



✎ Innovated rich oxygen air-acetylene flame analysis technique

The patented flame analysis technique adopting rich oxygen air-acetylene flame as the substitution for nitrous oxide-acetylene flame for high temperature element analyses, such as Ca, Al, Ba, W, Mo, Ti, V, etc. Flame temperature is continuously adjustable between 2300-2950°C, which makes it possible to choose the best atomization temperature for different elements. It features easy operation, low analysis cost and wide flame AAS analytical range. Rich oxygen flame will not pollute the environment and is not harmful to human bodies. It's a break-through in flame AAS analysis.

✎ Flame atomization system with flame emission burner

A flame emission burner head can be installed to perform flame emission analysis to Alkali metals as K, N etc.

✎ Accurate fully automated control system

Automatic multi-lamp turret, automatic adjustment of lamp current and optimization of light beam position.

Automatic wavelength scanning and peak picking

Automatic spectral bandwidth changing

Automatic ignition

✎ Perfect safety protection measures

Alarm and automatic protection to fuel gas leakage, abnormal flow, insufficient air pressure and abnormal flame extinction in flame system.

✎ Advanced and reliable electronic design

Adopting large-scale programmable logic array and Inter 12C bus technology.

European type sockets and AMP adapters with high reliability to ensure long term reliability of the whole electronic system.

✎ Easy and practical analysis software

Easy-to-use AAS analysis software is made under Windows Operating System, realizing fast parameter setting and optimization.

Automatic display of measured data, automatic calculation and analytical result automatic print out.

ORDERING INFO.:

Model RIC-112, Atomic Absorption Spectrophotometer, flame type. Automatic PC control, 4-lamp turret, air-C₂H₂ flame, D2 background correction Complete with the software & Operational Manual.

Model RIC-113, Atomic Absorption Spectrophotometer, flame type.

Fully automatic PC control, 6-lamp turret, air-C₂H₂ flame, D2 & S-H background correction. Complete with the software & Operational Manual.

Model RIC-114, Atomic Absorption Spectrophotometer, flame type

Fully automatic PC control, 6-lamp turret, D2 & S-H background correction

Air-C₂H₂ flame and patented air-C₂H₂-O₂ flame (Substitution for N₂O-C₂H₂ flame). Complete with the software & Operational Manual.

SPECIFICATIONS:

Wavelength Range: 190-900nm

Wavelength Accuracy: ± 0.25 nm

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: $\leq 0.004A/30$ min.

Background correction: The D2 lamp background correction capability at 1A is better than 30 times.

Light Source:

Lamp turret: 6-lamp turret RIC-114/ RIC-113

4-lamp turret RIC-112

Auto-alignment, fully automated scan and peak-picking

Lamp current adjustment: Automatic adjustment and display.

Wide pulse current: 0~25mA

Narrow pulse current: 0~10mA

Lamp power supply mode: 400Hz square wave pulse

100Hz Narrow square wave pulse + 400Hz Wide Square wave pulse (RIC-114/ RIC-113)

Optical System:

Monochromator: Single beam, Czurney-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

Nebulizer: High efficiency glass nebulizer with metal sleeve, sucking up rate:6-7mL/min

Detection and Data Processing System:

Detector: R928 photomultiplier with high sensitivity and wide spectral range

Software: Windows Operating System

Analytical method: Window curve auto-fitting; standard addition method; automatic sensitivity correction, automatic calculation of concentration and content.

Repeat times: Maximum 20 times of repeat measurement, automatic calculation of mean value, standard deviation and relative standard deviation

Multi-task function: Sequential measurement of multi-elements in one sample

Condition reading: With model function

Result printing: Measurement data and final analytical report printout, editing with excel.

Standard RS-232 serial port communication

Characteristic Concentration and Detection Limit:

Normal Air-C₂H₂ flame: Cu Characteristic concentration ≤ 0.025 mg/L, Detection Limit ≤ 0.006 mg/L

Rich oxygen Air-C₂H₂ flame: Ba: Characteristic concentration ≤ 0.22 mg/L

Function Expansion: Hydride vapor generator can be connected for hydride analysis.

Dimensions and weight: 1020 (L) X 490 (W) X 540 (H) mm (main unit), unpacked 80 Kg

RELIABLE INSTRUMENTS CO. (ISO 9001CO.)



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