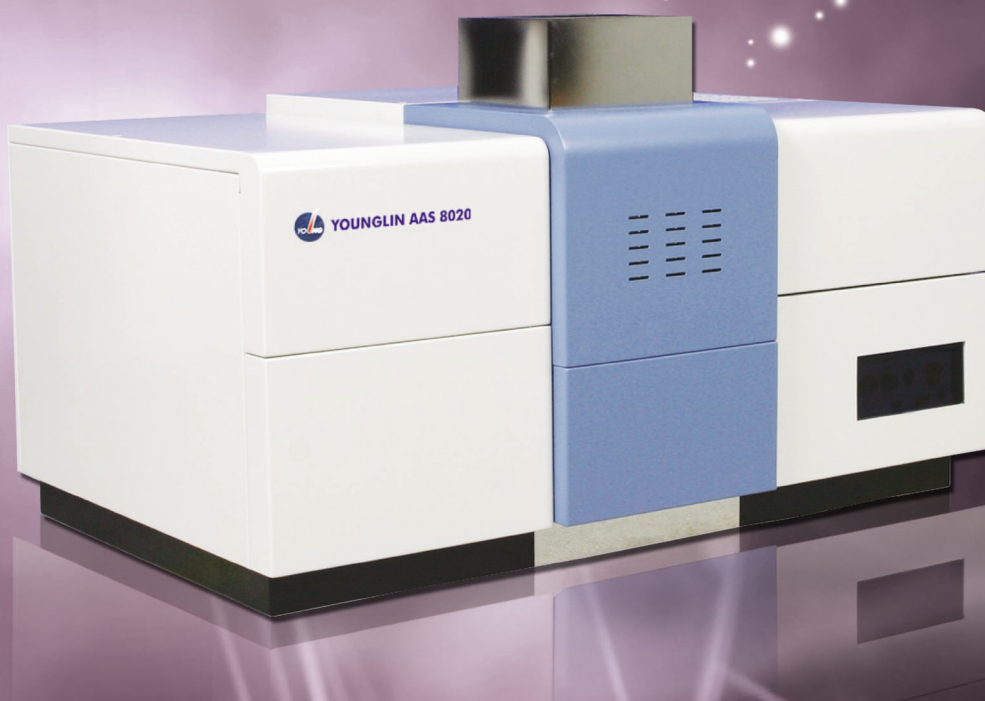


# AAS-8000 Series

Atomic Absorption Spectrometer

Robust, Reliable, Attractive Price for Inorganic Analysis

- **Model 8020** Fully Automatic Flame/Graphite Furnace AAS
- **Model 8010** Fully Automatic Flame AAS



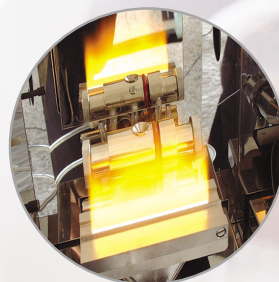
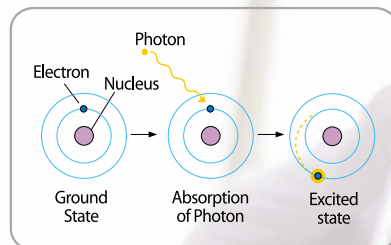
# AAS-8000 Series

## Atomic Absorption Spectrometer

The Young Lin **AAS-8000** Series Atomic Absorption Spectrometer has been developed with our accumulated experience in analytical instruments. The Young Lin **AAS-8000** Series will satisfy all user demands by providing excellent performance with reliable and accurate data.

### Features

- Designed with a floating optical system to ensure no effects from environmental conditions.
- Compact design integrating all parts such as Flame, Graphite furnace, Optical system, Atomizer, Graphite furnace, power supply and electronics in one.
- Titanium nebulizer and burner head are protected against corrosion and oxidation for long time use.
- The use of 1,800 lines/mm diffraction grating for strong energy and high resolution.
- Optical single beam for strong energy to ensure a very low limit of detection for atoms such as As, Se etc.
- Easy switching between Flame and graphite furnace within seconds.
- D2 Lamp background correction and self-absorption background correction for more accurate results.
- Hollow cathode lamp protection from current surge and insufficient pressure.
- Gas leak detection and alarm for over-heating in graphite furnace mode.
- Hydride generator (Optional) for analysis of As, Pb, Se, Hg, etc with high sensitivity.
- Autosampler (Optional) for automatic analysis process and preparation of standard solutions .



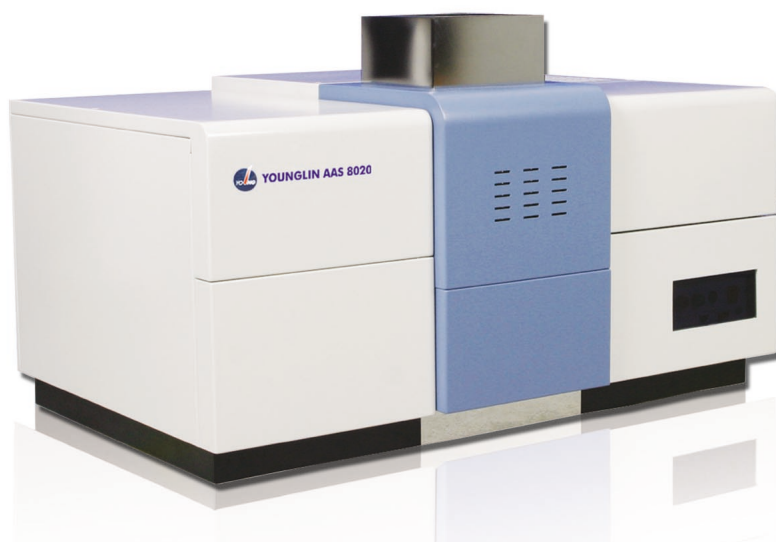
Flame Atomizer



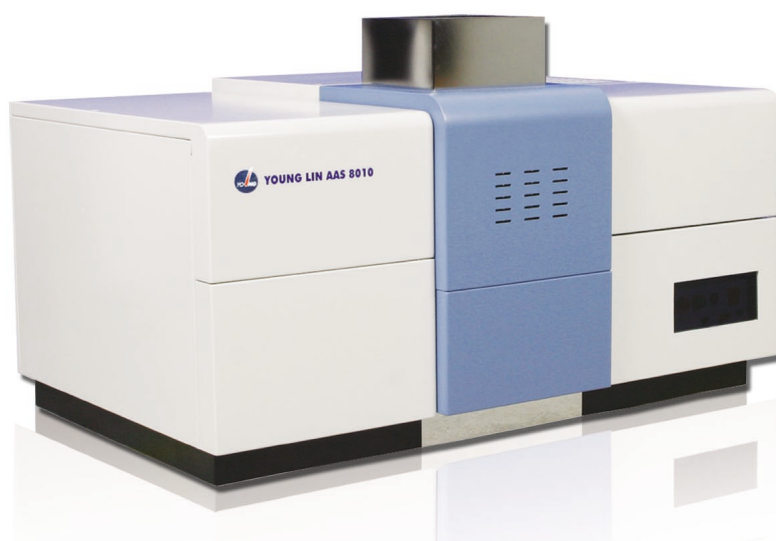
6 Lamps Automatic Rotating Turret

## Model 8020 Fully Automatic Flame/Graphite Furnace AAS

- Easy switching between Flame and Graphite furnace

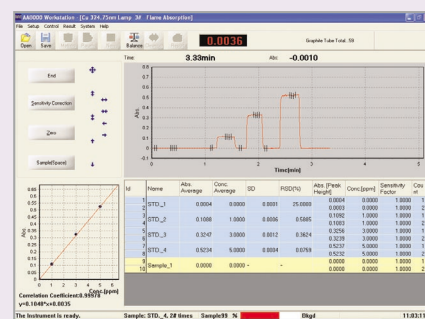


## Model 8010 Fully Automatic Flame AAS



### Features in common

- Fully controlled by PC
- Automatic wavelength set-up, automatic slit switching, automatic lamp current and gain set-up within 40 seconds.
- Easy switching and control of 6 lamps on rolling turret
- Automatic flame ignition, automatic flow control for gases and gas leak detection.
- Nitrous Oxide Gas/Acetylene Gas selection (Optional) to analyze elements under the condition of high temperature.
- The use of advanced 1,800 lines/mm grating for strong energy and high resolution.
- Compatible with MS Windows XP and user-friendly graphical user interface.



## HG 8000 Hydride Generator

The hydride generator is for the low concentration analysis of elements such as As, Se, Hg, Bg, Bi, Sb, Sn and Te with high sensitivity. The sample injection by a peristaltic pump and atomizer made of quartz tube with an electrical heating mode are provided for easy and fast operation. It is also easily applied to any AAS with hydride-atomic absorption.



- Non-stop injection from 3 channels by a peristaltic pump. Injection volume : 1 ~ 5ml/min
- Longest life of Tygon peristaltic pump tube(500 ~ 1,000 hr)
- The use of quartz electric heating tube to resist oxidation and contamination. (Heating available up to max. 1,000°C with no damage.)
- Rapid ramping rate : 100 ~ 1,000°C set-up available Temp. set-up accuracy:  $\pm 2^{\circ}\text{C}$
- Compact design to optimize space

### Sensitivity and Detection Limit in use of Hydride generator

	Sensitivity	MDL	RSD
As	0.11ng/mL	0.015ng/mL	0.82%
Pb	0.21ng/mL	0.27ng/mL	1.03%

## Chiller

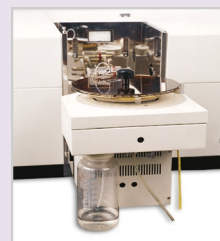
### Supply of cooling water for use of Graphite furnace

Water temp.	Flow rate	Power supply
-20°C ~ 90°C	12 L /min	220V

## AS-GF Autosampler for Graphite Furnace

The Young Lin autosampler for the use of Graphite Furnace provides multi-function and high precision for convenient and automatic operation.

- Up to 70 sample vials and 6 ea of 25ml glass for solutions, blank solution and chemical modifier. (Carousel type)
- Installation wizard for convenient use.
- Accuracy :  $< 0.1\mu\text{l}$
- Precision :  $< 1\%$  (RSD)
- The function of standard chemical addition. Full control of all process related to samples, standard chemicals and chemical modifier.
- Air separating different solutions ensures no contamination.
- Up to 20 repetitions for same sample, Up to max. 70ul injection.
- Automatic heating of Graphite furnace after injections.



## AS-F Autosampler for Flame

This autosampler provides both individual sample injections and batch sample injections. For the batch sample injection type, it performs washing, stand by and sample injection. The user can set up the number of samples, stand-by time and injection time for each sample.

- Up to 60 ea of 5ml vials, carousel type
- Max. injection volume : 4ml
- Accuracy : 2 ~ 3 %



## Technical Specifications

### [ Spectrometer ]

Wavelength Range	190nm ~ 900nm	Spectrum Bandwidth	5-steps : 0.1nm, 0.2nm, 0.4nm, 1.0nm, and 2.0nm, respectively
Grating	1800 lines/mm	Mono-Chromator	Czerny-Turner Grating Mono-Chromator
Wavelength Repeatability	Full Wavelength $\leq \pm 0.1$ nm	Background Calibration	> 50 times
Blaze Wavelength	250nm	Accuracy	Full Wavelength $\leq \pm 0.2$ nm
Focal length	300mm	Resolution	better than 0.3nm

Flame Method	Position Adjustment	Best Adjustment of Height and Angle. Finish Switch between Flame/Hydride in 1 minute
	Burner Head	Interchangeable Full Titanium Burner Heads of 50mm and 100mm, Full Titanium Atomizing Cell
	RSD: $\leq 1\%$	Limit of Detection : $\leq 0.005$ mg/L

Graphite Furnace Method	MDL	1 pg
	Temperature Control Range	Room Temperature ~ 3000 °C
	Graphite Furnace Repeatability	3 $\mu$ g/L Cd 11 injections, RSD $\leq 2\%$
	Temperature ramping rate	$\geq 2000$ °C /second
Temperature Control Program: Max 20 segments Temperature Rising Program. 3 Modes of Temperature Rising: Step, slope, and flat, respectively		

Data Processing	Measurement Method	Flame Absorption, Flame Emission, Graphite Furnace, and Hydride
	Analysis Method	Linear Equation, Non-Linear Equation, Standard with Added Standard
	Print Output	Calibration Curve, Signal Spectrogram, Instrument Conditions, Analysis Parameters, Analysis Results and others all can be stored automatically and printed.



These Products are manufactured by Young Lin  
ISO 9001-certified facility that is periodically  
audited by the registering body to ensure compliance

# AAS-8000 Series

## Atomic Absorption Spectrometer



**YOUNG LIN INSTRUMENT CO., LTD**

Young Lin Bldg., 899-6 Hoggie-dong, Anyang, 431-836, Korea  
TEL : 82-31-428-8700 / FAX : 82-31-428-8779  
E-mail : [export@younglin.com](mailto:export@younglin.com) Homepage : [www.younglin.com](http://www.younglin.com)

Date : May, 2009