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IIT Indore

NIT No.: IITI(MM)/CE/1/1A/527/MSJ/2023-24

PREBID REPORT

The online meeting for Pre-bid discussion and presentation was held via Google Meet on April 25, 2024 @ 3.00 P.M. for Procurement of Atomic Double Beam Absorption Spectrometer-AAS System, Qty-01 through GeM Custom Bidding, Bid No. GEM/2024/B/4854106.

The report of the meeting are as below:

| Sl. No. | Query raised by firms | Reference Document | Query/Clarification/Deviation Sought | Response from IITI |
|---------|----------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| 01 | M/s. Labindia Analytical Instruments Pvt Ltd | As per NIT Section-II Part-II | Lamps Turrent – 8 or more Lamps (Only 2 companies are giving 10 lamps whereas 5 to 6 companies are giving 8 lamps turrent with the system) . Kindly change the specs to 8 or more lamps so that more companies can participate in the Tender. | Please refer attached Annexure-I |
| 02 | | As per NIT Section-II Part-II | Gas Flow control should be automatic through Computer Controlled Software. | Please refer attached Annexure-I |
| 03 | | As per NIT Section-II Part-II | Burner movement should be through Computer Controlled software. | Please refer attached Annexure-I |
| 04 | | As per NIT Section-II Part-II | Monochromator - Please add Czerny Turner monochromator in the specs (Litrow / Ebert / Czerny turner) | Please refer attached Annexure-I |
| 05 | | As per NIT Section-II Part-II | For ppb detection limit you will be needing Graphite furnace with the system . Request you to please add Integrated Flame & Graphite system in the specs. | Please refer attached Annexure-I |
| 06 | | As per NIT Section-II Part-II | For Element such as Arsenic , Lead , Cadmium , Mercury you will be needing Continuos flow Hydride system , Request you to please add Continuos Flow Hydride system in the specs. | Please refer attached Annexure-I |
| 07 | | As per NIT Section-II Part-II | Sensitivity – 0.9 Abs for 5 ppm Cu standard . | Please refer attached Annexure-I |
| 08 | | Burner Should have horizontal, vertical & Angular movement control | Manual burner movement is not possible to get perfect angle, for over range samples Movement of Burner in 3 dimension (vertical, horizontal and angular should be software controlled) | Please refer attached Annexure-I |
| 09 | | Ten Lamp carousels with Auto Optimization Facility | Ten Lamp carousels is very Specific Specification of particular Manufacturer, Many of branded manufacturer has 8 Lamp carousels | Please refer attached Annexure-I |
| 10 | | Focal Length :250 mm | For better separation of light and resolution higher Focal Length required many of manufacturer has focal length more than 300 mm, kindly add the focal length more than 300mm | Please refer attached Annexure-I |

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|----|----------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| 11 | M/s. Skytech Systems Pvt Ltd | Sensitivity At least 0.65 Abs for 5ppm Cu Standard | Sensitivity is the very significant factor in Spectroscopy, it should be more. Many of manufacturer provide 0.9 Abs for 5 ppm Cu and that should have evidence of testing and mentioned on brochure. Also for Sensitivity relative standard deviation is required so kindly add RSD <0.5%. that should be guaranteed. | Please refer attached Annexure-I |
| 12 | | Minimum ten Lamps automatic aligning turret with computer controlled lamp selection | Ten Lamp carousels is very Specific Specification of particular Manufacturer, Many of branded manufacturer has 8 Lamp carousels | Please refer attached Annexure-I |
| 13 | | Safety Requirement | System Should have UL/CE certificates as per EN 61010-1:2010 safety requirement for electrical equipment, should have EMC/EMI as per EN 61326-1:2013 electric equipment for laboratory use | Please refer attached Annexure-I |
| 14 | M/s. MOTRAS Scientific Instruments Private limited | As per NIT Section-II Part-II | Add specification of Gas control Unit- Fully automatic , PC controlled minimum 12 Safely interlock with built in Power backup in case of power failure while running AAS. | Please refer attached Annexure-I |
| 15 | | As per NIT Section-II Part-II | Focal length 250mm or more. | Please refer attached Annexure-I |
| 16 | | As per NIT Section-II Part-II | Sensitivity : 0.900 Abs or more for 5 ppm copper standard solution | Please refer attached Annexure-I |
| 17 | | As per NIT Section-II Part-II | 5 .0 KVA ups with 30 min back up. | Please refer attached Annexure-I |
| 18 | | As per NIT Section-II Part-II | PC screen size 27 mm | Please refer attached Annexure-I |
| 19 | M/s. Perkin Elmer | As per NIT Section-II Part-II | Focal Length: 250 mm or above | Please refer attached Annexure-I |
| 20 | | As per NIT Section-II Part-II | Variable Slit width ranging from 0.2-2.0 nm. | Please refer attached Annexure-I |
| 21 | | As per NIT Section-II Part-II | .Controlled coded 8 lamps for more with Boosted HCL's Ultra Lamps, Super Lamps, Electrode Less Discharge Lamps should be quoted for Hg, Se and As. | Please refer attached Annexure-I |
| 22 | | As per NIT Section-II Part-II | Electrical Safety compliance: System should qualify all international Safety Standards EN 61010-1, EN 61010-2. The instruments bear the CE Mark and the CSA/NRTL Certification Mark | Please refer attached Annexure-I |

Note :-

1. Please find attached updated technical specifications - Annexure-I.
2. The date of submission of online bids is extended up to 22/05/2024 @ 15:00 Hrs
3. The date of Opening of bids is extended up to 22/05/2024 @ 15:30 Hrs
4. All prospective/willing bidders are requested to take note of this report as part of the Tender document. All other parts of the tender including the terms and conditions of the tender will remain unchanged.

Assistant Registrar
MM Section, IIT INDORE

Technical Specifications

These specifications cover the requirements for a Double Beam Atomic Absorption Spectrometer system with a hydride generator, incorporating advanced features and control capabilities for precise elemental analysis.

1. **Optics:** Double beam optical design with automatic wavelength and slit selection using an optical fiber system.
2. **Hydride Generator:** Continuous flow Hydride generator system.
3. **Burner:** Horizontal, vertical and angular movement with software control.
4. **Lamp Carousel:** 8-10 lamp carousels with an auto-optimization facility.
5. **Monochromator:** Ebert/Littrow/Czerny type.
6. **Wavelength Range:** 190 nm to 900 nm with a wavelength accuracy of ± 0.5 nm.
7. **Focal Length:** 250 mm or more
8. **Slits:** Variable slit width ranging from 0.2 to 2.0 nm.
9. **Detection Limits:** parts-per-million (ppm).
10. **Sensitivity:** 0.9 and more Abs for a 5 ppm Cu standard.
11. **Detector:** Solid-state or photomultiplier type.

Flame System:


12. **Nebulizer:** Acid and solvent-resistant nebulizer.
13. **Background Correction:** Deuterium (D2) lamp included.
14. **Lamp Support:** Minimum eight lamps automatically aligning turret with computer-controlled lamp selection.
15. **Lamps:** Single-element coded hollow cathode lamps for mercury, nickel, cadmium, cobalt, iron, manganese, zinc, lead, arsenic, chromium, magnesium, sodium, potassium, calcium, silver and selenium. The lamp should have an individual power supply.

Automation and Control:

16. **PC System:** Intel Core i7, 16 GB RAM, 1 TB HDD, with a black-and-white laser printer and a 27" desktop monitor.
17. **Gas System:** All other accessories like acetylene, N₂O, nitrogen or Argon gas cylinder with regulator, Gas purification Panel, S.S Tubing – 100 MTR, PVC Casing capping – 70 ft, cylinder bracket.
18. **Gas Flow Control:** Precise PC control over gases for optimal conditions.
19. **UPS:** 5 KVA online UPS with inbuilt isolation transformer for 60 minutes backup.

Accessories:

20. **Air Compressor:** Including air purifiers and moisture traps compatible with the AAS unit.
21. **Exhaust Hood:** Stainless steel exhaust hood with fan and fitting hardware.
22. **Standards:** NIST traceable standards for each element separately, 100 ml (1000 ppm) each.



Certifications/Standards

23. AAS System should comply with UL/CE international & national safety standards certification for electrical equipment and other parts and certifications for laboratory use. IQ, OQ, and PQ on the equipment.

Warranty

24. One year on-site Comprehensive warranty from the date of installation & acceptance of the material/Item.

Training

25. OEM/Bidder has to provide 1 week of on-site training to the user.

Delivery

26. Within 10 weeks from the date of P.O.

Experience

27. OEM/Bidder should submit five (5) past performance reports along with user contact details.

Service and Support

28. OEM/Bidder should have a local service station & support for fast issue resolution.



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