PetroFLAG® SYSTEM

Total Petroleum Hydrocarbons in Soil

USEPA SW-846 Draft Method 9074

The **PetroFLAG® system** is a field portable analysis method for determining Total Petroleum Hydrocarbon concentration in soil. PetroFLAG detects both aliphatic and aromatic hydrocarbons in a carbon range from C8-C44. The easy-to-use system quantifies all fuels, oils, and greases as total hydrocarbons with results displayed on the PetroFLAG analyzer in parts per million (ppm).

This method is designed to provide rapid site assessment at spill sites, tank removals, and is ideal for non-PCB transformer oil releases due to equipment leaks, accidents, or storm damage. The unique reagent system is designed to provide consistent extraction efficiency for the soil types and field conditions most commonly encountered. The reagents contain NO hazardous CFCs or dyes.

The PetroFLAG meter is a rugged hand-held unit powered by a 9-volt alkaline battery. Approximately 4000 tests can be run on a single battery, providing field dependability. The meter is menu driven with prompts and results clearly displayed on an LCD screen. TPH concentration is determined by utilizing a system of programmed response factors that correlate to the response of specific analytes with the PetroFLAG reagent system. Response factors 2-10 cover most common analytes, and 11-15 are designed for crude oil. For unknown or mixed analytes, choose the option that will provide the most conservative results.

The complete PetroFLAG system includes the PetroFLAG meter, electronic balance, timer, and one box of reagents packed in a lightweight, field portable carrying case. An extra set of calibration solutions, (ProPack) is also included for training purposes.

	Catalog #
PetroFLAG Analyzer System	**PF-MTR-01**

WARNING: Reproductive harm.
For more information visit www.P65Warnings.ca.gov

PetroFLAG Reagents

Each box of **PetroFLAG reagents** includes everything needed to process 10 soil samples and one calibration. The calibration solutions include; one blank and a 1000 ppm hydrocarbon standard. Additional 1000 ppm standards are available by boxes of 12. All reagents are premeasured and sealed in glass ampules for quality control assurance. In addition to the reagents, each box provides 10 disposable aluminum scoops for transferring soil from your collection vessel to the soil tube without worrying about cross contamination. The reagent boxes are designed to fit into the space provided in the carrying case for convenient replenishment. The test process involves just a few steps; weigh your sample, add the extract solvent and shake; pour the solution into a filter and dispense into a developer vial. Wait 10 minutes, insert the developer vial into the PetroFLAG instrument and press the “read” button. When analysis is complete, results are displayed on the LCD screen in ppm TPH.

Using a 10 gram soil sample with the standard reagent system provides results from 15 (MDL) to 2000 ppm (analyte dependent). By reducing the sample size, and applying a multiplier, results are possible up to 20,000 ppm (2%). For samples above 2000 ppm, the High Range Dilution system should be considered. With the High Range Dilution reagents, it is possible to achieve results as high as 20% by reducing the sample size and applying a multiplier.

Analytes	**Petroleum Hydrocarbons**
Matrix	**Soil**
Detection Method	**Turbidimetric Development**
Action Levels	**10 gm sample: ~15 to 2000 ppm (analyte dependent)**
MDL	**15 ppm**
MQL	**45 ppm**
Interferences	**Natural Hydrocarbons**
Overall Accuracy	**10% +/-MDL**
Analysis Time	**Throughput 1-10 samples in 15 minutes**

	Catalog#
PetroFLAG Reagents **Box 10 tests / Case 40 tests**	**PF-SRP**
PetroFLAG Calibration Standards **(1000 ppm standard only)** **Box 12 standards / Case 48**	**PF-CAL**

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