

Ambient Ion Monitor

The 9000 Series Ambient Ion Monitors consist of several different configurations for your specific sampling needs. The Ambient Ion Monitor System can be configured with one Ion Chromatograph (IC) to provide time-resolved direct measurements of anion particulate Nitrate, Sulfate, Nitrite, Phosphate and Chloride found in PM-2.5, as well as gas phase Hydrogen Chloride, Nitric Acid, Nitrous Acid and Sulfur Dioxide.

With the addition of a second IC, the Ambient Ion Monitor will also provide time-resolved direct measurements of cation particulate Ammonium, Sodium, Calcium, Potassium and Magnesium, as well as gas phase Ammonia.

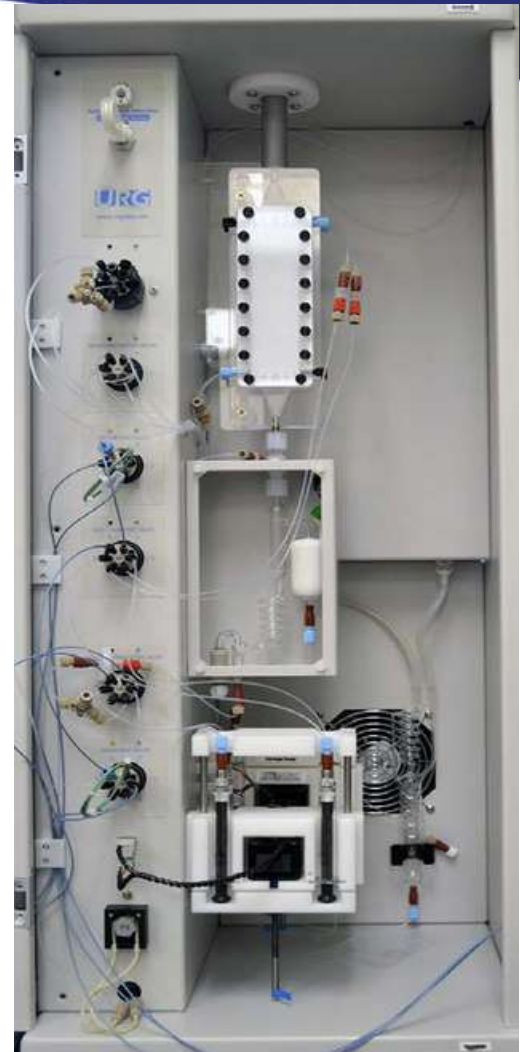
ANALYSIS METHOD

The analysis method for the AIM System is a Thermo Scientific™ Dionex™ ion chromatography system. Dionex Reagent-Free™ IC (RFICTM) systems produce eluents and regenerants electrolytically, so all you need to do is add water. The unique Dionex RFIC systems work seamlessly with the AIM System for accurate determinations of air contaminants.

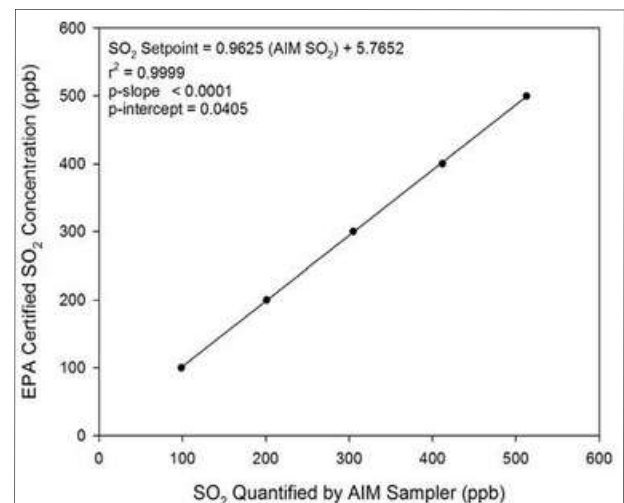
The accuracy of the IC analysis is verified by an internal "check" standard of Lithium Bromide that is injected with each sample.

URG'S UNIQUE PATENTED LIQUID DIFFUSION DENUDER

- Highly efficient at all concentration levels
- Denuder's parallel orientation prevents particle settling
- No issues with bacterial growth
- Denuder can be switched without interrupting sample collection
- No moving parts that break or require maintenance
- Pre-cut membrane material allows for quick replacement



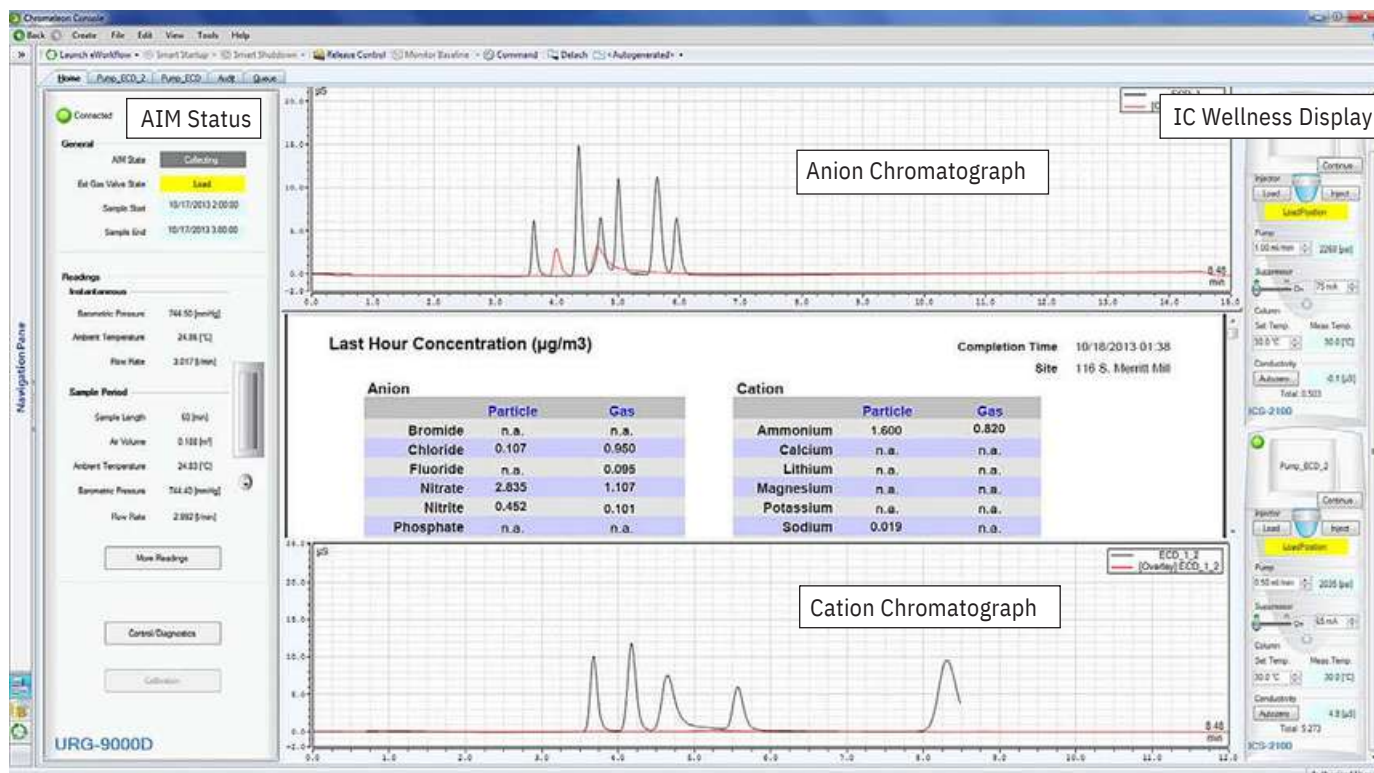
Inside the URG-9000D AIM System



Comparison of Known SO₂ Concentrations to AIM Reported SO₂ Concentrations

CHROMELEONTM 7.2: THE INDUSTRY LEADER OF CHROMATOGRAPHY DATA SOFTWARE

The Chromeleon™ 7.2 software used by the AIM is a very versatile and powerful program that allows the users to easily QA data and automatically recalculate results. The sample volume, temperature and barometric pressure are reported in each of the analysis chromatograms so when the data is recalculated, the µg/m3 for each ion is automatically reported.



Chromeleon Home Panel

SOFTWARE FEATURES AND BENEFITS

- Ease-of-Use: Single software control improves operational simplicity
- Consolidated Controls and Results: Complete view of AIM and IC operations from the Home Panel
- Streamlined Workflow: Only four clicks to setup sequences and report data for two weeks of continuous operation
- Flexibility and Efficiency: Users can customize both ePanel and reporting templates
- AIM Calibration: All temperature and pressure calibrations are performed in a single user-friendly calibration panel
- Simplified Data Evaluation: Calibration plots, interactive charts and reports are linked to the active chromatogram displaying only data relevant to the current zoom or selected peaks



AIM Calibration Panel

Specifications

Power:	Wide Range 100-240VAC
Dimensions:	15" x 16" x 36"
Weight:	Approximately 50 lb
Measures:	Nitrate, Sulfate, Nitrite, Phosphate, Chloride, Ammonium, Sodium, Calcium, Potassium, Magnesium, Ammonia, Hydrogen Chloride, Nitric Acid, Nitrous Acid and Sulfur Dioxide
Detection Limit:	0.05 µg/m3 Every Hour (Optional 15-30 Minutes)
Installation:	Requires Installation in an Environmentally-Controlled Shelter where the Temperature is Maintained Between 20-30 Degrees Celsius
Configurations :	Stand-Alone or Rack Mountable Unit Available



URG-9000D in use at Beijing Environmental Protection Monitoring Center

ORDERING INFORMATION

URG-9000A - Time-Resolved Direct Measurements of Nitrate, Sulfate, Nitrite, Phosphate and Chloride

URG-9000B - Time-Resolved Direct Measurements of Nitrate, Sulfate, Nitrite, Phosphate, Chloride, Ammonium, Sodium, Calcium, Potassium and Magnesium

URG-9000C - Time-Resolved Direct Measurements of Nitrate, Sulfate, Nitrite, Phosphate, Chloride, Hydrogen Chloride, Nitric Acid, Nitrous Acid and Sulfur Dioxide

URG-9000D - Time-Resolved Direct Measurements of Nitrate, Sulfate, Nitrite, Phosphate, Chloride, Ammonium, Sodium, Calcium, Potassium, Magnesium, Hydrogen Chloride, Nitric Acid, Sulfur Dioxide and Ammonia

Office Location

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