

#### Atomic Absorption Spectrophotometer

Simple, Effective, Efficient

#### BUCK AA's Thrive where others fail!



#### Features

High energy optical design for superior sensitivity

In-line D2 Background correction Automated wavelength setting

Push button oxidant change-over for N2O

Flame detector with automatic gas shut down

Sample drain sensor to prevent flashbacks

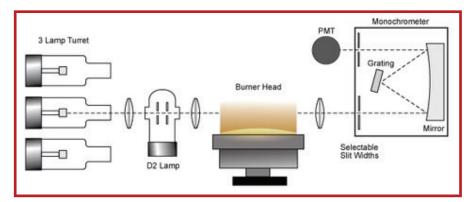
Automated Slit selection

Push button ignition 10" Color touchscreen

and supported in the USA



Auto gas box & push button ignition



Our in-line D2 background correction uses less mirrors for higher energy & superior sensitivity





# Atomic Absorption Spectrophotometer

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#### **Features**

Our innovative optical design unlocks the full potential of atomic absorption, providing greater sensitivity and lower detection limits than traditional systems. By maximizing energy throughput, our instruments can measure lower concentrations of key elements like Arsenic and Selenium without expensive EDL lamps.

This efficient design also allows our spectrometers to be remarkably compact. Our instruments have a smaller footprint and lighter weight compared to competitor models, making them ideal for space-constrained labs and field applications.

The bottom line? Our optimized optics deliver enhanced performance and versatility. Get expanded analytical capabilities without the high cost and bulk of dated AA systems. Discover new levels of trace element detection with our cutting-edge atomic absorption technology.

The 235ATS includes Deuterium Background correction for Improved Accuracy

D2 correction accounts for nonspecific background interference, increasing measurement accuracy and confidence.

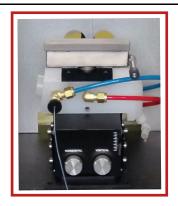
By removing background noise, D2 correction lowers detection limits for enhanced sensitivity and trace analysis by correcting for variations in sample introduction and flame instability which improves measurement precision.

Our D2 background correction enables accurate analysis even with complex sample matrices like oils, blood, ashes.

Automated D2 correction built into the system makes analysis easier for new users.

D2 correction linearizes calibration curves and improves quantitation accuracy.

### Unlock Maximum Sensitivity with Superior Nebulization



Our short-path dynamic nebulizer-burner setup is engineered for performance. We precisely position an inert nebulizer needle to inject the sample into a venturi for incredible nebulization. This nebulizes even challenging sample types with high total dissolved solids or viscosities.

The sample then reaches a high-velocity impact bead made of corrosion-resistant material. This generates a fine aerosol mist for the most efficient transport of sample to the flame.





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### Superior Nebulization

What does this mean for your lab? Our innovative nebulizer setup delivers extreme sensitivity and stability across all sample matrices. You get lower detection limits to see more of your sample and expanded analytical capabilities.

Experience the difference optimized nebulization makes. Achieve new levels of sensitivity and productivity with our cutting-edge sample introduction system. Unlock the full potential of your lab.

### Innovation that Simplifies Service

Easy access was a guiding principle in our 235ATS design. We've engineered quick-slide doors and panels to make wear components readily serviceable. Our founder's decades of hands-on service experience ensured that critical parts are upfront and convenient to maintain.

Because at Buck Scientific, we know downtime costs you precious time and money.

While other brands maximize profits using inferior components, we refuse to compromise. Our atomic absorption systems are made to perform, day after day, with industrial-grade materials.

Experience the difference thoughtful design makes. Our instruments deliver the powerful performance labs need while simplifying upkeep. You get robust construction coupled with incredible ease of service.

Partner with the only spectrometer designed by technicians, for technicians. Enjoy worry-free ownership and increased productivity. That's the Buck Scientific difference.







# Atomic Absorption Spectrometer

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### Specifications

Model	235ATS AA Spectrophotometer
Electrical requirements	Auto selectable 100V to 230V 50/60Hz input
<b>Power Consumption:</b>	.5 A
Optics:	
Detector:	model 928; wide range general purpose, 190-930nm
Lenses:	Supracil - amorphous silica
Monochromator:	0.25m Ebert mount
Grating:	32nm x 27nm; 600 grooves/mm
Wavelength adjustment:	3 digit motor driven, 0 to 1000nm +0.1 nm
Reproducibility:	+0.1 nm
Resolution:	variable slit - 2Å, 7Å, and 20Å
<b>Operating Modes:</b>	
Absorbance/Emission:	-0.0820 to 3.2000
Concentration:	to 5 significant digits
Integration Period:	0.1 to 99.9 seconds
Screen Refresh:	0.224, 0.448 or 0.896 seconds
Analog (Recorder) Output:	1V/ABS (-0.08 to 3.2V)
<b>Background Correction:</b>	In-line Deuterium Arc
<b>Hollow Cathode Lamps:</b>	
Dimension:	1.5" OD Striking Voltage: 500V
Lamp Current:	0 to 18 mA average current (typical current is 1.5-8.0 mA)
Duty Cycle:	25%
Modulation Frequency:	(142 Hz Nominal)
<b>Burner Assembly:</b>	
Design:	Polyethylene Pre-mix chamber, glass impact bead dispersion
Burner Heads:	Titanium; air-acetylene head - 4" x 0.026" single slot
	nitrous oxide head - 2" x 0.019" single slot
Adjustments:	Manual Horizontal and Vertical positioning
Performance:	
Average Noise:	0.0018 ABS (Cu at 324.7nm, 7Å slit, 5 sec. int.)
Reproducibility:	<+5% relative standard deviation



