



AFS 800/900 Series Atomic Fluorescence Spectrometers

Measurement of As, Sb, Bi, Hg, Se, Te, Ge, Pb, Sn, Cd, and Zn at ppt levels



AFS-930 Atomic Fluorescence Spectrometer



AFS-830 Atomic Fluorescence Spectrometer

BEIJING TITAN INSTRUMENTS CO., LTD.

THE COMPANY

Beijing Titan Instruments Co., Ltd. is a Beijing based private enterprise that was conceived in the late nineties by a group of Financiers, Engineers, Chemists and other Specialists with a common vision. This vision centered on the idea that a rugged, reliable, automated and ultra-sensitive analytical instrument to measure element concentrations in diverse sample matrices could be achieved by using AFS techniques - an area with which the key researchers had an in-depth familiarity. From these auspicious beginnings, Beijing Titan Instruments Co., Ltd. has become a very successful AFS manufacturing company, with widely sold instruments in China and beyond. With emphasis on research and development in some critical components of AFS, such as hydride generating hardware and ergonomic instrument design, we are pushing the forefront of Atomic Fluorescence science and applying it to produce analytical instruments that the world needs.

By incorporating modern manufacturing processes with state-of-the-art research into AFS techniques, as well as a stable and well funded financial backing, we have produced our AFS 800/900 series of spectrometers. Compare the automation, ultra-sensitivity, the form and fit, as well as the purchase price and you can easily see why we are the most widely represented Atomic Fluorescence Spectrometer manufacturer in People's Republic of China (PRC). As of 2004, our products find equal application in Environmental, Hygiene, Mining, Clinical, Agricultural, and Cosmetics sectors. To introduce us to your specific needs, please contact a local representative near you.

THE TECHNOLOGY

With increasing awareness of how industrialization and human activities affect the world around us, the need for detecting lower and lower levels of sample concentrations has become both a pressing and persistent matter. Pushed by stringent guidelines of legislative bodies, the analyst is demanding ever greater degrees of sensitivity, particularly for the elements of known toxicity, such as Hg, As, Cd, Se, Sb and Bi.

So, what are the options available to the modern analyst. Although AA, ICP, and ICP-MS all have their place in a modern laboratory, none of these techniques offers the sensitivity needed to provide accurate analysis at ultra-low levels. Beijing Titan Instruments has been at the breaking edge of research into AFS techniques since its inception and has accumulated substantial expertise and knowledge in the field to become an international leader. At present, our products provide a proven and effective means for measuring Hydride forming elements at single-digit ppt levels in diverse matrices.

By its very nature, fluorescence is linear over many orders of magnitude. Titan AFS 800/900 series instruments have the capability, for example, to measure Hg and Cd from single-digit ppt levels to ppm levels without the need for instrument adjustment and without significant interfering carryover from sample to sample.

THE FEATURES

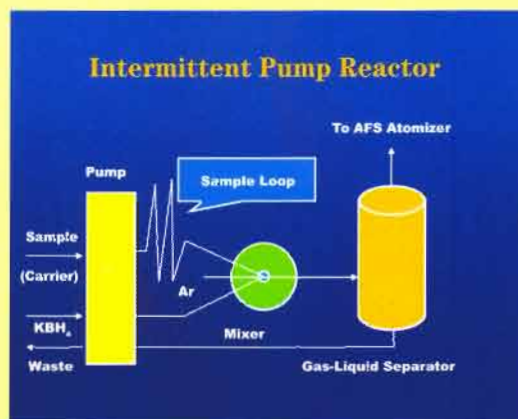
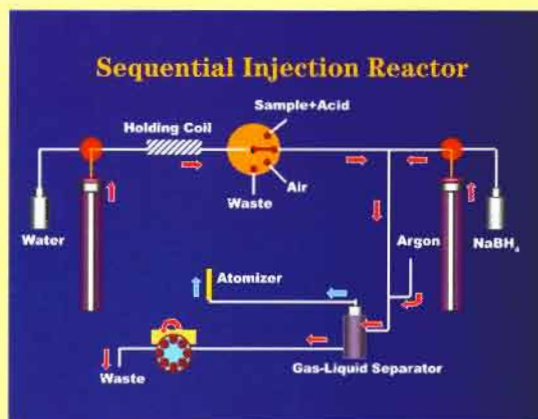
- Two elements can be measured simultaneously in one sample.
- Routine monitoring of As, Sb, Bi, Hg, Se, Te, Ge, Pb, Sn, Cd, and Zn at ultra trace levels (ppt, ng/L).
- Advanced Titan perfected sequential injection technique system or intermittent pump technique system.
- Advanced shield Quartz atomizer.
- Novel, light-proof system and atomizer.
- Highly integrated and modular electronics design.
- Standard RS-232/RS485 Interface for computer operation.
- Reliable, fully tested Windows XP/98 English and Chinese software.

THE AFS LINE OF PRODUCTS

In order to meet the varying needs of laboratories with differing applications and budgets, Titan Instruments Co., Ltd. produces multiple models of our AFS product line - from our top end, fully automatic, sequential injection, hydride generation system based AFS-930 to our economical intermittent pump technique, semi-automatic, hydride generation based AFS-820. Our range of products not only embraces a number of substantial improvements to ease sample measurement tasks but also significantly improves the detection limits of our products.

The AFS product line is designed with the routine element monitoring in mind, but built into our software and hardware is a range of facilities that has today's researcher and current legislation needs well covered.

With our AFS products, most-major controls are readily available from software, making it possible to conserve not only reagents and gases but minimize the risk of operator error. Our vapor generation system is an integrated part of our products, since the atomization source is provided by the hydrogen flame produced by the chemical reaction itself. The Titan design minimizes foaming and ensures reliable analysis.



Our Detection Limits

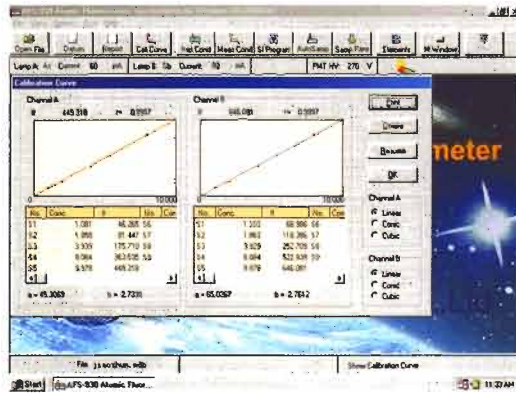
		As, Se, Pb, Bi, Te, Sn	Ge	Hg, Cd	RSD
Detection Limit ($\mu\text{g/L}$)	AFS-820	<0.04	<0.1	<0.004	<1.0%
	AFS-830	<0.04	<0.1	<0.004	<1.0%
	AFS-920	<0.02	<0.05	<0.002	<1.0%
	AFS-930	<0.02	<0.05	<0.002	<1.0%

OUR SOFTWARE

Our fully tested and operator friendly, yet powerful application software for the AFS line of products is available in both English and Chinese and operates in Windows XP/98 operating systems. Take a look at some of the menu windows.



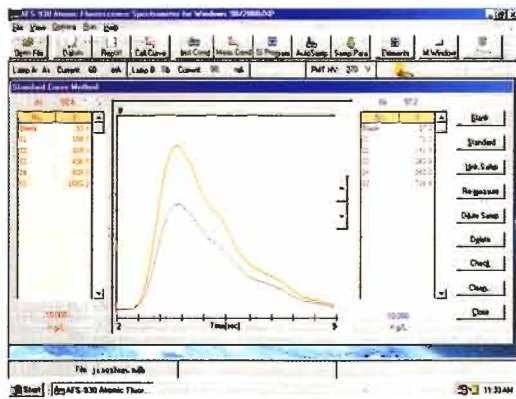
Complete control of most major instrument function is available right from the computer screen.



Calibration curves are available in a method file and can extend across several orders of magnitude with up to 9 standards calibration points.



Our autosampler based operation includes easy setup procedure with standards, checks and sample position.



Clear, graphical presentation of sample intensities with time can provide a good diagnostic as well as sample information output. Peak shown is As and Sb at 10 ppb concentration.

If you are working in the following industries, then we already know your application.

- Hygiene:** food, water, city supply and sewage water, dental amalgam
- Environment:** soil, sludge, waste water, rain water, river water, sediments
- Geological:** ore, rock, coal, crude oil, metals
- Clinical:** blood, tissue, hair, urine
- Agricultural:** dairy, wine, feed, meat
- Cosmetics:** cream, lipstick
- Metallurgical:** materials and products
- Medicine:** Chinese herbal medicine

If not, please let us know your needs. Titan will find a solution for you.

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