

SafeGuard™

Automated Trace Metals Analyzer

The SafeGuard™ analyzer from AMS is an automated trace metals analyzer for monitoring municipal and industrial water and wastewater. It provides real-time, reliable and accurate analysis of trace metal contaminants to ensure compliance with regulatory requirements. The analyzer provides high frequency data in just 30 minutes with sensitivity down to 1 ppb.

SafeGuard™ Applications

The automated operation of the SafeGuard analyzer returns data on trace metal contaminant levels with just a push of a button after loading a sample. The analyzer is configurable for arsenic, chromium, selenium and more.

The benefits of using the SafeGuard analyzer include:

- Help validate the performance of remediation pilot systems
- Obtain baseline operational data on influent and effluent contaminant levels
- Monitor critical process steps to aid in remediation process control and optimization
- Control blending schemes with multi-stream analysis
- Quickly detect declining effectiveness of the remediation process and avert regulatory breach

SafeGuard™ Features

Automated operation

- Eliminates operator variability
- Accuracy to 1 ppb or $\pm 15\%$, whichever is higher
- Measurement time of 30 minutes typical, up to 2 hours with sample preparation
- Correlation with standard method ($\pm 15\%$)

Comprehensive data acquisition

- Data logging records results, allows report generation and results archiving

Low operational costs

- Employs a self-regeneration sensor and is auto-calibrating



SafeGuard™ Analyzer with optional autosampler

SafeGuard™ Specifications

PERFORMANCE

Measurement Range	Arsenic: 1-1,000 ppb total inorganic arsenic Chromium: 1-1,000 ppb Cr(VI) and Total Cr Selenium: 1-1,000 ppb inorganic/organic selenium Other trace metals: 1-1,000 ppb typical
Measurement Accuracy	1 ppb or ± 15%, whichever is higher
Measurement Time	30 minutes typical, up to 2 hours with sample preparation
Sample Streams Supported	Standard configuration: 1
Sample Requirements	Temperature: 5-40°C pH range: 2-12 for most trace metals, Cr(VI) 4 – 8 Minimum sample size: 15 mL
Sampling Scheme	Side port accepts standard screw-on sample. Configurable to perform automatic 50:1 dilutions with no additional hardware

SYSTEM

User Interface	Windows-based software displays easy-to-read results
Electrical	100-240VAC, 50/60Hz 1.5A (Three grounded sources required)
Operating Conditions	Temperature: 5 - 40°C Humidity: 5 - 95%, non-condensing
Other Requirements	Nitrogen Gas: 25 – 50 psi 300 cubic ft. gas cylinder provides 6 months operation (1 test/hr) Deionized water: 18MΩm These requirements are configuration-dependent
Dimensions	24" W x 15.5" H, 13.5" D

OPTIONS

Autosampler	CETAC™ ASX-260 Dual rack, 21 vials/rack 50 mL vials (sample size can be much less) CETAC™ service support Dimensions: 13" W x 24" H x 20" D
Upon Request	Additional CETAC™ compatible autosamplers, racks and vials

*Note- specifications are subject to change without notification.