

Atomic Fluorescence Spectrometer for Trace Element Analysis

This atomic fluorescence spectrometer excels in quantitative determination of trace elements within samples. Its modular design incorporates sample blank cleaning monitoring for quality control and efficient maintenance.



Overview

High-Performance Trace Element Analysis

This atomic fluorescence spectrometer is a sophisticated analytical instrument engineered for the quantitative determination of trace elements across diverse applications, including environmental monitoring and food safety. Featuring a modular architecture and advanced signal processing, it ensures high sensitivity and selectivity even in complex matrices. The system integrates automated cleaning monitoring and versatile injection methods to streamline workflows and reduce maintenance complexity.

Performance Metrics

Detection Limits (DL)

0.01 g/L As, Se, Pb, Bi, Sb, Te, Sn	0.001 g/L Hg, Cd	0.05 g/L Ge	1 g/L Zn	3 g/L Au
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Precision and Range

Parameter	Value
Relative Standard Deviation (RSD)	<0.8%
Linear Range	> 3 orders of magnitude

Technical Features

System Capabilities

- Dual-channel, double element simultaneous measurement
- Intermittent and continuous injection modes
- Automatic switching between peristaltic pump and syringe pump
- Unique sample blank cleaning monitoring
- Online dynamic adjustment of lamp current and gas lines

Analyzable Elements

Arsenic (As), Mercury (Hg), Selenium (Se), Lead (Pb), Germanium (Ge), Tin (Sn), Antimony (Sb), Bismuth (Bi), Cadmium (Cd), Tellurium (Te), Zinc (Zn), Gold (Au)

Hardware & Design

Design Highlights

- Modular architecture with CAN bus circuit design
- Ten-roller, six-channel independent peristaltic pump
- Cryogenic shield quartz furnace atomizer
- High-efficiency closed second-level gas-liquid separator
- Automatic identification of air-core coding cathode lamps

Connectivity & Software

Interfaces

USB • RS232

Software Environment

Windows operating systems