

RS DYNAMICS

Science for Homeland Safety



Soil and Groundwater Contamination Survey

Fast and cost-effective in-situ mapping of hydrocarbons and other organic contaminants in the subsurface environment with a small and compact PID/IR device



- In-situ measurement of organic and other contaminants with selective analyses of Methane, Petroleum Hydrocarbons, CO2, O2, H2S, N2O, atmospheric pressure, sampling vacuum, soil temperature with indication of soil porosity
- Automatic monitoring station option, capable to operate in the network of remotely controlled stations
- · Fully integrated automatic GPS data-logger
- Independent automatic monitoring station operation
- Built-in powerful computer, graphic screen, sampling pump, internal rechargeable batteries for whole day operation
- · and much more....
- 10 in-situ simultaneously measured values at each station in less than 1 minute
- ECOPROBE 5 system especially designed for in-situ Soil Contamination Survey/Mapping, bio-remediation monitoring and head-space underground water contamination measurement
- Advanced computer data evaluation and remote control (wire or Internet) software included
- · Capacity to measure more than 200 stations within one day



» BASIC APPLICATIONS

- Detection, delineation and monitoring of hydrocarbon and other organic contamination of soils and/or water table from fuel spills
- Fast and convenient monitoring of UST and pipe-lines for leakage
- Waste dumps & agricultural waste measurement
- · Monitoring of contaminant plume migration
- Monitoring of in-situ bio-remediation processes
- Detection and monitoring of Methane effluence over closed coal mines
- Detection and monitoring of gaseous toxins in industrial plants and agriculture
- Detection and monitoring of contaminant effluents from various fittings sealing in chemical/petrochemical industry. Meets EPA 21 standards.
- · Air pollution monitoring

Specifications

ECOPROBE 5

ECOPROBE 5 is the highly sensitive, portable multi-function analytical system which provides optimum power & flexibility for efficient, low-cost Soil Contamination Surveys / Toxic Gas Monitoring with the following features:

- Simultaneous in-situ measurement of using the time integrated photo-ionization analyzer (PID) and 6-channel selective infra-red analyzer (IR).
- · Automatic re-zeroing before each measurement ensures perfect baseline stability and high accuracy of the resulting values.
- Ruggedized, light-weight and compact of strong construction making it entirely suitable for the field environment.
- · Easy to read graphic display, user-friendly operating system & data acquisition software.
- Real time correction of measured values for soil porosity, atmospheric / pumping pressure and temperature.
- Automatic Monitoring Station Mode. Automatic logging of all measured data.
- A powerful surface data logging system for transparent and fast 3-D graphic visualization.
- Fully integrated automatic GPS Position Logger (up to centimeter accuracy) is referenced to the WDS 84 coordinate system and also supports surface format "in meters" for un-demanding operator navigation.
- An integral user calibration facility provides on-site fast calibration and advanced whole dynamic range calibration.
- USB/RS232 interface with Win 7-10 ECOPROBE_VIEW software, providing data transfer, graphic data acquisition and data spreadsheet for 3-D graphic outputs.
- Reliable Oxygen reading.

Automatic date/time record for all stored data, built in adjustable acoustic alarm for all measured values.

» PID

- (Photo-ionization analyzer) measures total level of volatile organic compounds (VOCs) and other toxic gases including chlorinated hydrocarbons to sub-ppb levels with the following characteristics:
- Detection limit: 2 ranges- 0.1 ppm/1 ppb
- 0.5 ppb zero stability (using automatic zeroing procedure)
- Interchangeable Ion Lamps 9.6/10.6/10.2/11.7 eV (lamps optional)
- Response time: 0.08 sec; Sampling rate: 10 samples/sec.
- ppb resolution, choice of peak or integrated values
- · Indication of soil porosity/permeability
- Internal automatic calibration for quantitative vapor phase determination for about 200 compounds
- Zero response for Methane (Methane measured separately by IR unit)
- Large dynamic range (0.1 ppb to 4000 ppm), fast response
- Ion lamp 10.6/10.2 eV (other energy levels are optional)
- ppm or mg/m^3 (ppb or mg/m^3) output

>> IF

- (Infra-red analyzer) comprises 3 independent channels for selective analyses of Methane, Petroleum Hydrocarbons, CO₂ with reference channel providing ppm resolution and the following characteristics:
- Methane: 0-500 000 ppm, detection limit 200 ppm
- · Petroleum Hydrocarbons: 0-500 000 ppm, detection limit 200 ppm
- Carbon Dioxide: 0-500 000 ppm, detection limit 50ppm
- Reference Channel
- Ranges of other channels optional/selectable
- Response time: 0.5 sec; Sampling rate: 10 samples/sec
- ppm or mg/m³ output

» Other readings

- Oxygen, 0-100 %, N_2 0 10000 ppm, H_2 S up to 50 ppm or 2000 ppm
- Soil temperature: deg. F,C; (+/-0.1C, resolution 0.01C)
- Sampled gas temperature: deg. F, C
- Ambient pressure / sampling vacuum (mbar, Torr, psi, kPa), accuracy 0.1%, resolution 0.01%



- Dimensions: 105 x 260 x 170 mm (including handle), weight: 3 kg
- Shipping Weight: 13 kg (incl. probes, calibration kit, accessories)
- Power Supply: internal rechargeable battery
- Memory Capacity: about 100 000 measurements
- Output: RS 232 cable or infra-red interface
- Data Format: ASCII, EXCEL, GRAPHER, SURFER or user programmable format
- Display: full graphic back-lite LCD
- Keyboard Input: multi-function sealed keys
- Operating System: Win 9x/NT4.0 / 2000 compatible
- Internal Air Pump: membrane vacuum pump with programmable speed 0.25 4 liters/minute
- Automatic calibration of all measuring channels

Locally distributed by:

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