

# chem-ID™ Your Lab To Go



Precision Chemical Analysis –  
when and where you need it.

## No labs, no delays.

Performing parts-per-billion analysis has always required a laboratory with trained personnel, or an instrument narrowly tailored for a very specific job. The chem-ID™ now allows parts-per-billion measurements to be performed in the field by personnel with almost any background or training.

Traditional "send-sample-to-the-laboratory" analysis is very effective, but has inherent compromises:

- It takes time, sometimes weeks, depending on the lab backlog
- It can lead to errors in linking lab results to the original sample taken days or weeks earlier
- There is always a potential for contamination
- It requires field personnel to take the sample
- It requires skilled technicians to accurately perform the lab test
- It requires skilled and trained personnel to analyze the test results.

Using the chem-ID™ eliminates these compromises. Tests and results are performed in real-time. Measurements can be analyzed in the field. Or, because the chem-ID™ is so easy to use, measurements can be taken by personnel with very little training and quickly emailed to a trained professional for analysis.

## The Chem-ID is Used For...

- Field Testing
- Process Control
- Petroleum Refineries
- Criminal Investigations
- Laboratories
- Comparison Testing
- Aging Testing



## What can the Chem-ID™ be used for?

### Field Testing

- Testing for the presence and concentration of a chemical(s) can be performed in real-time at any location, allowing tests and results to be completed in the same day.
- Storage tanks of unknown chemicals can be analyzed safely by remote control

### Any Manufacturing Process Using Chemicals (Process Control):

- Testing of samples in manufacturing, allowing quick monitoring of quality and concentrations whenever desired.
- Chemical deliveries can be checked before they are introduced into the production process.

### Petroleum Refineries

- Petroleum engineers can sample at any stage of the refinery process, viewing hydrocarbon mixtures and concentrations and comparing it against expected or previous measurements at the same stage.

### Criminal Investigations

- Meth labs can be analyzed for hazardous levels of toxic substances before officers are exposed to dangerous chemicals
- Meth lab chemicals can be analyzed and recorded for evidence in real-time
- Arson investigators can check burn sites for accelerants

### Laboratories

- Because the chem-ID™ is easy to use, less expensive, and much smaller than conventional GC configurations, it is highly efficient for performing high volume, repetitive testing in the laboratory.

### Comparison Testing

- Because the chem-ID™ stores hundreds of chemical samples, it can be used to compare chemical samples from different times.

### Aging Testing

- Chemicals and components in storage can be analyzed as they age to determine how much and how fast they are changing.

## Specifications

Title	Spec value
Sensitivity*	100 ppb
Detectors (2)	Thermal Conductivity
Battery	Rechargeable 28.8 volt sealed lithium ion
Battery Life	12-14 measurement cycles
Carrier	Ultra-pure helium
Helium Tank Life	20 hours of constant operation
Communication	Built-in Bluetooth class 1 radio
Operating temperature range	-25° to 125° F
Relative Humidity	0-100% condensing
Precipitation	Driving Rain per Mil-STD-810
Vibration	ASTM D4169-04A
Emissions	FCC certified
Approved decon methods	External high pressure wash and brush
Dimensions	16" (14" w/o knobs)L x 8.6"H x 7.5"W
Weight	15.9 lbs

## What is the Chem-ID?

The chem-ID is a parts-per-billion gas analyzer that characterizes chemicals using two-dimensional gas chromatography. The chemical signatures of gases and out-gassing liquids and solids are measured and recorded in the field. Each chemical signature contains information on the individual compounds and concentrations of the chemicals present in the sample. Because the chem-ID is rugged, it can be used in most locations and under most harsh conditions.

The chem-ID operates using 4 large control buttons, a large color LCD display, and menu-driven software. It can also be operated by remote control via the built-in Bluetooth wireless radio. The chem-ID automatically performs the functions needed to precisely measure a chemical sample, produce and record the two-dimensional chromatograph signature of the sample, and clean itself in preparation for the next test.

The two gas chromatograph columns in the standard chem-ID use DB-1 (Dimethylpolysiloxane) and DB-wax (Polyethylene glycol) stationary phases. Alternately, almost any column can be installed to meet your unique test requirements. The chem-ID comes standard with a pre-concentrator loaded with Tenax TA as a trapping agent. Again, almost any trapping agent(s) can be used to meet specific test requirements.

The chem-ID PC Manager software provides an easy to use tool to operate the chem-ID by remote control, download chemical signatures, or analyze previously measured data. Operating the chem-ID by remote control simulates the same controls as the chem-ID - no additional training is required. Chemical signatures can also be saved as standard CSV format files

