

METALGUARD™ Chromium

Online Hexavalent Chromium Analyzer



MetalGuard Chromium is the first fully automated, online multi-stream hexavalent chromium [Cr(VI)] analyzer for monitoring drinking water.

Utilities employing drinking water remediation techniques to address Cr(VI) contamination must measure influent and effluent chromium levels to adequately control and optimize water treatment and removal processes.

The MetalGuard™ Chromium analyzer from Aqua Metrology Systems provides real-time, multi-stream reliable and accurate analysis of Cr(VI) 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™ Chromium Applications

The MetalGuard Chromium online analyzer provides high frequency real-time data on chromium 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 multi-stream analysis
- Quickly detect declining effectiveness of remediation process and avert regulatory breach

MetalGuard™ Chromium 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 ($\pm 15\%$ 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™ Chromium Specifications

PERFORMANCE

Measurement Range	1 - 10,000 ppb Cr(VI) and Total Cr
Measurement Accuracy	1 ppb or ±15%, whichever is higher
Measurement Time	Approximately 30 minutes
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: 4 - 9
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

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	22 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

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.