

CORRIGENDUM

As the Technical Specifications of Atomic Absorption Spectrophotometer tender notice no. NITJ/Pur/111/2018 under **Category –A** have been modified, the detailed revised specifications are now available at attached **Annexure-A**. Accordingly, the potential bidders can quote as per revised specifications. However, the terms and conditions, tender documents will remain the same.

Registrar

TC CAT-A Annex - A

Specifications of Atomic Absorption Spectrophotometer

Fully Computer controlled Optical double beam Atomic Absorption Spectrophotometer (AAS) system with Flame, Hydride Vapor generator and Graphite Furnace, Automatic Dilution System with following minimum specifications:

Optics:

1. Instrument should have optical double beam with wavelength range from 190-900 nm or better.
2. Instrument should have Littrow/Czerny Turner monochromatic Grating with 1800 lines/mm.
3. Automatic selectable slit width from 0.2, 0.7, 2 nm or more choices.
4. Instrument should have at least six or more positioned automatic lamp turret with automatic selection of lamp with pre warm up facility for next lamp.
5. Instrument should have D2 background correction for the system.
6. Instrument should have photomultiplier/Solid State detector
7. Single Element Hollow cathode lamps of Pb, As, Cd, Cr, Co, Cu, Mn, Hg, Ni, Zn, Fe, Mg, Mo etc. along with complete lamp history function or Coded lamps

Flame System:

1. Burner Head: 10 cm Air-acetylene and 5 cm N₂O-Acetylene burner heads. Burner Heads made up of corrosion resistant pure Titanium with automatic height & lateral movement of burner through software.
2. Nebulizer: Pt-Ir capillary, ceramic impact bead must be made of an inert corrosion resistant material to handle HF acid.
3. All flow rates should be fully automatic and controlled through software.
4. Gas control system of an instrument must have maximum safety features like Automatic gas leak check, Prevention of wrong burner head use, Gas Pressure monitor, Drain tank level monitor, flame monitor, prevention of wrong burner head etc., so as to have complete safe operation.
5. Flame auto sampler with atleast 60 sample vials capacity must be included with the basic system.

Graphite Furnace with Auto-sampler:

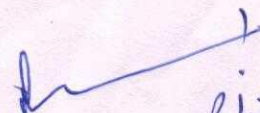
1. Graphite Furnace should have temp range up to 2700 or 3000 °C or more with 12 or more heating programming steps. Graphite furnace auto-sampler must have at least 60 or more samples holding capacity
2. System should be fully automatic computer controlled with all major accessories including graphite furnace, burner heads, auto-sampler, Vapor Generator etc.
3. Graphite Furnace with Auto-sampler. RSD of Furnace Auto-sampler must be 1% or lesser, Carry Over: Rinse Port less than 0.0001 and mixing port less than 0.00001 or better.
4. Auto-sampler should be permanently aligned & installed with the furnace.
5. Change over from flame to graphite furnace, vice versa and alignment through software. No manual atomizer changeover mechanism is required for ease of use and to get good reproducibility.

Vapors Generation Accessory:

Instrument should include software controlled hydride vapor generation accessory for hydride forming elements like As, Cd etc at Trace level and should be completely compatible with auto-sampler for automated analysis.

Automatic Dilution System:

System must be quoted and supplied with automatic and online dilution system with dilution factor of up to 300 times or more for highly concentrated samples.

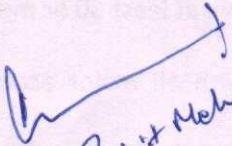
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Software:

Software should handle instrument linear absorbance reading, concentration, or emission intensity, integration time, built in statistics, calibration equation control, slope of analytical curve using operator selective calibration standard, Comprehensive quality control protocols facility including blank, multiple quality control standards, QA/QC audit trail and calibration failure. Software should have hardware validation function and should check wavelength accuracy, noise level, baseline drift, absorbance, repeatability etc automatically.

Accessories/Utilities:

1. Instrument should be supplied with good quality Oil free air compressor with air filters for moisture, dust, oil & mist removal
2. High Purity filled Gas Cylinders for Acetylene, N₂O and Argon with dual stage gas regulators
3. Exhaust Fume hood with vent assembly
4. Standards 100 mL volume, 1000 ppm concentration for above mentioned elements
5. Control boxes/panel for Gases like acetylene, Argon
6. Instrument should be supplied with Branded PC Core i3, 4 GB RAM, 1 TB HDD, LaserJet Printer.
7. Water circulator/chiller for cooling of Graphite Furnace must be quoted & supplied along with the system.
8. Compatible Online UPS with 60 minutes back up
9. Warranty: System must be quoted along with Two years warranty and Three years AMC to be quoted separately.
10. Flame System, Vapors Generation Accessory and Graphite Furnace should be of same manufacturer for better accuracy and repeatability.
11. Proper Training for the operation as well as routine maintenance of complete system should be provided by the supplier.
12. Quoted system must be a reputed make with worldwide presence. Printed Catalogue should be provided from manufacturer in support of above mentioned specifications.


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