

The PG990 Atomic Absorption Spectrophotometer is a versatile entry level instrument with a computer controlled Air/Acetylene flame for general laboratory requirements. Due to its high sensitivity and excellent performance the instrument can be used for a wide range of applications including:

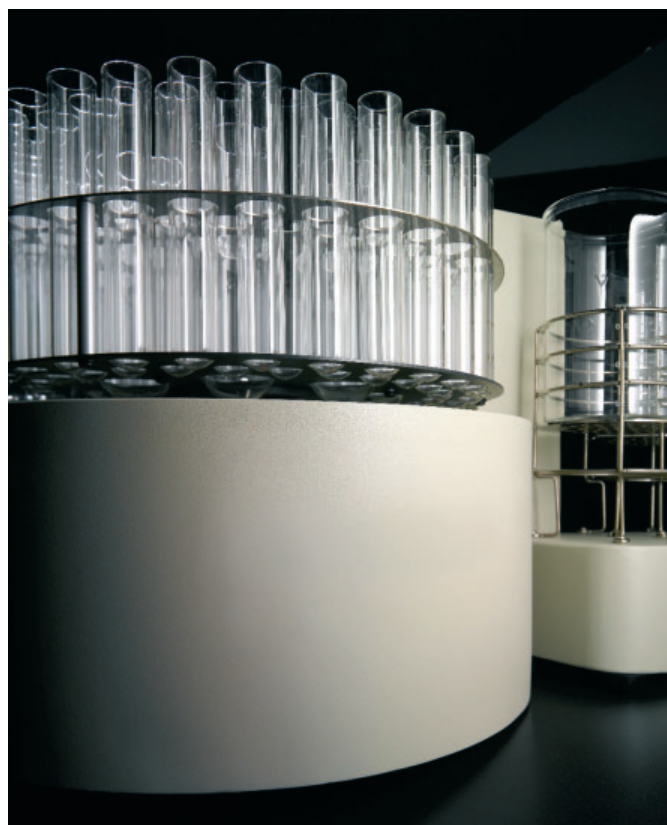
- Agricultural
- Food
- Geological
- Clinical
- Metal
- Petrochemical
- Environmental
- Mining
- Pharmaceutical

FEATURES & FUNCTIONS

- The instrument has a motorised 8 hollow cathode lamp turret which allows the automatic positioning and optimisation of each hollow cathode lamp by the software.
- The control of the gas flows for the fuel gas (C_2H_2) of the burner is also carried out directly from the software thus allowing optimisation of the instrument for the best analytical parameters for a selected analysis.
- Two methods of background correction are available. The first utilises a Deuterium Arc lamp and the second is the proven method of Self Reversal.
- High precision minimal optics ensures maximum light throughput to the computer controlled Czerny-Turner Monochromator.
- The location of the wavelength and peak selection is automatically controlled from the software.
- The spectral bandwidth is automated and is available with a choice of five slit sizes.
- The electronic parameters for the photomultiplier tube detector, the hollow cathode lamp current and the balancing of the absorbance and background energies are controlled from the software.
- The ignition of the flame is computer controlled and the various safety interlocks offer a very safe operating system.

SAFETY

- The flame conditions are continuously monitored and should the flow rates change, an audible alarm sounds.
- The pressure of the support gas (oxidant) is monitored constantly. If the pressure changes then the flow of the fuel gas will be stopped and the flame will be safely extinguished.



- A sensor monitors the level of liquid in the drain and will prevent ignition if too low. The flame will also be extinguished if the level of liquid in the drain changes significantly.
- A flame sensor monitors the flame and safely turns off the gas flow to the burner if the flame suddenly extinguishes.
- The burner is identified by a switch making it impossible to light without the burner being fitted.
- An emergency flame off button is installed in case a problem is observed. The flame can be extinguished safely.

Specifications

Spectrometer system	
Wavelength range	190nm -900nm
Light Source	Hollow cathode lamp (HCL), Deuterium Arc lamp (D2)
Modulation	Square Wave Pulse
Modulation frequency	100hz Self reversal (SR) background, 400hz Deuterium Arc (D2) background
Monochromator	
Grating	1800 grooves/mm diffraction grating
Blazed Wavelength	250nm
Focus	300nm
Bandwidth	0.1nm, 0.2nm, 0.4nm, 1.0nm, 2.0nm (Software selectable)
Scan mode	Automatic
Photometric Type	Single Beam
Wavelength Accuracy	+/-0.15nm
Wavelength Resolution	0.2nm +/-0.02nm
Wavelength Reproducibility	< 0.05nm
Baseline Stability	0.005Abs/30min
Background Correction	Deuterium Arc (D2) 1.0Abs, Self Reversal (SR) 3.0Abs
Flame Analysis	
Flame Type	Air/Acetylene
Sensitivity (Cu)	2ug/ml Absorption >0.28Abs
Characteristic Concentration	Cu < 0.02ug/ml
Detection Limit	Cu < 0.004ug/ml
Repeatability	Cu < 0.7%
Burner head	Titanium Alloy
Nebuliser	Inert Adjustable Nebuliser, Flow Rate from 2ml - 6ml/min. Pt/Ir capillary available for high acid concentration
Pre-mix Chamber	Corrosion Resistant
Safety Functions	Burner switch, Flame Sensor, Gas Leak Sensor, Low Gas Pressure Sensor, Drain Trap Sensor, Power Loss Protection
Data Processing	
Operating Program	AAWin2 software
Analytical Methods	Flame AA, Flame AE, Hydride
Readout Mode	Continuous, Manual, Peak Height, Peak Area
Calibrations	Multi-Standard Calibration, Standard Addition, Interpolation
Data Storage	Analytical results, Instrument and measurement parameters, Signal profile, Calibration curve
Power Requirements	
Dimensions	110cm x 54cm x 54cm 75Kg

We reserve the right to modify, revise/upgrade, suspend or discontinue any Product in whole or in part, either temporarily or permanently, with or without notice.



pg instruments

ALMA PARK, WIBTOFT
LEICESTERSHIRE, LE17 5BH
UNITED KINGDOM

T: +44 (0)1455 220131

F: +44 (0)1455 220025

www.pg instruments.com