

INDIAN INSTITUTE OF TECHNOLOGY GOA

At Goa Engineering College Campus

Farmagudi, Ponda, Goa 403401

E-mail: purchase@iitgoa.ac.in

Enquiry No: IITGOA/2018-19/039

Date: 12/12/2018

IIT Goa invites sealed quotations in two bid format for the supply of below mentioned items;

Sl. No.	Description of Items	Qty
1	Probe Sonicator (Detailed specifications attached)	01 No.

Terms and conditions:

1. Quotation must be valid for at least 90 days.
2. The GSTIN should invariably be mentioned in your offer.
3. Kindly attach a compliance certificate along with the technical quote.
4. Supplier should provide free delivery and installation at IIT Goa.
5. Supplier should provide five-years warranty for the above stated item.
6. Prices should be quoted in Indian Rupees inclusive of any shipping/transportation charges.
7. Delivery and installation must be made within 4 weeks of getting a confirmed order.
8. Payment: Within 30 days after the delivery and successful installation.
9. The suppliers shall provide the banking details along with their quote on their letterhead duly signed and stamped.
10. For any clarification, you may kindly contact Dr. Arindam Das (e-mail: arindam@iitgoa.ac.in) and Stores & Purchase Department (email: purchase@iitgoa.ac.in) till 24/12/2018.
11. IIT Goa reserves the right to accept and/or reject any/all bids without assigning any reason.
12. Quotations shall be submitted in two parts;
 - 1) **Part – I (Technical)** should contain all the technical details and specification of the product. It should contain unpriced bid along with terms and conditions, compliance certificates, Proprietary certificates (if applicable), other certificates etc. This envelope should be marked as “Technical Bid”
 - 2) **Part -II (Financial)** The financial bid of the above item should be in a sealed envelope marked as “Financial Bid” and should contain financial terms and conditions.
13. All sealed quotations must reach to the Assistant Registrar (Stores & Purchase), IIT Goa, at Goa College of Engineering Campus, Farmagudi, Ponda - Goa by 17:00 Hrs on or before 03rd January, 2019”.

Sd/-

Asst. Registrar (S&P)

Center of Excellence in Particulates, Colloids and Interfaces

Indian Institute of Technology Goa

GEC Campus, Farmagudi

Goa 403401

Technical Specification for Probe Sonicator

The Ultrasonic Probe Sonicator should have following technical Specifications

1. Microprocessor based programmable **Probe Sonicator** with control over probe intensity and suitable for nanoparticle dispersion, creating emulsion etc.
2. The system should have automatic tuning with Frequency control, Automatic amplitude compensation. The system should automatically maintain the set amplitude under variable load condition.
3. Display: Alphanumeric display with programmable LED/LCD screen or Touch Screen. Display items: Energy monitor, Watt meter, Amplitude, Time indicator, Pulser and Temperature.
4. Digital amplitude / Intensity control: Output amplitude can be set from 10 to 100%.
5. Integrated temperature controller monitoring from 1°C to 100°C with stainless steel probe.
6. The system should have 10 hour process timer with elapsed time indicator. Continuous mode up to 30 minutes or more.
7. The system should have 1-59 second independent ON/OFF Pulse mode.
8. System should have exclusive energy set point to monitor the amount of energy supplied to probes.
9. Simultaneous monitoring and controlling of both the temperature of the sample and the amount of energy that is being delivered.
10. Option to set the time, energy and amplitude.
11. Up to 10 stored user-programmed presets for protocol duplication, automatic repetitive tasks, and elimination of user-to user method variability.
12. The system should have variable power output control with sealed converter with Piezoelectric (lead zirconate titanate -Preferable) crystals.
13. Should be microprocessor based with digital wattmeter.
14. Electrical Supply : 230 VAC, 50 Hz
15. Probe Power : 700-750 watt

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16. Operating Frequency: 20 KHz
17. Probes should be made of Titanium alloys and should be autoclavable.
18. Threaded and replaceable standard probe tip suitable to process different sample volume range.
19. Operating Sample volume ranges (1) 0.25 mL to 5 mL (probe dia. 3 mm or less) (2) 5 mL-50 mL (probe dia. 6mm or less) (3) 50mL-250 mL (probe dia. 15 mm or less) and (4) 250-1000 mL (probe dia. 25mm or less). Appropriate Probes must be supplied for these volume ranges.
20. Two different types of probe, 1) with replaceable tip and 2) solid probe for volume range 50mL-250 mL must be quoted as compulsory accessory with the base module. Tip for processing 5mL to 50 mL should be also quoted and included as compulsory accessory. Rest of the probes should be quoted as optional accessory.
21. Multiple sample processing probes can be quoted optionally.
22. Converter, tool kit, power cord and other required accessories must be included
23. System should be supplied with Sound abating enclosure with transparent door , suitable clamp, support rod and labjack stand.
24. Should have Integral temperature controller and memory to prevent overheating of the sample by terminating the probe power when the sample reaches a predetermined temperature limit.
25. Provision for the Air cooling must be there to use during prolonged use with higher amplitude.
26. Must be CE certified
27. Must provide a user manual
28. Should have user-friendly menu
29. 5 Years comprehensive warranty
30. **Additional features/accessories if any that can potentially increase the productivity and safety of the instrument should be quoted as optional items.**

Miscellaneous:

1. Quoted brand and model must have global presence among globally reputed research labs and academic institutes and industry R&D labs across the globe.
2. Bidder should supply the complete list of users from national labs and academic institutes from India. User list should be only for the quoted model.
3. All optional accessories compatible with the quoted model must be quoted separately.
4. After Sale, Service should be available promptly. Round the clock technical help must be provided to the users.

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