10 pack reagents

7065300

Other recommended materials

- Personal protective clothing (i.e. latex gloves)
- Liquid and solid waste containers
- Absorbant paper for blotting
- Notepad for record keeping



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