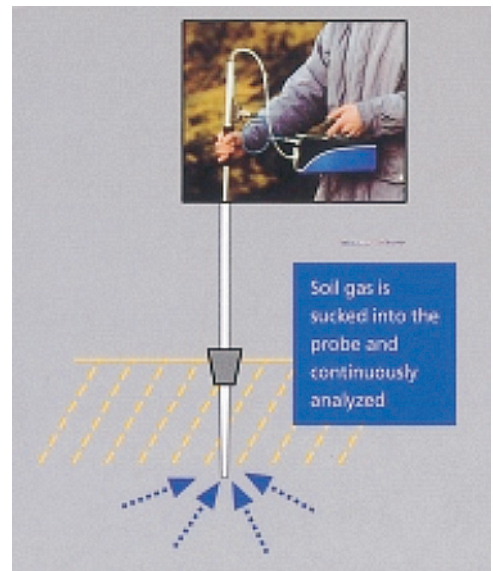
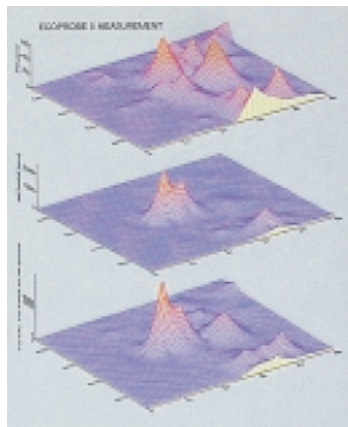


Soil Contamination Monitor



Model : **ECOPROBE 5**



용도

Applications

- 토양 오염도 측정
- 송유관 및 유류 저장 탱크의 누유 측정
- 토양 오염 복원 시설의 성능 검증
- 매립지 배출 가스 측정

특징

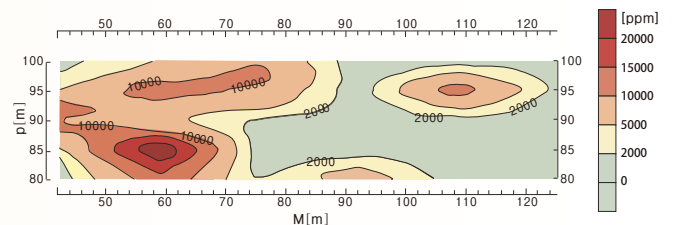
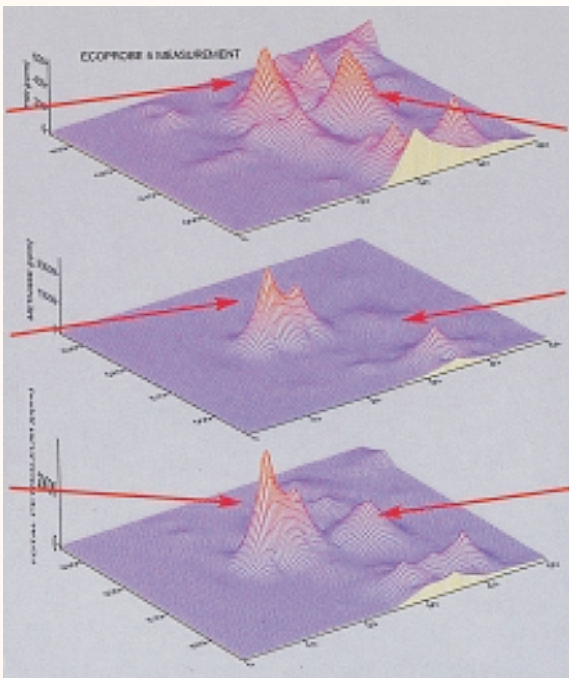
Features

- VOC, TPH, CH₄, CO₂, O₂, 대기압 및 온도 자동 측정
- GPS를 사용하여 측정 위치 자동 입력 및 오염 분포도 지원
- GPS에 의한 3차원 그래프 자동 생성
- Menu driven 방식에 의한 편리한 Software 탑재
- 독립된 PID와 4CH IR Cell에 의한 정확한 측정 가능
- VOC-0.1ppb, Petroleum Hydrocarbon-20ppm의 저농도 측정 가능
- 측정값, 시간 및 장소를 선택된 주기에 따라 100,000개까지 자동 저장
- 충전용 Battery로 현장에서 쉽게 사용 가능

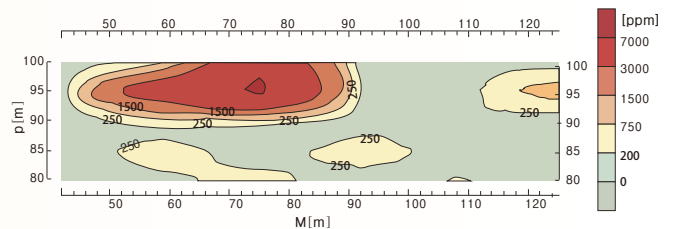
SPECIFICATIONS

| | |
|---|---|
| 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 0.1ppm / 0.1 ppb |
| zero stability | 0.1ppb |
| Response time | 0.1 sec; Sampling rate:10 samples/ sec. |
| Resolution | ppb, choice of peak or integrated values |
| Indication | 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 (0.1ppb to 4000ppm), fast response | |
| Ion lamp 10.6/10.2eV (other energy levels are optional) | |
| ppm or mg/m ³ (ppb or μg/m ³) output | |

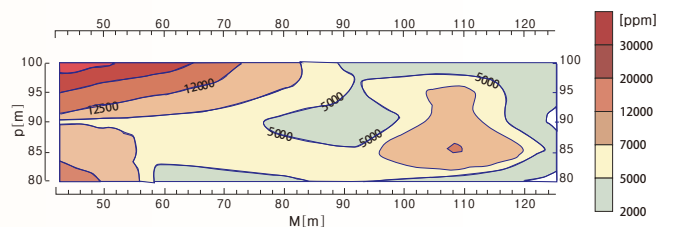
ECOPROB 5 RESULTS



▲ Total petrol vapor concentrations according to Soil Vapor Survey using **ECOPROB 5**



▲ Methane concentrations according to Soil Vapor Survey using **ECOPROB 5**



▲ CO₂ concentrations in soil air according to Soil Vapor Survey using **ECOPROB 5**

| | |
|---|--|
| IR | (Infra-red analyzer) comprises 4 independent channels for selective analysis of Methane, Petroleum Hydrocarbons and CO ₂ with ppm resolution and the following characteristics: |
| Methane | 0-500,000ppm, detection limit 100 ppm (for Methane) |
| Petroleum Hydrocarbons | 0-500,000ppm, detection limit 30 ppm (for THC) |
| Carbon Dioxide | 0-500,000ppm, detection limit 20 ppm |
| Reference Channel | Other channel & ranges optional |
| Response Time | 0.8 sec; Sampling rate : 10 samples/sec ppm or mg/m ³ output |
| Other Readings | |
| Oxygen | 0-100% |
| Soil Temperature | deg. F,C;(±0.1 °C, resolution 0.01 °C) |
| Sampled Gas Temperature | deg. F,C |
| Ambient Pressure/Sampling Vacuum | mbar, Torr, psi, kPa, accuracy 0.1%, resolution 0.01% |
| Dimension | 105 x 260 x 170mm (including handle), weight : 3kg |
| Shipping Weight | 13kg (Incl. Probes, calibration kit, accessories) |
| Power Supply | internal rechargeable battery |
| Memory Capacity | about 100,000 measurements |
| Output | RS232 cable or infra-red interface |
| Data Format | ASC II, 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 | |

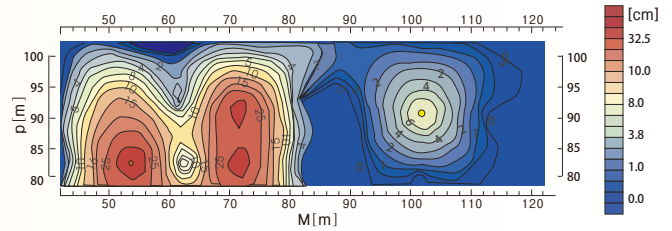
CONFIGURATIONS

| | |
|--|-------|
| ECOPROBE 5 PID + 4 Channel IR, O ₂ , T, P | 1 set |
| Com. Software ECOPROBE-View Lite Included | |
| Ecoprobe 5 Calibration Kit Single Gas | 1 set |
| Sampling Probe with Thermometer | 1 set |
| Connecting Cable Sampling Probe to ECOPROBE | 1 set |
| Sampling Probe Standard | 1 set |
| Sampling Probe Case | 1 set |
| ECOPROBE 5 Pelican Case | 1 set |

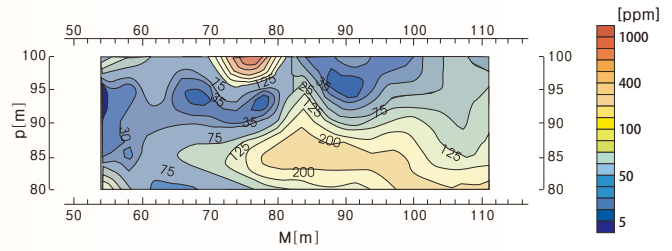
OPTIONAL ACCESSORIES

| | |
|--|------|
| GPS Smart Antenna | 1 ea |
| Hw & Sw Upgrade enabling GPS handing | 1 ea |
| ppb PID sensitivity upgrade | 1 ea |
| ECOPROBE-VIEW Plus(Advanced calibration)software | 1 ea |
| Dust Filters (10/pk) | 1 pk |

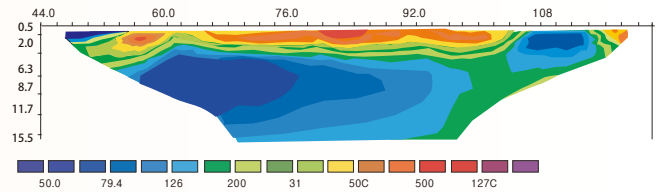
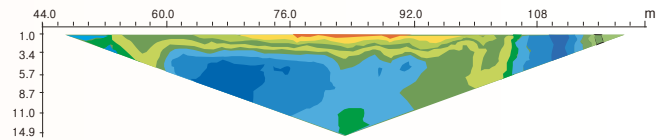
GEOPHYSICAL RESULTS



▲ Thickness of the free hydrocarbon product in monitoring wells



▲ Resistivities of the aquifer related to the depth 6m (from 2-D inversion of multielectrode resistivity measurements)



▲ Results of multielectrode resistivity measurements on the profile P-80