

GBC Scientific Equipment



Pre-Owned 908PBMT Double Beam Atomic Absorption Spectrophotometer, includes Windows 7™ computer system, instrument software and all shipping charges. (US & Canada only)

\$8,000.00

Features include:

- **Automatic wavelength and slit setting**

The wavelength and bandwidth are stored with the application and set up automatically. The large, self-calibrating monochromator has been specifically designed to provide the high light throughput and stability needed for atomic absorption. Spectral bandwidth is continuously adjustable between 0.2 and 2nm and, for furnace work, reduced slit height is available with all slit widths. For convenience, the wavelength, slit width and slit height are set automatically. A wide-range photomultiplier tube covers the full wavelength range.

- **Programmable flame control**

The 908PBMT offers a programmable flame control, which allows the flame type and gas flow to be stored with the other application parameters. When an application is recalled, the appropriate flame conditions are automatically set up by the programmable flame control system. When nitrous oxide-acetylene is selected, an air-acetylene flame is first established and then the acetylene flow is automatically boosted before changeover to nitrous oxide-acetylene. On flame off, the reverse sequence is followed. The flame may be turned off at the end of a run to conserve gas.

A comprehensive range of safety interlocks is included:

- The flame cannot be ignited if there is no burner installed.
- The flame cannot change over to nitrous oxide-acetylene unless a nitrous oxide-acetylene burner is installed.
- A liquid level sensor prevents ignition if the liquid trap is not filled.
- Spray chamber interlocks prevent ignition if either the nebulizer bung or the pressure relief bung is not in place.
- The air, nitrous oxide and acetylene supply pressures are continuously monitored and ignition is prevented or the flame shuts down if the pressure falls below a safe level.
- The actual oxidant flow is also continuously monitored.
- A flame sensor causes the gases to be shut off if the flame should go out for any reason.
- If the mains power should fail, an auxiliary power supply allows the system to follow the normal flame shutdown sequence.

- **Four-lamp motorized turret**

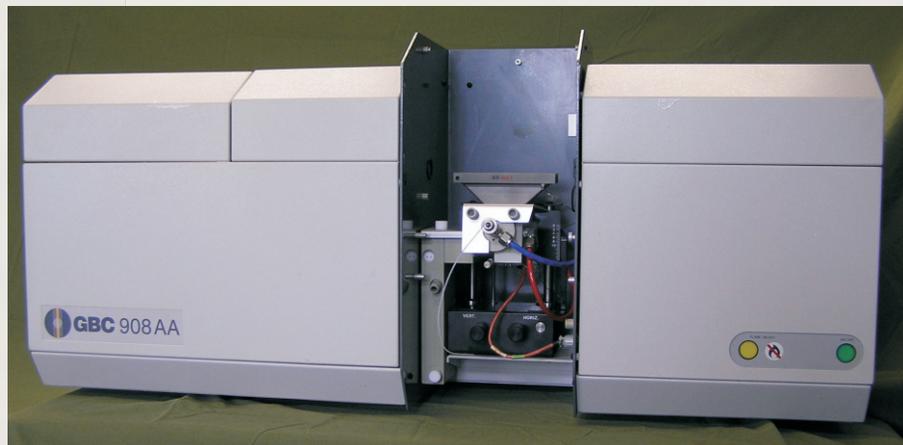
Four-lamp turret with automatic computer-controlled lamp selection. Individual adjustment for each lamp allows lamps to be pre-aligned. With automatic multi-element operation, the next lamp in a sequence is automatically warmed up. Compatible with standard hollow cathode lamps.

- **True Double Beam Optics**

The genuine double beam with background correction and flame emission capability. Asymmetric modulation with 2:1 sample to reference ratio for noise reduction. All-reflective system with quartz overcoating on mirrors. Sealed against dust and vapor.

- **All Reflective, Sealed Optical System**

The 908 uses mirrors throughout the optical system to ensure that correct focus and high-energy throughput are maintained at all wavelengths. To protect the optical surfaces, the whole system is sealed against dust and vapor, and additional protection is provided by coating the mirrors with silica.



GBC Scientific Equipment (USA) LLC
151A N. State Street, P.O. Box 339
Hampshire, IL 60140
Toll-Free: 800-445-1902 Fax: 847-683-9871
Email: sales@gbcscientific.com
www.gbcscientific.com



- **Asymmetric Modulation Reduces Noise**

Asymmetric modulation for double beam instruments is a GBC innovation. Most of the noise in atomic absorption measurement comes from the sample beam. By spending more time measuring the sample beam - twice that of most conventional systems - the GBC 908 reduces noise by up to 40%.

- **Ultra-Pulse Background Correction**

With all background correction systems, there is a small time delay between the measurement of background and total absorbance. When the background is changing very rapidly, as it often is with graphite furnace work, this delay can lead to an error in the background corrected reading. Systems with slower sampling rates and longer delays show greater errors. Most background correctors measure the background absorbance 50 or 60 times per second and the delay between the measurement of background and total absorbance can be as much as 10 milliseconds.

The GBC Ultra-Pulse system takes 240 (60Hz) sample measurements per second and the delay between the measurement of background and total absorbance is about 1 millisecond. This produces a dramatic reduction in background correction errors. Accuracy is further improved by interpolating between background measurements to calculate the background when the atomic signal is measured.

This system also allows correction for higher background levels than most systems - up to 2.5 total absorbance.

Software

- **Data Processing**

Provides analysis by atomic absorption or emission. Absorbance range to 3.0 Abs. Measurement by integration, running mean, peak height or peak area. Mean and RSD of up to 50 replicate readings. Calibration using up to 10 standards. Linear least squares curve correction, linear least squares through zero curve correction, exact fit curve correction, concentration least squares (polynomial) curve correction, standard additions or bracketing standards. Programmable re-slope using a single standard or complete recalibration, rate settable by either time or frequency of samples. Password protected result editing to remove unwanted readings on either samples or standards. Weight and dilution correction. All editing available either during the run or post run.

- **Graphics**

High resolution color display of atomic absorbance, background signals, furnace temperature programs, calibration curves, peaking meters and wavelength scans. Graphics can be displayed in a number of different modes including overlaying non-successive peaks. Selectable absorbance scale for traces. Graphics cursor can be used to obtain numerical information from graphics traces. Zoom function allows graphics traces to be expanded.

- **Data Storage**

Storage is provided for all data including the linking of the graphics trace to the results. Also stored are the methods, sample labels, sample sequences, method sequences, weights and dilutions, report headers and footers, calibrations and the results.

- **Report Generation**

Reports may be printed from all stored results in either single element or multi-element format with results being combined from different runs and different measurement techniques. All operating parameters, calibration graphs, headings, footers, method notes, sample labels, result statistics and weight and dilution factors may be printed. Software supports a full range of printers.

- **Quality Control Protocols**

Complete range of quality control functions available, including check samples, spike recovery, upper and lower QC limits, and calibration correctness. Checks can be carried at predetermined intervals based on time or number of samples analyzed. Alternately, checks can be carried out randomly. All checks have operator settable failure limits and failure actions, and flagging for all failed tests.

Includes 90-day warranty

Please Note: Many other options are available for use with this GBC system, including:

- Installation & Training
- Standard hollow cathode lamps
- Nitrous-Oxide/Acetylene Burner with Flame Shield
- Atom trap (improves flame sensitivity)
- Flame Autosampler
- Graphite Furnace System with Autosampler
- Hydride Generator
- Mercury Concentrator