

Atomic Absorption Spectrophotometer

LX220AAS



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Atomic Absorption Spectrophotometer LX220AAS does not support S-H background correction capability and has 4-lamp turrets lamps to reduce downtime between samples or allow for sequential analysis. This automated instrument exhibits high performance which is designed to meet the requirements of the modern laboratories.

Features

- The D2 lamp background correction capability at 1A is better than 30 times
- Provided with automatic 4-lamp turret, automatic adjustment of lamp current and optimization of light beam position
- Parameters like Wavelength scanning, peak picking, change in spectral bandwidth, optimization of position parameters, automatic ignition and gas flow setting are done automatically
- The graphite furnace analysis is fully reliable and automatic where it is adopting FUZZY-PID and dual curve mode light-controlled temperature control technique, temperature auto-correction technique, ensures fast heating, good temperature reproducibility and high analytical sensitivity
- The temperature control accuracy is less than 1%
- Graphite furnace with pneumatic control and pressure lock ensures constant pressure and reliable contact
- Equipped with alarm and automatic protection to fuel gas leakage, abnormal flow, insufficient air pressure and abnormal flame extinction in flame system
- Protection function and alarms for insufficient carrier gas and protective gas pressure, insufficient cooling rate supply and over-heating in graphite furnace system
- Adopting large-scale programmable logic array and Inter I2C bus technology
- For long term reliability of the whole electronic system, provided with European type sockets and AMP adapters
- AAS analysis is made under windows operating system which is easy-to-use with fast parameter setting and optimization

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- Provided with detector R928 photo multiplier with high sensitivity and wide spectral range
- Data processing system: provided with analytical methods – Working curve auto-fitting standard addition method, automatic sensitivity correction, automatic calculation of concentration and content with windows operating system software
- Experiments can be repeated 20 times maximum along with automatic calculation of mean value, standard deviation and relative standard deviation
- Equipped with multi task functions- sequential determination of multi-elements in the same sample, condition reading- with model function and result printing- measured data and final analytical report printout in excel
- Provided with standard RS-232 serial port connection

Optional Accessories

- Air compressor
- Hydride Vapor Generator for the element A_s , H_g . A_s a function expansion the hydride vapor generator can be connected for hydride analysis
- Pyrolytically coated platform graphite tube and graphite tube included in the main unit
- Two pieces of Normal graphite tube and high efficiency nebulizer are included in the main unit
- Water chiller is necessary for this system
- Graphite furnace power supply included in the main unit

Applications

Used for testing the metal element concentration analyze in agriculture, chemical, environmental study, food, mining, and petrochemical, pharmaceutical industry.

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Specifications

| Model No. | LX220AAS |
|-------------------------------|--|
| O ₂ Enriched Flame | No |
| Flame | Yes |
| Graphite Furnace Type | Yes |
| High Performance Lamp | No |
| Auto Sampler | No |
| Wavelength Range | 190-900nm |
| Wavelength Accuracy | ±0.25nm |
| Resolution | Two Spectral lines of Mn at 279.5nm and 279.8nm can be separated with the spectral bandwidth of 0.2nm and valley peak energy ratio less than 30% |
| Baseline Stability | 0.004A/30min |
| Lamp Turret | 4-lamp turret Auto-alignment, fully automated scan and peak-picking |
| Lamp Current Adjustment | |
| Wide Pulse Current | 0-25mA |
| Narrow Pulse Current | 0-10mA |
| Lamp Power Supply Mode | 400Hz Square wave pulse |
| Optical System | |
| Monochromator | Single beam, Czerny-Turner design grating Monochromator |
| Grating | 1800l/mm |
| Focal Length | 277mm |
| Blazed Wavelength | 250nm |
| Spectral Bandwidth | 0.1nm, 0.2nm, 0.4nm, 1.2nm Automatic change |
| Flame Atomizer | |
| Burner | 10cm single slot all-titanium burner |
| Spray Chamber | Corrosion resistant all-plastic spray chamber |

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| Nebulizer | | High efficiency glass nebulizer with metal sleeve, sucking up rate: 6-7ml/min |
| Graphite Furnace | | |
| Temperature Range | | RT~3000°C |
| Heating Rate | | 2000°C/sec |
| Graphite Tube Dimensions (L*OD) | | 28*8 mm |
| Characteristic Mass | | Cd \leq 0.8*10 ⁻¹² g, Cu \leq 5*10 ⁻¹² g, Mo \leq 1*10 ⁻¹¹ g |
| Precision | | Cd \leq 3%, Cu \leq 3%, Mo \leq 4% |
| Normal Air-C ₂ H ₂ Flame | | |
| Cu: | Characteristic Concentration | \leq 0.025mg/L |
| | Detection Limit | \leq 0.006mg/L |
| Main Unit Dimensions | | 1020*490*540 mm |
| Main Unit Weight | | 80kg |
| Graphite Furnace Dimensions | | 420*420*460 mm |
| Graphite Furnace Weight | | 50kg |