

Specifications of Atomic Absorption Spectrophotometer with Vapour Generation Accessory upgradable to Graphite Furnace

The Atomic Absorption Spectrophotometer should be true real time double beam AAS system. The system should provide D2 back ground correction for flame part.

Should have capability using coded hollow cathode lamps in the flame mode of operation. All the elements (as mounted in the lamp holder) in a sample should be analysed using air/acetylene Flame.

The instrument should have fully sealed quartz coated optics with a Monochromator with focal length of at least 250 mm having Holographic blazed diffraction grating 1800 lines/mm, wavelength range: 185 – 900nm. Computer controlled adjustments of spectral bandwidth in steps.

The instruments should have wide range and High Sensitivity P.M.T Detector or High sensitivity solid state detector.

The instrument should have minimum fixed 6 lamp holder for Hollow Cathode lamps.

The instrument should be provided with 10 cm Titanium burner head for air/acetylene for uninterrupted operation. (As per BARC Regulation). Automatic change over between the flames should be possible.

The instrument should have facility to field upgradable to furnace.

It should have automatic gas control system. Sensitivity of the instrument for flame operation should not be less than 0.85 A of 5ppm Cu in 5- seconds integration time using air acetylene flame.

The software should be windows based multitasking with a provision of calibration, recalibration, data storage, data manipulation, resolve, post data run, display of recommended condition, graphs, curves, absorption peaks, background correction inter elemental correction including fault/ error finding diagnostic features, statistical parameters and all necessary features. IQ/OQ/PQ should be done during the installation for NABL purpose. The software should have CFR part 11 compliance.

The items to be quoted as follows:

- i. Coded Single Element Hollow Cathode Lamps for the elements As, Cd, Pb, Hg, Se, Ca, Mg, K, Na, & Fe and Cu.
- ii. Mercury hydride generator unit for the analysis of hydride forming elements like Hg, As & Se to be coated.
- iii. 5 KVA online UPS with 1 hour back up.
- iv. Air Compressor, gas cylinders (Acetylene – 1No. and Argon gas 1 No.) with regulators, PC/Printer, Fume hood and necessary single element standards should include in the quote.
 - i. Prices should be quoted on FOB basis as well as in Indian Rupees upto destination.
 - ii. Prices should include installation, commissioning and on-site training.
 - iii. Warranty should at least be for two years.
 - iv. Authorized agents must attach proper agency certificate issued by principal supplier within 1 month.
 - v. Attach proprietary certificate in case manufacturer is sole manufacturer.
 - vi. Should have service facility in Kerala for prompt service.
 - vii. Vendor should have supplied minimum 10 No. of quoted model instrument in Kerala, also should submit minimum 5 nos. of performance certificate from Govt. institute from Kerala.

(Sd/-)

12.01.2022

Managing Director