

METALGUARD™ Arsenic

Online Arsenic Analyzer



MetalGuard™ Arsenic is the first fully automated, online arsenic analyzer for monitoring drinking water.

Utilities addressing arsenic contamination must measure influent and effluent arsenic levels to adequately control and optimize water treatment and removal processes.

The MetalGuard™ Arsenic analyzer from Aqua Metrology Systems provides real-time, multi-stream reliable and accurate analysis of As(III), As(V) and Total As to ensure compliance with regulatory requirements. The analyzer features a robust and stable design that is capable of maintaining its sensitivity and calibrated status for an unlimited timeframe while operating reliably regardless of sample matrix conditions.

MetalGuard™ Arsenic Applications

The MetalGuard Arsenic online analyzer provides high frequency real-time data on arsenic contaminant levels in thirty minutes with sensitivity down to 1 ppb. The benefits of using the analyzer include:

- Help validate 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 mutli-stream analysis
- Quickly detect declining effectiveness of remediation process and avert regulatory breach

MetalGuard™ Arsenic Features

Automated online operation

- Eliminates operator variability
- Accuracy to 1 ppb or $\pm 15\%$, whichever is higher
- Measurement time approximately 30 minutes
- Correlation with standard method (15% typical)
- Multiple stream including grab sample port

Comprehensive data acquisition

- Easy-to-use front panel HMI
- Programmable on-board data acquisition

Low operational costs

- Replaceable reagent tray provides up to 3,000 measurements
- Employs a self-regeneration sensor and is auto-calibrating



METALGUARD™ Arsenic Specifications

PERFORMANCE

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|-------------------------|---|
| Measurement Range | 1 - 10,000 ppb for As(III), As(V) and Total As |
| Measurement Accuracy | 1 ppb or ±15%, whichever is higher |
| Measurement Time | 30 minutes typical |
| Sample Stream Supported | Standard configuration: One With optional external manifold: Up to six |
| Sample Requirements | Temperature: 5 - 40°C Pressure: 5 - 45 psi pH range: 2 - 12 |
| Sampling Scheme | Standard configuration: dead-end type, input line pumped out prior to each measurement, stagnant between measurements Optional configuration: custom plumbing on external rack |

SYSTEM

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|-----------------------|--|
| User Interface | Display: 4 line X 20 characters, sunlight readable. Dedicated function keys for: system initialization and test, automatic operation, manual maintenance, sampling and data acquisition setup |
| Annunciator Interface | 2 alarm relays, plus 6 relays to control external solenoid valves |
| Electrical | 100-130VAC, 50/60Hz (option for 200-260VAC 50/60Hz) 200W |
| Operating Conditions | Temperature (standard configuration): 5 - 40°C Temperature (with optional ambient control): -20 - 50°C Humidity: <95%, non-condensing |
| Monitor Cabinet | NEMA 12 rated Houses all electronics and measurement fluidics User-friendly, front panel HMI |
| Reagent Cabinet | NEMA 12 rated Houses Standard Reagent Tray |
| Maintenance Schedule | Quarterly maintenance |
| Reagent Consumption | Standard Reagent Tray provides up to 3,000 measurements (Replenished monthly at continuous sampling of four sample streams) |
| Consumables | Nitrogen (electronic grade) required to purge oxygen from solution, regulated down to 10 psi. Deionized water supply provided |
| Dimensions | H 60", W 32", D 13" |

OPTIONS

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|------------------------|---|
| External Rack | Houses sample manifold & sample pressure regulation and filtering Supplies waste drain connection and waste carboy |
| Weatherproof Enclosure | NEMA 4X system enclosure Environmentally controlled enclosure: with /air conditioner, heat |
| Sample Preparation | Pre-treatment module Filter system |

*Note- specifications are subject to change without notification.