

Technical Specifications of the Instrument/Equipment

1. Atomic Absorption Spectrometer

| Name of the instrument | Technical Specifications |
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| Atomic Absorption Spectrometer | <p>Fully PC controlled double beam Atomic Absorption Spectrophotometer with Air/Acetylene</p> <p>Optics : True Double Beam optical design</p> <p>Detector : Wide range Solid State Detector</p> <p>Wavelength Range: 185-900 nm</p> <p>Software selectable variable Spectral bandwidth 0.2 to 2nm</p> <p>Holographic grating with 1800 lines/mm with dual blazed</p> <p>System should have automatic 8 lamp turret to hold 8 different lamps with fully automatic alignment with built-in power supply for each lamp.</p> <p>System should have auto adjustment lamp position and pre-heating current</p> <p>Burner Alignment: it should be automatic</p> <p>Air Acetylene Burner Head</p> <p>Oil-free Air Compressor should be offered directly from the manufacturer of the AAS (local Air Compressor will not serve the purpose)</p> <p>All the method parameters related to lamp selection, calibration, control of flow gases should be through integrated software in the system</p> <p>Background correction: Built-in continuum source double-beam background correction using a high-intensity deuterium arc lamp. Should have fibre optics to reduce influence of stray light and scattering losses & should be optimized to provide high transmission for the whole wavelength range of interest, and significantly the UV region of the spectrum</p> <p>Gas Control: Oxidant & fuel monitoring should computer control, remote ignition system, auto adjusted acetylene flow when switching to or from nitrous oxide-acetylene operation</p> <p>Various safety interlocks like burner head, gas pressure, nebulizer, drain etc. should be integrated inside the system</p> <p>The following coded Hollow Cathode Lamps should be offered – single element Cu, Fe, Zn, Mn, along with 1000ppm 100 ml AAS standard solution.</p> <p>Acetylene cylinder with gas and dual stage SS regulator</p> <p>Suitable vent and hood assemble with necessary ducting</p> <p>Branded computer and printer to be supplied along with the instrument from the manufacturer with preloaded licensed version software</p> <p>Suitable Online UPS with 30 minutes backup</p> <p>Suitable Laboratory Table to placed the instrument along with all accessories</p> <p>Spilt 1.5 ton Air condition Machine of repute make</p> <p>Power Supply Requirement: Necessary Earth ground if required for the instrument should correct Any other requisite to make the system fully operational</p> <p>Tenderer must quote for a price which includes the cost of 5 Years onsite warranty (including the cost of Spare parts) from the date of completion of the satisfactory installation</p> |

2. Lab Water purification system (ASTM type-II Water)

| Name of the instrument | Technical Specifications |
|--|--|
| Lab Water purification system (ASTM type-II water) | <p>Complete ASTM Type-2 water purification system for production of ASTM type-2 grade water from tap water consisting of imported main Type-2 system and heavy duty indigenous prefilter Bench top imported main Type-2 main water purification system having RO</p> <p>Flow rate not less than 10 l/h and should reject up to 99.9% organic and inorganic matter (>150 Daltons)</p> <p>It must have a built-in pre-filtration mechanism consisting of multiple 'Activated Carbone filters & micron filters' before RO module to enhance life and performance of RO membrane. RO permit should be stored in a covered, pressurized and hermetically sealed tank to protect it from air & Light contact during storage. Tank capacity should not be less than 50L.</p> <p>RO water should be treated with DI resin cartridge and capable to produce ASTM Type-2 grade De-ionized water. Produced De-ionized water must meet or exceed ASTM type-2 grade water quality specification and have conductivity < 1 $\mu\text{S/cm}$ and up to < 0.1 $\mu\text{S/cm}$.</p> <p>Automatic start/stop function depending on the volume of water in the pressurized tank LCD display for continuous reading of feed water and product water (Type 2) conductivity as well as rejection rate of RO module</p> <p>Visual and audio alerts for replacement of Pretreatment module and Deionization module The equipment must supply with pressure regulator and gauge control for controlling the input water pressure</p> <p>A suitable heavy duty Tap water conditioning indigenous pre-filter (capacity 30 L/hr.) capable of reduction of iron, free chlorine, TDS, TSS, organics etc. from tap water should be quoted along with main equipment. This pre-filter should be completed with PP reservoir and delivery pump.</p> <p>Tenderer must quote for a price which includes the cost of 5 Years onsite warranty (including the cost of Spare parts) from the date of completion of the satisfactory installation</p> |