ECOPROBE 5 - Fast, Field-Ready Soil Contamination Survey

ECOPROBE 5 is a trusted handheld analyzer designed for rapid, in situ soil contamination screening. By combining photoionization detection (PID) and infrared (IR) spectroscopy in a single portable device, ECOPROBE 5 delivers immediate, reliable insights directly in the field—without the delays and costs of laboratory analysis.

Built for environmental professionals, ECOPROBE 5 enables fast decision-making during soil surveys, site assessments, and remediation projects. Its dual-technology approach enhances detection sensitivity and selectivity across a broad range of organic contaminants, methane, CO_2, O_2, NO_2, and H_2S.

ECOPROBE 5 is reliable and lightweight device ensures ease of use in demanding field conditions.

APPLICATIONS:

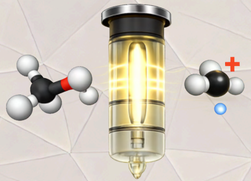
Soil Contamination Survey

Explore the ECOPROBE 5 - highly reliable, robust and powerful instrument for the in-situ measurement of organic contaminants, selective analysis of methane, or CO_2, O_2, NO_2 and H_2S.

Pipeline Leakage Test

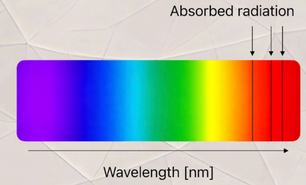
The ECOPROBE 5 is an excellent device allowing you to find pipeline leakages. Connect the attached GPS, download your measurement, and create your own map showing the pollutant concentration.

TECHNOLOGY:



Photoionisation detection (PID) is a sensitive analytical technique used to detect volatile organic compounds (VOCs) and other gases in air. It works by exposing gas molecules to high-energy ultraviolet (UV) light, which ionises compounds with ionisation energies lower than the lamp's photon energy. The resulting ions generate an electrical current that is proportional to the concentration of the target compounds. Because PID does not consume or permanently alter the sample, it enables rapid, real-time monitoring with high sensitivity, making it especially useful for environmental monitoring and leak detection.

Infrared (IR) spectroscopy is an analytical technique used to identify chemical substances based on how they interact with infrared light. When IR radiation passes through a sample, specific wavelengths are absorbed by molecular bonds, causing them to vibrate. Each type of bond absorbs infrared light at characteristic frequencies, producing a unique spectrum that acts like a molecular fingerprint. IR spectroscopy allows qualitative identification of compounds and provides information about their molecular structure.



RS DYNAMICS LLC is a trusted Swiss developer and manufacturer of highly advanced and exceptionally mobile handheld chemical detectors and identifiers. As proud pioneers in the field, our trusted product, the ECOPROBE 5, stands as the most robust & enhanced, and most accurate handheld soil contamination survey analyser.

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ECOPROBE 5

PID/IR Soil & Groundwater Contamination Survey Analyser

Technical

Unique PID/IR technology combination

Additional NO_2 & H_2S IR measurement

Selective methane measurement

Outstanding reliability

Simple use - one button operation

Automatic monitoring station option

Fully integrated automatic GPS logger

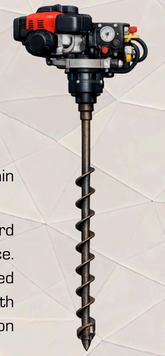
Featured

- **Sensitivity** — The ECOPROBE 5 measures VOCs and other toxic gases including chlorinated hydrocarbons to sub-ppb levels because of the PID analysis.
- **Selectivity** — The PID provides zero response to methane. The IR measure methane separately, whose values can be subtracted afterwards from total organic measurement.
- **Speed** — The ECOPROBE is designed for performance. You can make 10 measurements within one second.
- **Field use** — The heavy duty case is specially designed for the use anywhere around the world under different conditions, Either in desert or arctic.
- **User-orientated** — Although different modes, the ECOPROBE 5 offers user-friendly graphical interface readable on direct sunlight, heavy-duty rubber buttons and simplicity for user.
- **Robustness** — The ECOPROBE 5 is a proven device within the toughest conditions. No matter if you face dust, rain or snow - the ECOPROBE 5 withstands.

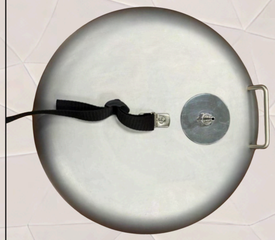
Operating the Device

Impermeable soil probe

In muddy, clayey, or otherwise low-permeability soils, the user must first drill a thin borehole approximately 1 meter deep.



This borehole allows proper insertion of the standard ECOPROBE probe while minimizing soil disturbance. Once the hole is prepared, the probe is placed directly into the ground, ensuring stable contact with the surrounding soil for precise contamination measurements.



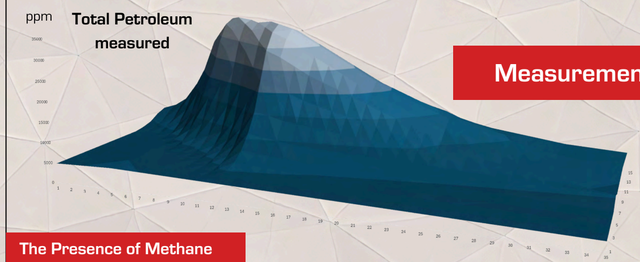
Porous soil probe

In permeable soils such as sand, gravel, or loose substrates, the user must employ the bell-shaped ECOPROBE probe.

The bell-shaped design improves contact with the surrounding soil matrix, prevents collapse around the sensing area, and ensures consistent sampling conditions without the need for a pre-drilled borehole.

After drilling, connect the probe with ECOPROBE 5 with silicon tubes and paper filter for a purpose of prevention of water drops or humidity sucking. Now you are ready for the measurement!

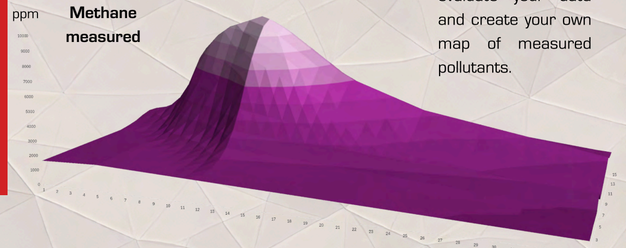
Measurement evaluation

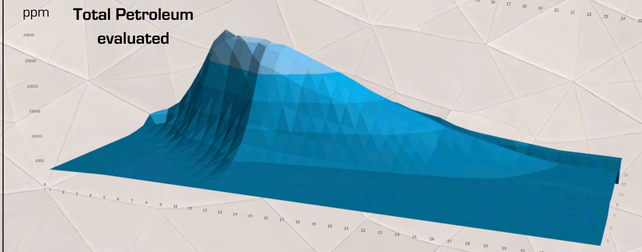


Each measurement is stored in internal memory and can be downloaded into PC, where you can evaluate your data and create your own map of measured pollutants.

The Presence of Methane

Methane is always present in the soil as a final product of biological processes. As such it can distort contamination measurement. ECOPROBE 5 offers separate channel for detection of methane for a purpose of measurement correction.





Thanks to extensive measurement, you can process your data to suppress natural environmental interference