Product Brief
FROG-4000™

Gas Chromatography System for VOC Analysis in Water, Air, and Soil

FROG-4000™

Defiant Technologies' **FROG-4000™** is a hand held micro system for detection of benzene, toluene, ethylbenzene, and xylenes (BTEX) and other volatile organic compounds (VOCs) in water, air, and soil.

Chemical Capabilities:
MTBE/BTEX
TCE/PCE
Alcohols/Ketones
Naphthalene
Other VOCs

Applications:
Environmental Monitoring
Adaptable for Industrial Hygiene/IAQ
Process Monitoring
Laboratory and Field Analysis

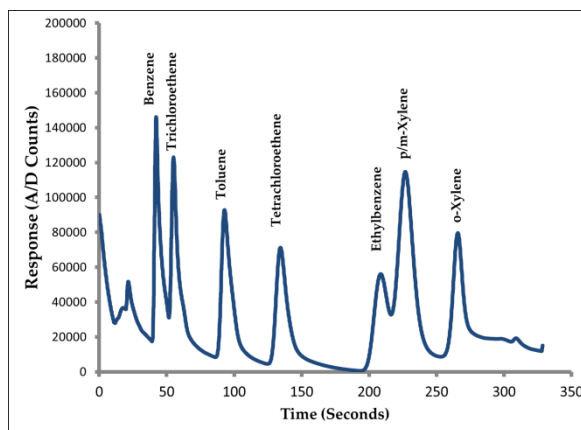### Specialized Materials and Components Enable Bench Top Quality Results

The FROG-4000™ miniaturizes components used for analytical chemistry. The system incorporates a micro preconcentrator that is coated with a designer nanoporous material. The micro preconcentrator has an integrated heater for thermal desorption. Defiant's micro GC separates target analytes in less than 5 minutes. The micro GC column also has an integrated heater for temperature ramp chromatography. Ramping the temperature reduces the analysis time and aids in the separation of late eluting compounds. The detector is a miniature PID (10.6 eV). Chemical name and concentration can be viewed on FROG-4000's LCD display, or the user may watch the chromatogram real time on a computer.

FROG-4000™ includes a micro-SD card to store results from the field. Data can be downloaded from the SD card for further analysis at a later time.

www.defiant-tech.com

FROG-4000™ GC System.

Separation and Analysis of BTEX, TCE and PCE in five minutes.

Chemical Detection Range	Vinyl Chloride (MW 62.5)	2-Methyl Napthalene (MW 142.2)
Boiling Point at 1 atm	-13.3 ^{o}C	244.7 ^{o}C
Vapor Pressure at 25 ^{o}C	2980 mmHg	0.067 mmHg
Instrument Specifications		
Weight	4.8 lbs.	
Dimensions	10 x 7.5 x 14.5 inches	
Battery Life:	Six hours, or external power	
Interface:	Standard RS-232 port	