

Ace MODERN ADVANCE RESEARCH TECHNOLOGY





PF7

ATOMIC FLUORESCENCE SPECTROMETER

The automated PF7 is an ideal instrument for elemental analysis in various market and research industries including:

- Agricultural
- Pharmaceutical
- Food and beverage
- Geological
- Public health
- Metallurgical
- Clinical
- Petrochemical

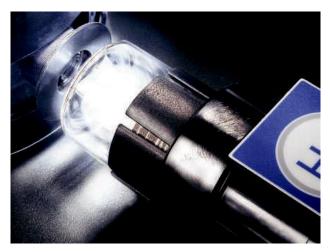




Standard Features

Light source

- High intensity hollow cathode lamps for improved sensitivity and stability.
- rpre-aligned lamp assemblies for trouble free installation. All
- lamps are uniquely data coded offering important information to the PF Win operating software.
- Up to 3 lamps can be installed for simultaneous analysis.



Optical System

- Double beam optical system to eliminate drift from the light source and the detector.
- Shielded optical design greatly reducing light interference.
- Enhanced signal to noise ratio for increased analytical sensitivity.
- I Unique optical configuration for increased Fluorescence intensity. Up to twice the intensity found in traditional AFS systems.
- High Quantum Solar Blind detector fitted as standard to ensure optimum stability.

Atomizer System

- High precision quartz tube designed for optimum performance, durability and long life.
- Adjustable height control for improved optimization.
- Integrated 2 stage, fully sealed, fume exhaust system to decontaminate toxic elements and pollution.
- Gold Mesh fitted to the chimney removes any mercury pollutant.

Hydride Generator

Integrated continuous flow Hydride System.

- Gas pressure sampling offers maintenance free operation.
- Online auto dilution and multiple auto purge by gas driven sequential injection system.
- Fully sealed reservoir bottles for extended solution life.
- New design Gas Liquid Separator with magnetic stirring for improved repeatability of analytical results.
- Liquid Separator cooled directly by specially designed Peltier system to remove unwanted water in the formed hydride and greatly reduce Fluorescence quenching thus increasing the sensitivity.
- I Unique high volume reagent storage positioned outside of the instrument to reduce contamination.
- Connection of carrier and reducer liquids to instrument using long life chemical resistant FEP tubing.

Electronic Control

High technology electronics and PCB components.
PF Win 3.0 software offers full control of PF7

- instrument and accessories.
- Windows operating software
- New features include: QC functions, online data sharing, self-diagnostics, result and resource management.
- Full GLP version available for multiuser group management and log.





Detection Limits

Element	Detection Limit (ug/l)	RSD %
Arsenic (As)	<0.01	<1%
Bismuth (Bi)	<0.01	<1%
Cadmium (Cd)	<0.001	<1%
Germanium (Ge)	<0.05	<1%
Mercury Hg)	<0.001	<1%
Lead (Pb)	<0.01	<1%
Antimony (Sb)	<0.01	<1%
Selenium (Se)	<0.01	<1%
Tin (Sn)	<0.01	<1%
Tellurium (Te)	<0.01	<1%
Zinc (Zn)	<1.0	<1%



Accessories

Auto Sampler

- IX, Y, Z drive configuration.
- | Fully controlled by PFWin software.
- Inert robust probe and FEP tubing.
- Improved probe wash. Simultaneous inner and outer wall wash.
- Large volume standard stock solution.
- Removable inert sample tray and rack.
- 3 sizes of sample racks available to accommodate 10ml, 25ml and 50ml test tubes.

Speciation Analyzer

- Built in HPLC pump. Isocratic/gradient
- Fitted with conventional column (optional column oven available).
- Annual or automatic sample input (with optional auto sampler).
- Detect and separate inorganic and organic compounds.
- High separation performance | Fast analysis < 12min.

Speciation Detection Limits

Element	Specification	Detection Limit (ug/l)	RSD %
As	Arsenite (As III)	0.04	<5%
	Dimethylarsenic acid (DMA)	0.08	<5%
	Monomethylarsenic acid (MMA)	0.08	<5%
	Arcenate (As V)	0.2	<5%
Hg	Inorganic (Hg II)	0.05	<5%
	Methylmercury (MeHg)	0.05	<5%
	Ethylmercury (EtHg)	0.05	<5%
	Phenylmercury (PhHg)	0.1	<5%
Se	Selenocysteine (SeCys)	0.3	<5%
	Selenite (Se IV)	0.1	<5%
	Selnomethionine (SeMet)	2.0	<5%
	Selenate (SE VI)	0.5	<5%
Sb	Sb III	0.1	<5%
	Sb V	0.5	<5%





Specifications

Specifications	PF7	
Sample Atomization		
Atomizer	Quartz furnace tube with auto ignition	
Furnace Heating	Computer controlled heating	
Hydride Generator	Continuous flow high performance for cold vapour Mercury and hydride determinations of As, Se, Te, Bi, Sb, Sn, Zn, Pb, Cd, Ge	
Gas Requirement	High purity Argon gas (99.99%) 30psi	
Exhaust System	2 stage filtration to decontaminate pollutants	
Sample and delivery		
Carrier and Reagent Delivery	Gas pressure driven system	
Gas/Liquid Separator	High efficiency gas/ liquid separator with magnetic stirring and Peltier cooling	
Optics		
Optical Design	Short focal length non- dispersive double beam	
Light Source	3 channel simultaneous element analysis using computer controlled modulated and pulsed hollow cathode source	
Baseline Stability	< 1.5%	
Baseline Noise	< 1.5%	
Linear Range	>10 ³	
Operating System		
Interface	USB, RS232	
Operating Software	PFWin software	
Safety	Gas alarm for low pressure and flow	
Power Requirements	100 – 240V 50Hz/60Hz 300VA	
weight	Net: 35Kg Gross 50Kg	
Dimensions	60cm x 57cm x 45cm	

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