

AA

Varian  
AA280 Atomic  
Absorption  
Spectrometers



**VARIAN**

# Varian gives you the extra edge and power to surpass your expectations.

The Varian AA280 series comprises two innovative, stylish and easy-to-use systems. The AA280 flame instrument combines our world-leading Fast Sequential design with eight lamp capability, to give you greater performance and reduced running costs. The AA280 Zeeman instrument comprises Varian's fast Transverse Zeeman background correction with our new GTA-120 graphite furnace for superior furnace performance and the most accurate correction.

The Varian AA280 flame instrument offers:

- Patented Fast Sequential™ capabilities\* with eight lamps, so you can determine more elements in rapid sequence from one sample analysis.
- Increased automation for optimum precision. Automated burner adjustment and programmable gas control provide the most stable and reproducible flame performance, as optimum settings can be used for each determination.
- Reduced running costs. Varian's new pre-emptive sampling reduces analysis times by up to 55% compared with conventional single-element AA systems. This high productivity means reduced sample-to-sample delays, minimal sample consumption, lower gas, reagent and lamp usage, and more results every day.

Varian, Inc. is a world leader in instrumentation for atomic spectroscopy. From our involvement in the development of components for the first atomic absorption spectrometers in the 1950s, to the world's first ICP-MS with tunable gigahertz sensitivity, Varian, Inc. has over 50 years experience of innovation and development in all areas of atomic spectroscopy.

- Improved sample throughput with flame AA. Use Smart Rinse™ to automatically optimize the rinse time. Once enabled, Smart Rinse automatically reduces rinse times for samples that don't need it and increases the rinse time for complex matrices, eliminating contamination.
- Improved data quality. Varian's innovative Fast Sequential (FS) analysis provides new capabilities for flame AA, including semi-quantitative analysis and internal standard corrections. Multiple elements are determined in rapid sequence allowing internal standard corrections to be applied on-line to correct for long term drift or sample preparation errors. This improves precision and accuracy.



\* US patent no. 6,236,457

### Why use Fast Sequential AA?

Fast Sequential AAS brings the productivity and speed of sequential ICP-OES analysis to AA. Varian's Fast Sequential instruments measure all elements in each sample, before moving to the next sample, providing complete results for each sample in minutes.

### Eight fixed lamp positions

All eight lamps are operated simultaneously in Fast Sequential mode. Unlike conventional slow, rotating turrets, a fast, motor-driven mirror system ensures rapid lamp selection from fixed lamp positions. Multi-element lamps can also be used in every position, so you can determine more elements without changing lamps.

### Software that redefines ease-of-use

Varian's acclaimed worksheet software is even more powerful and simple to use:

- Link directly to Varian's online support resources using the web-integrated software. Once connected, you can download applications and software updates, view the latest product announcements, order consumables and track your order status.
- 'Wizards' guide you through key aspects of analysis, including setting up a Fast Sequential sequence, optimising furnace methods or programming the autosampler.
- To save on downtime and running costs, and assist GLP compliance, you can track the operating lifetime of lamps, electrodes or pump tubing. You can also count the number of replicates and samples, and track replicate and sample measurements.

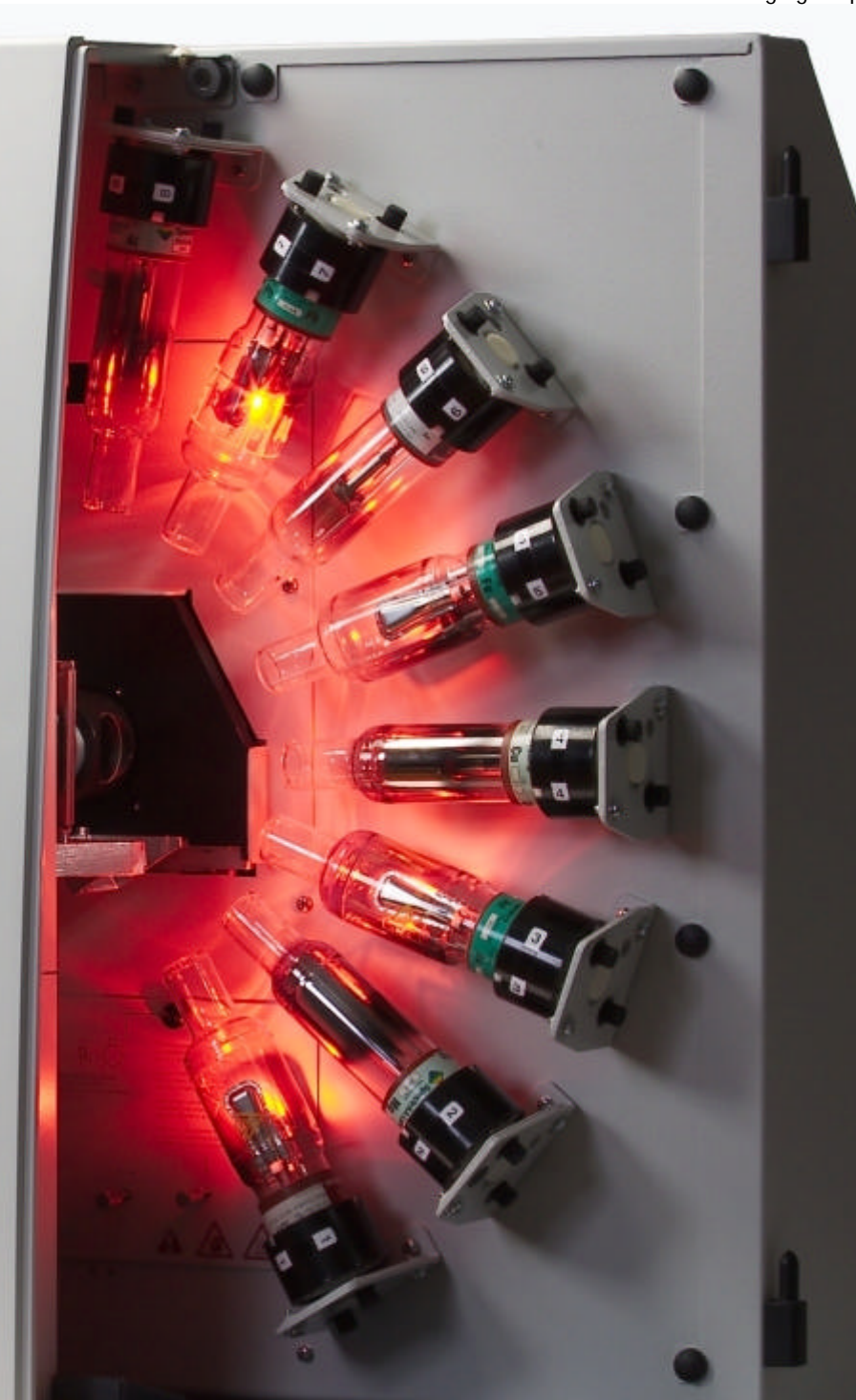
### Faster On-line Sample Preparation for Flame AAS

Varian's unique SIPS accessory automatically prepares a multi-point calibration from a single standard and provides fast, on-line dilution of over range samples. SIPS enhances accuracy and precision by eliminating dilution errors, and costly manual dilution and re-analysis of samples.

### Fastest Ever Flame Autosamplers

Speed up flame AAS even further with Varian's new SPS flame autosamplers. The SPS series feature the fastest ever sample to sample changes, high sample capacity, and rack exchange during the analysis. Using Varian's SPS autosamplers, you can improve sample throughput and create a complete sample preparation platform for your laboratory.

For clarity some images in this brochure may depict the spectrometer being used without safety covers. Ensure all safety covers, chimney etc. are in place for normal operation.



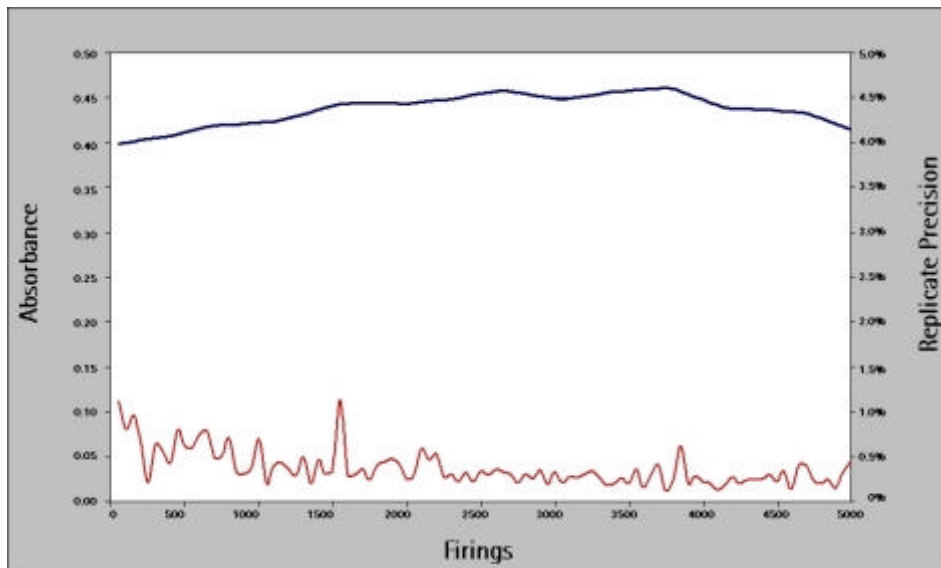
### Superior furnace capabilities

Varian's GTA-120 and GTA-120 Zeeman Graphite Tube Atomizers achieve superior furnace performance, no matter how difficult the sample. The GTA-120:

- Reduces running costs with Varian's Gas Minimizing Technology (GMT). GMT extends tube lifetimes, reduces gas consumption by 40%, and lowers analysis costs.
- Allows real time viewing with the optional in-built Tube-CAM. The Tube-CAM furnace viewing camera allows you to accurately set the probe dispensing height and confirm optimum drying and ashing temperatures during method development.
- Breaks graphite furnace productivity limits, with capacity for up to 135 solutions, guaranteeing extended operation for busy laboratories.
- Eliminates method development with the Surface Response Methodology (SRM) Wizard. The SRM Wizard automates optimization of the graphite furnace parameters by modeling the absorbance as a function of the ashing and atomization temperatures. The SRM Wizard recommends the optimum parameters and automatically creates a method using the recommended conditions. With SRM Wizard even a novice can become an expert.

### Better detection limits

For ultra trace level detection limits with fast Zeeman background correction, Varian's UltrAA lamps reduce noise and enhance sensitivity. Simply plug in and achieve better detection limits. The AA280 Zeeman requires no extra power supply for these high performance lamps.



Use Tube-CAM to monitor the analysis or capture still or video images.

Varian's GMT extends tube lifetimes and reduces gas consumption by 40%. Typical lifetimes for an aqueous copper standard with an atomization temperature of 2300 °C are shown.

### Safety

Although Varian's products are designed to be safe and to comply with all applicable regulatory requirements, it is important to be familiar with the hazards associated with these products. For full details, refer to <http://www.varianinc.com>



Varian AA instruments are certified to comply with the requirements of the EMC and LV directives of the European Union.

### Varian Spectroscopy and Chromatography Supplies — Performance, Selection, and Value

Varian is committed to providing analytical products and supplies at affordable prices, supported by superior customer service. Thousands of products for GC, LC, MS, AA, ICP, ICP-MS, UV-Vis, Fluorescence and sample preparation from Varian and other leading manufacturers are highlighted in our latest catalogs. Call today to request your free copy. You can also shop online at [www.varianinc.com](http://www.varianinc.com)

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