



ECOPROBE 5

PID/IR Soil & Groundwater
Contamination Survey
Analyzer



Technical

Unique PID/IR Technology Combination

Additional NO₂ & H₂S measurement

Selective methane detection

Outstanding reliability

Intuitive four-button operation

Holster with shoulder strap included

Optional automatic monitoring station

Fully integrated automatic GPS data logging

Simultaneous and independent measurement of all parameters

Featured

- **Sensitivity** The ECOPROBE 5 detects VOCs and other toxic gases, including chlorinated hydrocarbons, at sub-ppb levels using advanced PID technology.
- **Selectivity** The PID sensor shows no response to methane. Methane is measured separately using IR, allowing accurate correction of total organic compound readings.
- **Speed** The ECOPROBE 5 is engineered for high performance, delivering up to 10 measurements per second with all channels operating simultaneously.
- **Field use** Built for demanding environments, the rugged housing is designed for reliable operation worldwide—from desert heat to Arctic conditions.
- **User-orientated** The ECOPROBE 5 features a clear graphical interface readable in direct sunlight, durable rubber buttons, and simple, intuitive operation.
- **Robustness** Proven in the toughest environments, the ECOPROBE 5 withstands dust, rain, and snow without compromising performance.



ECOPROBE 5 - Fast, Field-Ready Soil Contamination Survey

The 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, it delivers immediate, reliable results directly in the field—eliminating the delays and costs associated with laboratory testing.

Designed for environmental professionals, the ECOPROBE 5 enables faster decision-making during soil surveys, site assessments, and remediation projects. Its dual-technology approach provides enhanced sensitivity and selectivity across a wide range of compounds, including organic contaminants, methane, CO₂, O₂, NO₂, and H₂S. All parameters are measured simultaneously and independently.

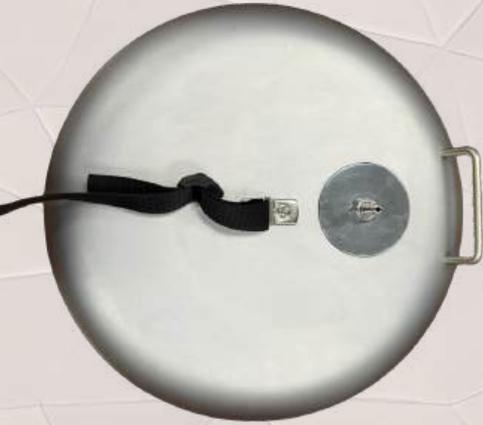
Lightweight, durable, and easy to operate, the ECOPROBE 5 is built for demanding field conditions.

Operating the Device

Impermeable soil probe

In clay, mud, or other low-permeability soils, a narrow borehole approximately 1 meter deep should be drilled prior to measurement. This allows proper insertion of the standardized impermeable soil probe while minimizing soil disturbance. Once prepared, the probe is inserted into the ground to ensure stable contact with the surrounding soil for accurate contamination readings.

In permeable soils such as sand, gravel, or loose substrates, the bell-shaped porous probe is used. This design improves contact with the soil matrix, prevents collapse around the sensing area, and ensures consistent sampling without the need for pre-drilling.



Porous soil probe

Methane Presence

Methane is naturally present in soil as a byproduct of biological processes and may interfere with contamination measurements. The ECOPROBE 5 includes a dedicated methane detection channel, allowing accurate correction of measurement results.

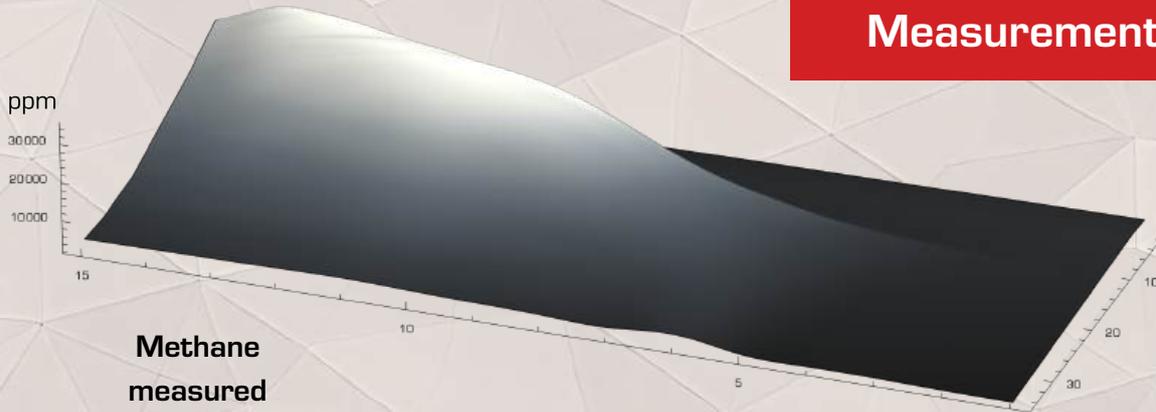


Setup

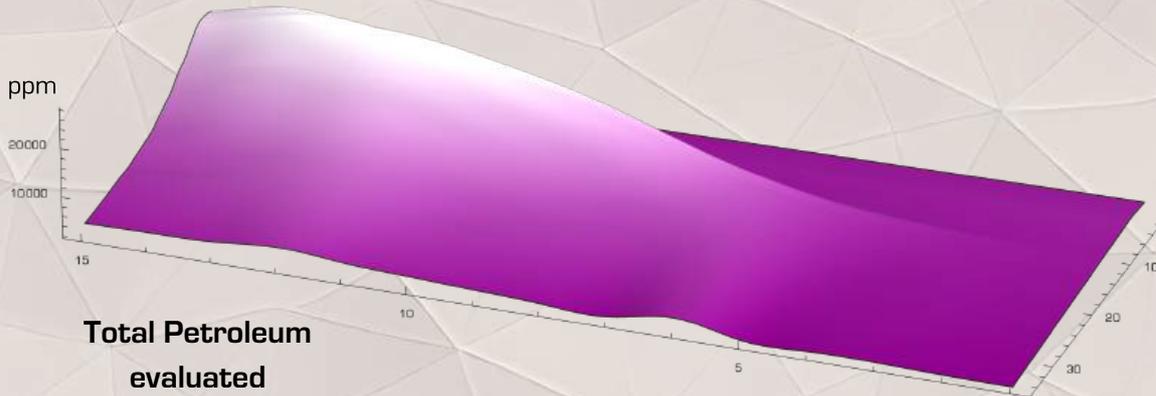
After drilling, connect the probe to the ECOPROBE 5 using silicone tubing and a dust filter. Once the measurement starts, all compounds are analyzed simultaneously in real time.

Measurement evaluation

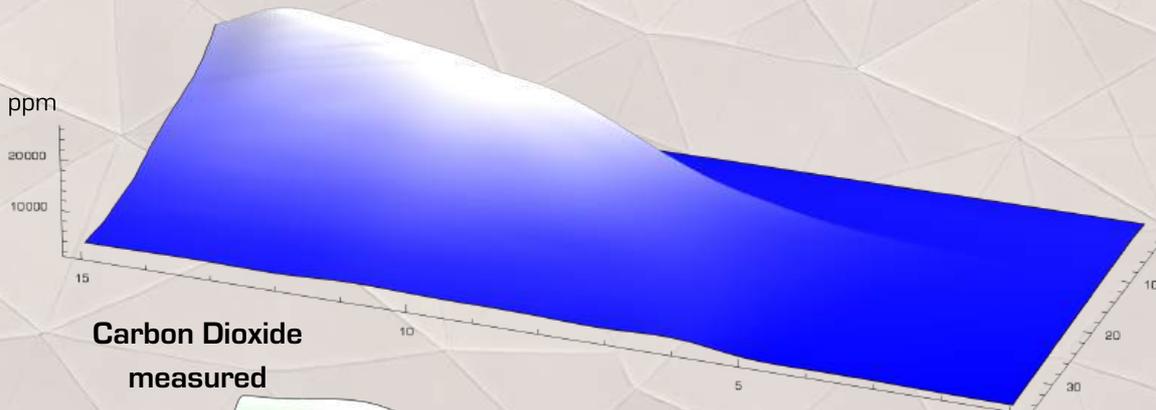
**Total Petroleum
measured**



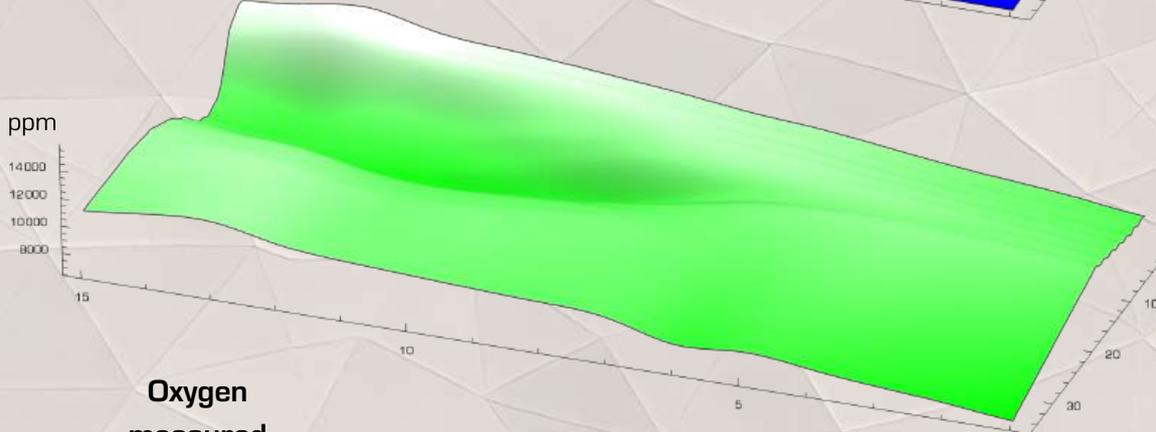
**Methane
measured**



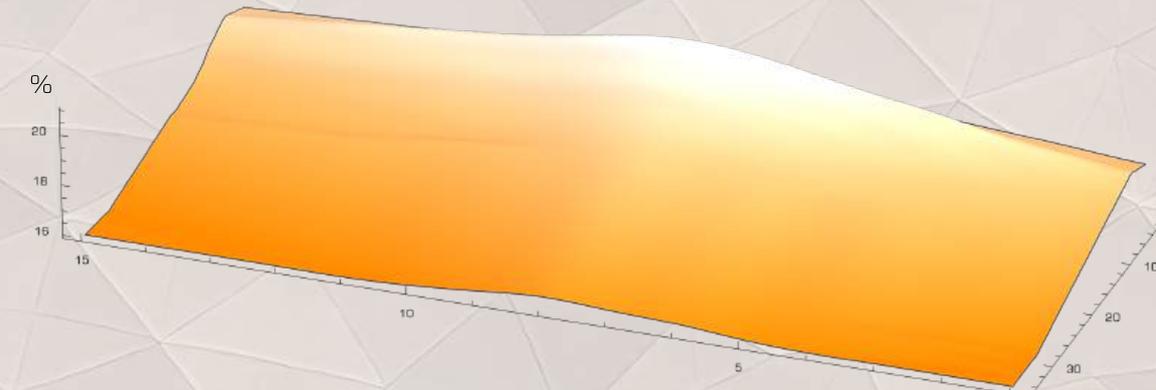
**Total Petroleum
evaluated**



**Carbon Dioxide
measured**



**Oxygen
measured**



Each measurement is stored in internal memory and can be easily downloaded to a PC for further analysis. Users can evaluate collected data and generate detailed contamination maps of surveyed areas.

Thanks to parallel measurement capabilities, datasets can be processed to eliminate environmental interferences.

A key advantage of the ECOPROBE 5 is its dedicated methane channel, which allows methane values to be subtracted from total petroleum measurements. This ensures accurate pollution concentration mapping without methane interference.

APPLICATIONS:



Soil Contamination Survey

Explore the ECOPROBE 5 is highly reliable, robust and powerful instrument for in-situ measurement of organic contaminants, selective analysis of methane, or CO₂, O₂, NO₂ and H₂S.

Pipeline Leakage Test

The ECOPROBE 5 enables fast and accurate detection of pipeline leaks. With integrated GPS, users can record measurements and generate precise contamination maps.



TECHNOLOGY:

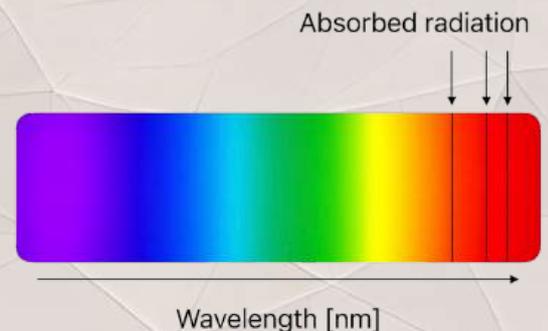


Photoionisation detection (PID) is a highly sensitive analytical technique used to detect volatile organic compounds (VOCs) and other gases. It works by exposing gas molecules to high-energy ultraviolet (UV) light, ionizing compounds with ionization energies below the lamp's photon energy.

The resulting ions generate an electrical signal proportional to the concentration of target compounds. Because PID does not consume or permanently alter the sample, it enables real-time monitoring with high sensitivity—ideal for environmental analysis and leak detection.

Infrared spectroscopy (IR) identifies chemical substances based on how they interact with infrared radiation. Specific wavelengths are absorbed by molecular bonds, causing them to vibrate and produce a unique spectral fingerprint.

This allows both qualitative identification of compounds and insight into their molecular structure.



RS DYNAMICS LLC is a trusted Swiss developer and manufacturer of advanced, highly portable chemical detection and identification systems. As a pioneer in the field, RS DYNAMICS delivers reliable, high-performance solutions. The ECOPROBE 5 represents a new standard in soil contamination analysis—combining accuracy, robustness, and efficiency in a handheld device.



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