



AA301 Atomic Absorption Spectrometer

AA301 Atomic Absorption Spectrometer has been developed to guide the user quickly and easily through an analysis with its comprehensive Elemental Method Library. The AA301 comes with intuitive AA software for simple data acquisition and system control.

Analysis is fast and simple with these performance enhancing features:

Better performance is achieved with an improved spray chamber and nebulizer making the sample introduction process more efficient and repeatable. Valuable time is saved with the twin lamp holder, allowing one lamp to be used for measurement whilst the other is warming up. Various options and accessories are available to enhance performance and functionality including background correction, hydride generator, cold vapour mercury generator and 50 mm nitrous oxide/acetylene burner. Convenient lamp selection via Element Name or Lamp Holder Number. Wavelength peaks can be searched and found automatically by selecting different parameters. Always see what is happening with the real time continuous display of absorbance scan vs time. Safe pneumatics controller including safety interlock before flame ignition, extinguish or flame type changeover. Continuous monitoring of flame and instrument status indicated clearly by color. Analytical parameters for all AA elements are stored in an easily accessible cookbook.

Software features include:

Instrument diagnostics and safety control via continuously operating interlocking features Automatic concentration curve calculation by least squared, linear, quadratic, cubic or polynomial fit Method of standard additions is also accommodated in the software Up to 10 repeats of the same standard and sample can be analyzed with the results and statistics easily viewed Analytical data, standards and sample information can be incorporated into a customized report and printed Service module for minimized downtime Online help facility.

Technical Information

Operational Modes	Atomic absorption, atomic absorption with background correction 1, emission.
Wavelength Range	190 to 900 nm
Photometric Range	-0.301 to 2.0 Abs
Photometric Accuracy	±0.001 Abs @ 1 Abs
Detector	High performance photomultiplier.

Monochromator

Mounting	Littrow type
Focal Length	250 mm
Grating	1200 lines/mm
Bandwidth	Variable 0.1 to 2 nm in steps of 0.1 nm

Physical Characteristics

Dimensions	815 mm (L) x 285 mm (W) x 495 mm (H)
Weight	35 kg
Lamp Capacity	2lamp positions with individual power supply.

Power

Power Required	230 Volts ± 10 %, 50 Hz, 69 VA
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Sample Introduction System

Sample Uptake Rate	5 to 8 ml/min
Spray Chamber	Chemically inert, PTFE.
Nebulizer	Platinum, Iridium.
Burner Type	Air cooled, pre-mix 100 mm slot burner suitable for acetylene/air flames. Universal 50 mm slot burner suitable for all flame types 2.
Burner Positioning	Manual vertical, rotational and lateral positioning.
Flame Ignition and Extinguish	Manual
Gas Control	Gas flow rate control with rota meter and needle valves. Software controlled flame type change over from air/acetylene to nitrous oxide/acetylene.

Performance

Sensitivity	Greater than 0.7 Abs signal for 5 ppm Copper solution 3.
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- Atomic absorption with background correction requires additional D2 background correction option
- 50 mm burner optional. Compatible with air/acetylene and nitrous oxide/acetylene flame types
- With 100 mm burner