Request for Quote (India based vendors only) for the procurement of a UV-Vis spectrophotometer. (Last date: 21st January 2022)

This is a Request for Quote (RFQ) from **Class I and Class II local suppliers/ manufacturers** only for the procurement of a UV-Vis spectrophotometer, for the Centre for Nano Science and Engineering (CeNSE) at the Indian Institute of Science (IISc), Bangalore. IISc is India's best institution on higher learning and the Center for Nano Science and Engineering is home to one of the best academic fabs in the world that houses a 14,000 sq. ft. cleanroom.

Only the Indian Original Equipment Manufacturer (OEM) or their distributor shall submit a response demonstrating their capabilities to produce the requested equipment to the primary point of contact listed below. The quotations should be on FOR-IISc Bangalore basis in INR only.

With respect to this tender, the rules laid out by the Government of India in order No. P45021/2/2017-pp-BE-II issued by the Public Procurement Section, Department or Promotion of Industry and Internal Trade, Ministry of Commerce, and Industry, dated 4th June 2020 will be followed. The bidders must go through the Government of India order stated above and follow all the rules and regulations therein.

Relevant definitions as per Government of India order:

- **Class-I local supplier** - A supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50%.
- **Class-II local supplier** - A supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%.
- **Local content** – The amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all custom duties) as a proportion of the total value, in percent.

Procedure:

1. Vendors will be required to submit a technical proposal and a commercial proposal in **two separate sealed envelopes**. The technical bid should contain all commercial terms and conditions, except the price. **Only vendors who will be adjudged by the committee to meet the technical requirements will be considered for the commercial negotiation**.
2. The covering letter should clearly state that whether the vendor is a Class-I or Class-II local supplier distinguished by their "local content". Failing this the bid will be automatically rejected.

3. The vendor must state the percentage of the local content and provide self-certification that the item offered meets the minimum local content requirement. They should also give details of the location(s) at which the local value addition is made.
4. Separate detailed justification needs to be given to substantiate the qualification as Class 1 and Class 2 suppliers and the intender reserves the right to cross-check the factual validity of the same and one if some foreign parts or equipment is being put forward then please submit the "*bill of material*" details for the same for evaluation.

5. **The deadline for submission of proposals is the January 21, 2022, 5:00 pm Indian Standard Time.** Proposals should arrive at the Main office, GF-15, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India, on or before the above deadline.

6. **The technical bid** must contain a point-by-point technical compliance document.
    a. The technical proposal should contain a compliance table with 5 columns.
        - First column must list the technical requirements, in the order that they are given in the technical requirements below.
        - The second column must provide specification of the instrument against the requirement (please provide quantitative responses wherever possible)
        - The third column should describe the compliance with a "YES" or "NO" only. Ensure that the entries in the column 2 and column 3 are consistent.
        - The fourth column should clearly state the **reasons/explanations/context** for deviations if any. Without clear explanation, just stating YES" or "NO" will not be considered.
        - The fifth column may contain additional remarks. It can be used to highlight the technical features, qualify response of previous columns, or provide additional details.
    b. All the equipment and software for the UV-Vis spectrophotometer should be from a single manufacturer.
    c. Vendors are required to provide brochures/ literature to establish the compliance to specifications
    d. Technical capabilities of any *suggested* accessories/add-ons that may enhance the usability, capability, accuracy, or reliability of the tool. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits.
    e. Vendors are encouraged to highlight the advantages of their tools over comparable tools from the competitors

f. Items in addition to that listed in the technical table that the vendor would like to bring to the attention, such as data sheets, technical plots etc. can be listed at the end of the compliance table. Vendors are also encouraged to highlight the advantage of their tools over comparable tools from the competitors.
g. If multiple systems can fulfil the requirements, vendors can submit multiple bids.

7. The technical proposal will be evaluated against the technical requirement. Deviations from the technical specifications requested are allowed. Such deviations must be highlighted and justified. Their acceptance or rejection will be left to the discretion of the technical committee. Only the vendors, adjudged by the committee to be suitable to meet the technical requirements, will be considered for the commercial negotiation.

8. The commercial bid must contain:
    a. Itemized cost of the system and *required* accessories, such as software, power supply, etc.
    b. All accessories needed for the instrument to function as per the technical specification must be listed.
    c. itemized cost, as an option, for any *suggested* accessories/add-ons that may enhance the usability, capability, accuracy or reliability of the tool. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits.
    d. The cost of shipping plus insurance up to IISc has to be included. IISc will help the shipping company to take care of the customs clearance at Bangalore Airport.
    e. Please indicate the warranty provided with the tool. Warranty of 3 years or more is preferred.
    f. Provide itemized cost for *required/expected* spares for 3 years of operation. For sake of this calculation, the vendor may assume active tool usage of 40 hours/week. This number will be used to estimate the life cycle cost of the tool.
    g. The cost of annual maintenance contract (AMC). The details of AMC are given below. This number will be used to estimate the life cycle cost of the tool.
    h. Length of time that the tools will be supported with service and spares from the date of installation. Our requirement is that the tools be supported for at least 5 years from the date of installation. To quote lowest price, vendors often quote for obsolete or soon-to-be obsolete equipment. This is NOT acceptable. For a user-facility like CeNSE, it is vital that the equipment be serviceable and supported for the foreseeable future. The length of guaranteed support will be used to estimate the life cycles cost of the tool.
    i. The commercial bid should indicate the following separately: (a) equipment price (b) optional items (c) Freight and insurance cost (d) Shipping cost and (e) the Total cost.

j. The quotations should be in INR only.

9. As an additional option, provide cost of an annual maintenance contract (AMC) for 3 years, post warranty. The AMC must
   a. cover 1 scheduled and 1 emergency visit per year.
   b. The emergency visit should be supported with a 48-hour response window.
   c. clarify if maintenance will be done by a trained onsite engineer (CeNSE employee) or a specialist from the OEM.
   d. in case the OEM is foreign, clarify if maintenance will be done by a trained engineer from India (local representative or Indian subsidiary) or by a trained engineer from abroad.
   e. include an itemized list of spares (e.g., maintenance kits) that are essential for scheduled visits.

10. The commercial bids will be evaluated based on life-cycle cost of the tool. This includes the cost of purchase, maintenance, spares, etc. The final decision will be me made by the committee.
11. Manufacturers must have experience of supplying more than 15 UV-Vis spectrophotometers with software in the last 5 years.
12. The RFQ must include references of 5 previous installations, preferably in India. Please provide the names and contact addresses of the referees, so that the committee can contact them independently. Details of such systems with model numbers and users should be provided.
13. **The quotations should be on FOR-IISc Bangalore basis in INR only. Please quote the price of each optional line item, separately.**

All the proposals should be addressed to:

The Chairperson,
Attn: Dr. Sreetosh Goswami
Centre for Nano Science and Engineering
Indian Institute of Science
Bangalore – 560012, India

The Proposals should arrive at the Main office, GF-15, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India, on or before the deadline of January 21, 2022, 5:00 pm Indian Standard Time. The parcels should be delivered between 9 am to 5 pm.

Questions regarding this tender should be addressed to Dr. Sreetosh Goswami at the email address sreetosh@iisc.ac.in with the subject line “Query _Tool name_Bidder’s name”.

Post such submission all vendors should send an email to sreetosh@iisc.ac.in with the subject line: "Submitted bid_Bidder's name_Tool Name" to intimate him of the submission within one day.

II. General terms and conditions:

1. The institute reserves the right to accept or reject any bid, or to annul the bidding process and reject all bids, at any time prior to the award of contract without thereby incurring any liability of the affected bidder or bidders.
2. Previous installations can be used by the committee to disqualify vendors with poor track record of service, build quality, system performance or poor availability of spares.
3. The bidder must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect should be provided.
4. The vendor should be able to repair and maintain the equipment once it is installed. Clarify if periodic (preventive) maintenance can be done by a trained on-site engineer (i.e., IISc employee) or requires a specialist from the OEM. The bidder should have qualified technical service personnel for the equipment based in India and must assure a response time if <24 hours after receiving a service request.
5. All the quotations must be valid for at least 90 days at the time of submission.
6. The quotations should clearly indicate the terms of delivery, delivery schedule, tax, and payment terms.
7. In case of the award of purchase order, the vendor must provide an Order Acknowledgement within 30 days from the receipt of the Purchase Order.
8. The lead-time for the delivery of the equipment should not be more than 3 months from the date of receipt of our purchase order.
9. 100% payments will be released after the completion of delivery and satisfactory installation subject to TDS as per rules. As per GFR no advance payment can be made to domestic vendors, unless an equal amount of bank guarantee is provided.
10. The bidder is responsible for the installation of the equipment in the IISc campus.
11. Necessary training to operate the procured setup and required literature support (in English language) should be provided without additional cost.
12. Bidders should undertake to support the system with spares and software bugfixes, if any, at least for the next 5 years.

13. Data must be supplied along with the technical compliance documents. Technical bids without supporting data can be deemed as technically non-compliant.
14. Printed literature and published papers in support of all compliance to the prescribed specifications are encouraged.
15. All guaranteed specifications will have to be demonstrated, upon request, in an active installation. Failure to demonstrate any promised specifications will be deemed as technical non-compliance.
16. Technical evaluation by the institute must include demonstration to verify functionalities and capabilities of the system quoted. Any discrepancy between the promised specifications and demonstrated specifications will be deemed as technical non-compliance. If need arises, the vendor must be ready to physically visit IISc for a techno commercial discussion.
17. The intender reserves the right to withhold the placement of the final order. The right to reject all or any of the quotations and to split up the requirements or relax any or all the above conditions without assigning any reason.

III. Technical specifications of UV-Vis spectrophotometer:

A UV-Vis spectrophotometer with the following technical specs is required. The committee will decide on the suitability of the proposals to meet our requirements.

UV-Vis spectrophotometer:

The UV-Vis spectrophotometer should have Complete coverage of UV-Vis range and extending up into the NIR with the wavelength range from 200 nm to minimum 1100nm.

It should comprise a double beam, Czerny-Turner monochromator with 1.5 nm fixed spectral bandwidth

It should have full spectrum Xenon pulse lamp single source with exceptionally long life and dual silicon diode detectors, quartz overcoated optics.

Technical Specifications

Instrumental scan rate for scanning the wavelength region should reach up to 24,000 nm/min and 80 data points/sec measurement rate.

Sample and reference measurements for the spectrophotometer should made at the same wavelength ensuring that no peak shifts are observed — even when measuring at the fastest scan speeds through non measurement phase stepping wavelength drive.

The instrument should have room light immunity which could enable fiber-optic based measurements

Photometric range up to 4 Abs which could Permits the analysis of highly turbid solutions and a wide range of sample concentrations (optical densities), as well as reducing sample preparation (dilution) requirements.

Focused beam measuring :1.5 x 1.0 mm, ensuring efficient energy coupling to accessories including fiber optic probes and ultra-microvolume cuvettes for measurement of low volume samples.

Sample compartment should have option left open during measurement due to room light immunity

Instrument Hardwares:

Source: Unique full-spectrum Xenon flash lamp (80 Hz) with warranty for 10 years

Monochromator: Czerny-Turner

Grating: Holographic, 27.5 x 35 mm, 1200 lines/mm, blaze angle 8.6° at 240 nm

Beam splitting system: Beam splitter

Detectors: 2 silicon diode detectors for simultaneous sample beam and reference beam measurements

Optical design: Double beam Czerny-Turner monochromator

UV-Vis limiting resolution (nm) ≤ 1.5 nm

Toluene/hexane limiting resolution (EP/BP and TGA test) ≥ 1.92

Stray light (%T): At 198 nm (12 g/L KCl, TGA & BP/EP method) ≤ 0.187 %T

At 220 nm (10 g/L NaI ASTM method) ≤ 0.018%T

At 370 nm (50 mg/L $NaNO_2$) ≤ 0.008%T

Wavelength range (nm): 190–1100 nm (minimum)

Wavelength accuracy (nm): ± 0.06 at 541.94 nm

Wavelength reproducibility (nm): ± 0.01 nm

Photometric accuracy (Abs): Using NIST 930E filters at 1 Abs ± 0.0007 Abs

At 0.2, 0.5 & 0.75 Abs (14.2% w/v KNO_3, TGA method) ± 0.01 Abs

0.292 to 0.865 Abs (60.06 mg/L $K_2Cr_2O_7$, BP method) ± 0.01 Abs

Photometric range (Abs): ± 4.0 Abs

Photometric display: ± 9.9999 Abs, ± 200.00 %T

Photometric reproducibility (Abs): Using NIST 930E fi lters, at 465 nm, 2 s SAT

Maximum deviation at 1 Abs < 0.004 Abs

Standard deviation for 10 measurements < 0.00050 Abs

Using NIST 930E fi lters, at 546.1 nm, 2 s SAT

Maximum deviation at 0.5 Abs < 0.003 Abs

Standard deviation for 10 measurements < 0.0030 Abs

Photometric stability (Abs/hour): 500 nm, 10 s SAT < 0.0004 Abs

Photometric noise (Abs, RMS): 500 nm, 1 s SAT At 0 Abs < 0.00002 Abs

At 1 Abs < 0.00012 Abs

At 2 Abs < 0.0011 Abs

260 nm, 1 s SAT At 0 Abs < 0.00002 Abs

Baseline flatness (Abs): 200 to 850 nm, smooth 21 filter applied, baseline corrected ± 0.0004 Abs

Compartment size (width x depth x height) :130 mm x 523 mm x 123 mm

Sample compartment access: Top and front

Operational features:

Spectral bandwidth (nm): Fixed at 1.5 nm (approximately)

Signal averaging (seconds): 0.0125–999 s

Scan rate (nm/min): 24,000 nm/min (approx.)

Slew rate (nm/min):24,000 nm/min

Data interval (nm): 0.15–5.0 nm

Repetitive scanning: 4800 data points per minute, number of cycles: 999 with maximum cycle time (min): 9999

Data collection rate: 80 data points/second

Temperature monitor: Temperature probe inside cuvette (using the Temperature Probe

Accessory)

Minimum sample volume: 0.5 µL

Accessories:

The following list of accessories should at least be included. Further suggestions are welcome.

1. Desktop and PC based operating software.
2. Cell holder.
3. Rectangular cell UV 10mm 3.5mL stop 2/pk.
   Rectangular cell, stoppered, UV quartz, matched pair, 10mm pathlength, 3.5mL. 2/pk.
4. Fiber Optic Coupler with doors and Stainless-steel fiber optic microprobe.
5. Long fiber Optic Absorption Probe (SS). A 6.38 mm thick, 3.0 m long stainless-steel probe with threaded end, replaceable 10 mm pathlength tip and light shield
6. Solid Sample Holder

Thanking you,

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