


	<p style="text-align: center;"><b>INDIAN INSTITUTE OF TECHNOLOGY MADRAS</b> <b>Chennai 600 036</b></p> <p>Telephone: [044] 2257 9798/9760      FAX: [044] 22570545/8366 E-mail: <a href="mailto:arpp@iitm.ac.in">arpp@iitm.ac.in</a></p>	
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V. Sathyanarayanan  
Senior Manager (Project Purchase)

Ref : CIE/1718/261/DSTX/LIGY  
Date: 08.06.2018

**Open Tender No: CIE/1718/261/DSTX/LIGY**

**Due Date: 2<sup>ND</sup> July 2018, 11 AM**

**Pre-Bid meeting: - Not required.**

**Technical Bid opening meeting on 2nd July 2018, 12 PM at Department of Civil Engineering, IIT-Madras.**

Dear Sir/Madam,

On behalf of the Indian Institute of Technology Madras, offers are invited for the supply of “**TOC Analyser with Solid Sample Module & Total Nitrogen Module**” conforming to the specifications given in Annexure I.

Vendor who can supply and integrate the above equipment alone need to respond to the tender please.

**Instructions to the Bidder**

- (i) **Preparation of Bids:** - The tenders should be submitted under two-bid system (i.e.) Technical bid and Financial bid.
  
- (ii) **Delivery of the tender:** - The tender shall be sent to the addresses mentioned below, either by post or by courier so as to reach our office before the due date and time specified in our schedule. The offer/bid can also be dropped in the tender box on or before the due date and time specified in the schedule. The tender box is kept in the office of the:

**Senior Manager,  
Project Purchase,  
IC & SR Building 2<sup>nd</sup> floor,  
I.I.T. Madras,  
Chennai – 600 036.**

(iii) **Pre-Bid meeting – Not needed**

(iv) **Opening of the tender:** - The offer/bids will be opened by a committee duly constituted for this purpose. The technical bids will be opened first and will be examined by a technical committee which will decide the suitability of the bids as per our specifications and requirements. All bidders will be invited for opening of technical bids. With respect to opening the financial bid, only technically qualified bidders will be called.

(v) **Prices:** - The price should be quoted in net per unit (after breakup) and must include all packing and delivery charges to various Departments/Centres/Institutions. The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However the percentage of tax & duties should be clearly indicated.

The price should be quoted without custom duty and excise duty, since I.I.T. Madras is exempt from payment of excise duty, and the custom duty will be paid at concessional rate against duty exemption certificate.

In case of import supply, the price should be quoted on EX-WORKS and CIP basis indicating the mode of shipment.

(vi) **Agency Commission:** - Agency commission, if any, will be paid to the Indian agents in rupees after receipt of the equipment and its satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances. The details should be explicitly shown in the tender document even in the case of 'Nil' commission. The tenderer should indicate the percentage of agency commission to be paid to the Indian agent. The foreign Principal should indicate the percentage of payment and it should be included in the basic price quoted originally(if any)..

(vii) **Terms of Delivery:** - The item should be supplied to the **Department of Civil Engineering, IIT-Madras** as per the Purchase Order. In case of import supply, the item should be delivered at the cost of the supplier to our Institution. The Installation/Commissioning should be completed as specified in our important conditions.

(viii) **Technical Bid Opening:** The technical bid will be opened on 2<sup>nd</sup> July 2018 at 12 PM. at the Department of Civil Engineering, IIT-Madras and the financial bids of those tenders who are technically qualified will be opened at a later date under intimation to them.

(ix) IIT Madras reserves the full right to accept / reject any tender at any stage without assigning any reason.

Yours sincerely,

V. Sathyanarayanan  
Senior Manager (Project Purchase)  
IC&SR Building, I.I.T. Madras,  
Chennai – 600 036.

## SCHEDULE

### Important Conditions of the tender

1. The due date for the submission of the tender is **02.07.2018, 11 AM.**

The offers / bids should be submitted in two bids systems (i.e.) Technical bid and financial bid. The Technical bid should consist of all technical details / specifications only. The Financial bid should indicate item-wise price for each item and it should contain all Commercial Terms and Conditions including Taxes, transportation, packing & forwarding, installation, guarantee, payment terms, pricing terms etc. The Technical bid and financial bid should be put in separate covers and sealed. Both the sealed covers should be put in a bigger cover. The Open Tender for supply of **“TOC Analyser with Solid Sample Module & Total Nitrogen Module”** should be written on the left side of the Outer bigger cover and sealed.

2. **EMD: - EMD should be at 2% (two percent) of the tender value quoted by the bidder.** EMD should be in the form of DD in favour of “The Registrar, Indian Institute of Technology Madras” and payable at Chennai. EMD demand draft should be attached with the financial bid. The tender without EMD would be considered as UNRESPONSIVE and REJECTED. Photo/FAX copies of the Demand Draft/Banker’s pay orders will not be accepted. No interest will be paid for the EMD and the EMD (Bid Security) will be refunded to the successful bidder on receipt of Performance Security. ***When no local agent, the foreign vendor can submit demand draft equal to 2% or wire transfer the amount to our account as detailed in the attachment (Annexure II) and enclose the proof with the financial bid.***
3. **Performance Security:** - The successful bidder should submit Performance Security for an amount of 5% of the value of the contract/supply. The Performance Security may be furnished in the form of an Account Payee DD, FD Receipt from the commercial bank, Bank Guarantee from any nationalized bank of India will be an acceptable.

**Only after submission of Performance Security, Payment will be released / L.C will be opened.**

**Performance Security in the form of Bank Guarantee:-** In case the successful bidder wishes to submit Performance Security in the form of Bank Guarantee, the Bank Guarantee should be routed through the Beneficiary Bank to the end user bank. Otherwise, the Indian Agent of the foreign vendor has to submit a Bank Guarantee from a Nationalized Bank of India.

The Bank Guarantee should remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including the warranty obligations.

4. If an Indian agent is involved, the following documents must be enclosed:  
Foreign principal’s proforma invoice indicating the commission payable to the Indian Agent and nature of after-sales service to be rendered by the Indian Agent.

- ✓ Copy of the agency agreement with the foreign principal and the precise relationship between them and their mutual interest in the business.
  - ✓ The enlistment of the Indian agent with Director General of Supplies & Disposals under the Compulsory Registration Scheme of Ministry of Finance.
5. Documentary proof for the claimed position and reputation accuracies must be obtained from the principals and submitted along with the relevant pages of the standards.
  6. Compliance or Confirmation report with reference to the specifications and other terms & conditions should also be obtained from the principal.
  7. **Validity:** Validity of Quotation not less than 90 days from the due date of tender.
  8. **Delivery Schedule:-** The tenderer should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.
  9. **Risk Purchase Clause:-** In the event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from other sources on the total risk of the supplier under risk purchase clause.
  10. **Payment:-** No Advance payment will be made for Indigenous purchase. However 90% Payment against Delivery and 10% after installation are agreed to wherever the installation is involved. In case of import supplies the payment will be made only through 100% Letter of Credit i.e. (90% payment will be released against shipping documents and 10% after successful installation wherever the installation is being done).
  11. **Bank Guarantee:** In case of specific percentage of advance payment is required, the Foreign Vendor has to submit a Bank Guarantee equal to the amount of advance payment and it should be routed through the Beneficiary Bank to the end user Bank. Otherwise, the Indian Agent of the foreign vendor has to submit a Bank Guarantee through a Nationalized Bank of India.
  12. **On-site Installation:** - The equipment or machinery has to be installed or commissioned by the successful bidder within 15 to 20 days from the date of receipt of the item at site of IIT Madras.
  13. **Warranty/Guarantee:** - The offer should clearly specify the warranty or guarantee period for the machinery/equipment. Any extended warranty offered for the same has to be mentioned separately. (For more details please refer our Technical Specifications).

14. **Late offer:** - The offers received after the due date and time will not be considered. The Institute shall not be responsible for the late receipt of Tender on account of Postal, Courier or any other delay.

15. **Acceptance and Rejection:** - I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

16. **Do not quote the optional items or additional items unless otherwise mentioned in the Tender documents / Specifications.**

**19. Disputes and Jurisdiction:** -

- a. **Settlement of Disputes:** Any dispute, controversy or claim arising out of or in connection with this PO including any question regarding its existence, validity, breach or termination, shall in the first instance be attempted to be resolved amicably by both the Parties. If attempts for such amicable resolution fails or no decision is reached within 30 days whichever is earlier, then such disputes shall be settled by arbitration in accordance with the Arbitration and Conciliation Act, 1996. Unless the Parties agree on a sole arbitrator, within 30 days from the receipt of a written request by one Party from the other Party to so agree, the arbitral panel shall comprise of three arbitrators. In that event, the supplier will nominate one arbitrator and the Project Coordinator of IITM shall nominate on arbitrator. The Dean IC&SR will nominate the Presiding Arbitrator of the arbitral tribunal. The arbitration proceeding shall be carried out in English language. The cost of arbitration and fees of the arbitrator(s) shall be shared equally by the Parties. The seat of arbitration shall be at IC&SR IIT Madras, Chennai.
- b. **The Applicable Law:** This Purchase Order shall be construed, Interpreted and governed by the Laws of India, Court at Chennai shall have exclusive jurisdiction subject to the arbitration clause.

20. All Amendments, time extension, clarifications etc., will be uploaded on the website only and will not be published in newspapers. Bidders should regularly visit the above website to keep themselves updated. No extension in the bid due date/ time shall be considered on account of delay in receipt of any document by mail.

**Acknowledgement:-** It is hereby acknowledged that the tenderer has gone through all the conditions mentioned above and agrees to abide by them.

**SIGNATURE OF TENDERER  
ALONG WITH SEAL OF THE  
COMPANY WITH DATE**

## Technical Specification for TOC Analyser with Solid Sample Module & Total Nitrogen Module

System should be designed and manufactured under ISO-9001 and should comply with international regulatory, safety and electromagnetic compatibility requirement. The TOC Analyser with Solid Sample Module & Total Nitrogen Module data system should be based on Microsoft Windows operating system for instrument control, data acquisition and data analysis.

### Core Specifications:

S.No	Specifications	Descriptions
1.	Operating Principle	Catalytic combustion oxidation/NDIR method at less than or equal to 700°C to analyse all the organic compounds including hard to decompose insoluble and Macro molecular organic compounds without salt interference
2.	Measurement range	Less than or equal to 4 ppb to maximum of 30000 ppm
3.	Measurement Accuracy	High measurement Accuracy of 1.5% CV (max) for entire range or better
4.	Measuring time	3 to 4 minutes
5.	Measurement Samples	Liquid sample with suspended particulates up to 0.5 mm or better
6.	Injection System	Sample injection, Acid Addition and Dilution by water should be automatic and internally done
7.	Sample Injection	Automatic Sample Injection using microliter syringe with auto sampler upgradable option
8.	Sample Injection Volume	Variable from 10 – 2000 microliters
9.	IC treatment	Internal acidification and sparging
10.	Sample Dilution Function	Automatic with dilution factor of 2 to 50
11.	Acid Sparging	Automatic
12.	Carrier Gas	High purity air
13.	Instrument background correction and check function	Analyzer should have built in ultra-pure (Carbon free) water generation system, which enables to perform back ground correction/check function

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14. Comprehensive Calibration system	<p><b>a)</b> Calibration curves to be created to compensate for TC in water used for standard solution adjustment</p> <p><b>b)</b> Multipoint calibration curves to be created with single stock solution</p>
15. Measurement features	<ul style="list-style-type: none"> <li>* Automatic settings for optimal measurement conditions</li> <li>* Automatic reanalysis of out of range samples</li> <li>* Automatic selection of best calibration curve</li> <li>* Exclusion of anomalous values</li> </ul>
16. Shutdown	The system should have automatic power off system after electric furnace cool down
17. Additional requirements	<ul style="list-style-type: none"> <li>* Evident of Minimum 5 numbers of installations in the last 3 financial years with satisfactory performance certificates.</li> <li>* Minimum 5 Performance satisfactory certificates from the previous supply.</li> </ul>

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**Solid Sample Analyser Specification:**

S.No	Specifications	Descriptions
1	TC Oxidation Method	Combustion catalytic oxidation (TC furnace temperature: 900°C)
2	IC Reaction Method	Acidification (IC furnace temperature: 200°C)
3	Measured Items	TC, IC, TOC
4	Measurement Range	TC: 0.1 to 30 mg carbon IC: 0.1 to 20 mg carbon
5	Measuring Time	5 to 6 minutes
6	Carrier Gas	High purity air

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## **Total Nitrogen Module Specification:**

<b>S. No</b>	<b>Specifications</b>	<b>Descriptions</b>
1	Measuring Parameter	TN (Total Nitrogen)
2	Measurement Principle	Thermal Decomposition / NO detection (Chemiluminescence Method)
3	Measurement Range	0 – 10000 ppm
4	Detection Limit	5 ppb
5	Measuring Time	Approx. 4 min

### **Miscellaneous Items:**

1. The supporting accessories such as moisture trap, solid sample boats and standards needed to be supplied along with instrument.

### **Data Acquisition:**

1. The system must be provided with a set of installation, operating and troubleshooting manuals both in paper and software forms.
2. A suitable PC compatible for the above instrument control should be supplied along with the instruments. The PC should meet the minimum requirements such as desktop with i-7 Processor, 8 GB RAM, HD 500 GB or more, Windows 7 home basic or better and 24" or more LED monitor.
3. Standard curves to be created and stored in PC.
4. Minimum 2 years warranty with 1 or 2 year free service will be preferred
5. On-site training for the operation of the hardware and software systems should be included.



## **General terms and conditions**

- The supplier/vendor must be an original equipment manufacturer.
- The system should be delivered within 8 - 10 weeks from the opening of the letter of credit or issue of purchase order, whichever is later.
- Costs and related information should be given only in the financial bid.
- The cost should include 24 months warranty of the overall system and CIP up to Chennai.
- Prices quoted should be valid for at least 90 days.
- Item-wise break up of cost should be provided for the different items (parts).
- IIT Madras reserves the right to exclude some items from the purchase.
- The payment conditions consist of 90% LC at site and 10% after installation and satisfactory training.
- The system should be installed and commissioned with no additional cost.
- Training at IIT Madras should be provided with no additional cost.
- Two copies of the system manual should be provided in CD form.
- There must be a local service agent in Chennai.

## **Technical Bid should comprise of the following:**

- Detailed Technical brochure
- Detailed technical write up explaining how each of the Technical Specifications are complied with.
- The list of at least five Institutions/R&D units/Industry where similar installations have been supplied in India/abroad including contact details (name of the person in-charge, email and phone number) is to be provided.



CENTRE FOR INDUSTRIAL CONSULTANCY & SPONSORED RESEARCH (IC&SR)  
INDIAN INSTITUTE OF TECHNOLOGY MADRAS  
CHENNAI 600 036



**B NAGARAJAN**  
JOINT REGISTRAR (IC & SR)

Project Accounts  
July 22, 2016

**TO WHOMSOEVER IT MAY CONCERN**

In connection with project, **US currency may be transferred to CANARA BANK, IIT - MADRAS Branch** with the following details.

**FOR TRANSFER OF CURRENCY US DOLLAR**

**Please Credit in USD**

**(THROUGH )**

JP MORGAN CHASE, NEW YORK  
SWIFT CODE: CHASUS33

**For Credit to**

USD ACCOUNT No: 001-1395969, of CANARA BANK INTERNATIONAL DIVISION  
MUMBAI

**For Further Credit to**

ACCOUNT NO: **2722101001741** of IIT Chennai – Swift Code: **CNRBINBBIIT**  
**OF THE REGISTRAR, IIT, MADRAS**

  
JOINT REGISTRAR (IC & SR) i/c  
संयुक्त कुलसचिव (आई.सी. एवं एस.आर.)  
JOINT REGISTRAR (IC & SR)

आई.आई.टी. मद्रास

This is to certify that the particulars furnished are correct.

*For Canara Bank*

Senior Manager  
Canara Bank - IIT Madras branch



एस. अरवींदन  
S.ARAVINDAN  
सीनियर प्रबंधक Senior Manager  
ए.अ.सं. S.No.31649