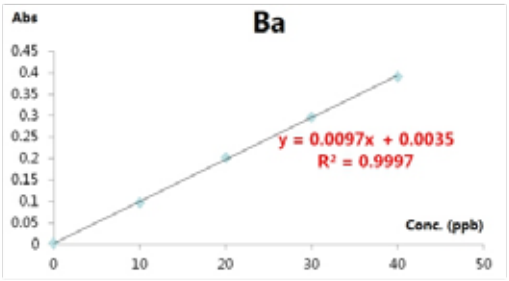
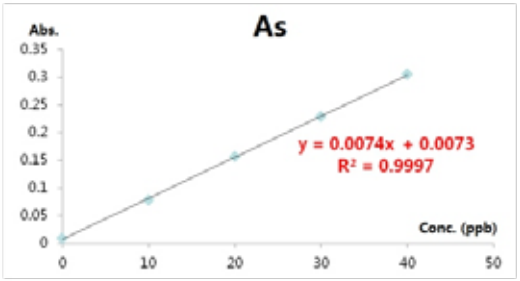
Multiplelabs
Turnkey Laboratories Solutions

9500I

Atomic Absorption Spectrometer





- Built on years of research and development, the 9500I can detect and analyze more than 70 elements with sensitivity ranging from ppm to ppt. The modular design provides the flexibility to choose the right configuration for your needs and enables elemental analyses at multiple concentration levels. The true double beam and two independent background correction methods ensure reliable and precise results. The 9500I is an ideal solution for any laboratory requiring a high quality precision instrument with a small footprint.

Configurations

Flame (F), Flame/Graphite Furnace (F/GF), Flame/Vapor Generation (F/VG), Flame/Graphite Furnace/Vapor Generation (F/GF/VG)

FEATURES AND BENEFITS

- Switchable single/double beam optics for highly accurate and precise results under various conditions.
- 6-lamp turret with auto-switch minimizes time between elemental analyses.
- Patented online dilution enables automatic dilution from a single solution to create calibration standards for flame and graphite furnace.
- Heating rate of up to 3800 K/sec and the transversely heated graphite furnace tube facilitates fast and uniform temperature distribution.
- scan from 185 – 900 nm in under 100 seconds provides results faster and enables higher throughput.
- Optional Universal or Flame-only autosampler provides random access to all sample vials.
- Durable Teflon nebulizer chamber provides superior resistance to corrosive reagents.
- Self-reverse and industry-leading 1 kHz D2 background correction ensures accuracy of results.

SPECTROMETER

Primary Optics	Switchable single/double beam optics. Narrow beam optical design for flame and furnace configuration. Aberration corrected Czerny-Turner monochromator with software controlled wavelength selection and optimization.
Focal length	300 mm
Optical Resolution	0.2 nm, Mn 279.5 & 279.8 nm peak ratio > 40%
Band Pass	Software adjustable 0.2, 0.6 and 1.2 nm and 0.6 nm reduced slit height for GF. Bandwidth is automatically selected

Grating	Diffraction grating with 1200 lines/mm
Wavelength Range	185-900 nm controlled by software
Wavelength Accuracy	From 185-900nm < 0.2 nm
Wavelength Precision	< 0.3 nm
Dynamic baseline stabilitity	±0.004A / 30 min
Measurement Units	Peak height, peak area
Background Correction	Rapid self-reversal method. Deuterium lamp with 1 ms rapid response for accurate correction. Electronic modulation with deuterium current control and aperture attenuation
PMT	High quantum efficiency from 185-900 nm, automatic gain control
Light Source	6 lamp motorized turret. Automatic selection, positioning and alignment
Built-in High Intensity Power Supply	Two (2) channel independent high intensity power supply provides improved sensitivities and lower detection limits
Dimensions / Weight	L 74.9 x W 59.5 x H 36.2 cm (add 34 cm with autosampler) / 57 kg (94 kg with autosampler)

ATOMIZERS

Standard Atomizer	Flame; transversely heated graphite furnace
Atomizer switch	Automatic (F/GF)
Optional Atomizer	Vapor and hydride generator (VG); N2O flame
Safety System	Liquid level trap, burner head identification, auto shut down of flame, GF cooling water and argon gas flow monitoring and alarm

FLAME

Spray Chamber	Solid Teflon nebulizing spray chamber, with tailor-made high proficiency nebulizer with glass capillary and metal jacket
Gas control	Auto gas control, auto-switch between air and nitrous oxide, auto optimization of acetylene flow rate and burner height
Flame Ignition	Automatic
Performance	2ppm Cu Abs > 0.4, RSD =< 0.5%

GRAPHITE FURNACE:

Graphite Furnace (GF)	Transversely heated graphite furnace, built in graphite furnace power supply, heating rate of 3800K/sec
GF Heating Program	Ramp, step, temperature holding, maximum 30 programmable heating steps
Performance	1ppb Cd Abs > 0.3, RSD =< 2.0%

VAPOR/HYDRIDE GENERATOR:

VG Control Mode	Electro-heating, continuous flow peristaltic pump with speed control, high efficiency mixing section and gas-liquid separation

SAMPLE PREPARATION

Autosampler	Optional Flame-only or Universal (compatible with all atomizer types) autosampler. Enables on-line dilution for GF
Sampling capacity	Holds up to 192 sample cup/tubes (0.5 or 10 mL) sample racks or solvent extraction or ICP tubes, microplates, etc.
Operation Control	External PC connection