



Indian Institute of Technology Madras

I.I.T.P.O., MADRAS-600 036

DEPARTMENT OF CIVIL ENGINEERING

(Modified) Form for Inviting Quotations

Ref.No.CIE/INDU/2017/ TOC Analyzer

Date: 20/11/2017

SPEED POST

To

As per list enclosed

Dear Sirs,

DUE DATE: 04/12/2017

1. Quotations are invited in duplicate for the various item/ s shown below/overleaf/enclosed list.
2. **The Quotations duly sealed and superscribed on the envelope with the reference No. and due date, should be addressed to the undersigned and contain in 2 bid system i.e. Technical bid and commercial bid in two separate envelopes should be enclosed in a single envelope only so as to reach on or before the due date stipulated above.**
3. The Quotations should be valid for (60) **Sixty days from the due date and the period of delivery** required should also be clearly indicated.
4. If the item is under DGS&D Rate contract No. and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for, should be submitted free of charges, and collected back at the supplier's expenses.
6. Local Firms : Quotations should be for free delivery to this Institute. If Quotations for Ex-Godown delivery charges should be indicated separately.
7. Firms Outside Madras : Quotations should be for F.O.R. Madras. If F.O.R. consignor station, freight charges by passenger train / lorry transport must be indicated. If Ex-Godown, packing, forwarding and freight charges must be indicated.
8. The rate of sales / General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales / General Taxes will be admitted at any stage and on any ground whatsoever. The taxes leviable should take into consideration that we are entitled to have concessional Sales Tax applicable to non Government Educational Institutions run with no profit motive for which a concession. Sales Tax Certificate will be issued at the time of final settlement of the bill.
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. Payment : Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later

Details as per enclosed list.

Yours faithfully

INDUMATHI M NAMBI

- Note: (i) Quotation should be sent by SPEED POST only or to be delivered directly concerned
(ii) Firms are requested to submit the specifications of their product along with supporting technical Documentation/brochure instead of reproducing the specifications sent by us.

TECHNICAL SPECIFICATION OF ONLINE TOTAL ORGANIC CARBON (TOC)
ANALYSER (Modified)

Supply, installation, testing, commissioning and guarantee of Online TOC analyser including necessary accessories and comprehensive spares as per technical specification and features detailed below:

System: The analyzer should provide fully automatic and simultaneous determination of TC, TIC, TOC, NPOC, POC etc. from every sample and combine top-level reliability with robustness. The instrument must satisfy the requirements of DIN-EN, USEPA, ASTM, FDA USP etc. The system should be able to analyze liquid (drinking water, ground and surface waters of medium concentrations, highly contaminated waters, particulate waste waters etc.) and solid samples directly and without any tedious system conversion.

Operating Principle: High temperature oxidative combustion followed by NDIR detection

Analysis Range: (i) Liquid 0 – 10,000 mg/L or more (ii) Solid 0 – 100 mg or more absolute carbon, should have the facility of electronic mass flow controllers, capable of automatic calibration out of only one stock solution

Furnace Temperature: The system should have high temperature combustion unit of up to 800 °C or more for liquid samples

Sample Injection: Sample injection should be software controlled and optionally show either direct injection or flow injection technology

Sample Injection Volume: (i) Liquid: 100 µl or less – 1 ml or more; (ii) Solid: up to 3 g.

Sample Flow Rate: 50 mL/min to 300 mL/min

Calibration: Automatic multipoint calibration

Precision: Better than $\pm 2\%$ of full scale

Detection Limit: 5 ppb for C or better

Measurement of Accuracy: CV 1 - 2 % max

Ambient Temperature: 5-40 °C

Analysis Time: 2 to 9 minutes or less



Display: Color LCD with touch screen

Documentation: At the time of shipment, a descriptive manual with complete instructions for operation, maintenance, calibration certificate and service manual (complete electronic circuit diagram) shall be provided. All documents shall be legible, written in Standard English, and accurate to the units as delivered

Training Operation and Maintenance: Trained engineer shall install the system at our site and demonstrate its performance to our satisfaction. The users shall be provided comprehensive training at our place for operation and maintenance without any charge.

Optional Accessories: The vendor should offer the spares and accessories which will be required for next three years

Warranty - 1 year as standard warranty

A handwritten signature in blue ink, consisting of a stylized initial 'R' followed by a cursive name, all underlined.