TraceDetect introduces SafeGuard, ensuring your water cleanliness through automated trace metal analysis.

SafeGuard offers flexible, robust monitoring of a variety of samples. With just a push of a button after loading your sample, SafeGuard's fully automated operation returns your contaminant levels in an easy-to-read display. Generating data and compliance reports for routine facility operations support is simple and straightforward.

With its compact design, SafeGuard is an application-specific, independent monitoring station located at-line or in your own on-site quality assurance lab, wherever it may be needed. SafeGuard's comprehensive easy-to-use interface offers modes for advanced users, as well as routine maintenance. The software is flexible and powerful enough to support ongoing development of new water contaminant treatment programs, yet simple and direct enough to spot-check routine grab sample results. Save precious time and money by eliminating the need to send samples to an outside lab.

**SafeGuard Features**

- Fully automated operation with Chemist in the Box™ technology
  - Eliminates operator variability to insure accuracy to 1 ppb
  - Measurement time less than 30 minutes
  - Correlation with ICP-MS (+/- 10% typical)
  - Configurable for As, Cu, Pb, Zn, Cd, and Hg
  - Easily accessible grab sample port
  - Data logging records results, allows report generation and results archiving

**SafeGuard Application Examples**

- **Ground Water**
  - Determine total As concentration in source waters

- **Drinking Water**
  - Stay in compliance with 10 ppb limit

- **Wastewater & Effluent Analysis**
  - Understand & control your wastewater emissions
  - Eliminate costly fines

- **Arsenic Removal Media**
  - Monitor arsenic removal media to ensure optimal effectiveness & lifetime
**SAFEGUARD Specifications**

**Performance**
- Measurement Range: 1 – 100 ppb
- Measurement Accuracy: 1 ppb or ±20%, whichever is larger
- Measurement Time: Less than 30 minutes
- Trace Metals Supported: Arsenic, Lead, Copper, Cadmium, Zinc, and Mercury

**Sample Requirements**
- Temperature: 5 °C to 45°C, room temp. is ideal
- Pressure: 5 – 75 psi
- pH Range: 1.0 – 8.0
- Minimum sample size: 15 mL
- Samples which contain solids must be prefiltered

**Sampling Scheme**
- Side port accepts standard screw-on sample bottles

**System**
- User Interface: Windows-based SafeGuard software displays easy-to-read results
- Electrical: 10-120 VAC, 50/60 Hz (Three grounded sources required)
- Operating Conditions:
  - Temperature: 20°C +/- 10°C
  - Humidity: 5 - 95%, non-condensing
- Other Requirements:
  - Nitrogen Gas: 25-50 psi
  - Deionized Water: 18 MOhm
  (these requirements are configuration-dependent)
- Dimensions: 28” W x 20” H x 15” D

ASV results show excellent correlation with ICP-MS

![Total Arsenic Measurement Correlation: SafeGuard (ASV) vs ICP-MS](chart.png)

\[ y = 1.0433x \]

\[ R^2 = 0.9963 \]