



Telephone :

044.2257 5284

EN

Department of Civil Engineering

# Indian Institute of Technology, Madras

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

Ref. No. 

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Date : 21. 5. 15

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Dear Sirs,

DUE DATE : 15. 6. 15.

1. Quotations are invited in duplicate for the various items 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 so as to reach him on or before the due date stipulated above.
3. The Quotations should be valid for 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. Rate Contract Number 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. If so, please send copy of the R.C. (Please note that we are not Direct Demanding Officers)
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 are for Ex-Godown, delivery charges should be indicated separately.
7. Firms Outside Chennai : Quotations should be for F.O.R. Chennai. 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 Certificates 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

o/c.

For HEAD OF THE DEPT.

\*Strike out whichever is not applicable.



### Specification for Toxicity Analyzer

The Toxicity analyser should be a laboratory-based, temperature -controlled and should contain self-calibrating photometer for the measurement of acute toxicity. The major specifications of the Biotoxicity analyzer are given below:

- The system should have a built-in cooling block.
- System should be biosensor-based measurement using bioluminescence technology to monitor for either accidental or deliberate contamination of both water and wastewater.
- The system should use bioluminescent bacteria for the detection of toxicity in water and based on the principle that certain strains of bacteria emit light when healthy.
- The results should be given in less than 15 minutes time.
- Results should be given either as an effective concentration (EC) value or as a % inhibition.
- The system should Complies with ISO 11348-3:2077 (luminescent bacteria test).
- Minimum and maximum sample requirement should be between 2.5 ml and 15 ml, respectively.
- The analyzer should have 30 well incubator block for performing 30 tests simultaneously.
- Analyzer should be compact in size and easy to handle (weight should be less than 10 kg).
- Power requirement for the analyzer should be 240 +/- 10% VAC, 1 Amp Slo Blo, 50/60 Hz.
- Temperature of the reagent well should be  $5.5^{\circ}\text{C} \pm 1^{\circ}\text{C}$
- Temperature of the Incubator block should be  $15^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$  in Acute Mode and that of Mutatox Mode & Chronic / ATP Mode be  $27^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$
- Temperature of the READ well should be of  $15^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$  in Acute Mode and that of Mutatox Mode & Chronic / ATP Mode be  $27^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$
- The system should be supplied with the software protocols for Basic toxicity test, Comparison test, Confirmation test, Screening toxicity test, Solid Phase/Basic Solid Phase, Comparison, Confirmation, WET (Whole Effluent Toxicity).
- The analyzer should be applicable for Industrial effluent, industrial process water, Municipal effluent, drinking water, soil , sediment samples, storm water, hazardous waste, etc.
- The complete system should be supplied with Accessories like bio-luminescent bacteria, freeze dried bacteria, Disposable Glass cuvettes and required PC with Windows Operating system (the quote should also include the cost of these items/add-ons)
- The quote should also include AMC (optional) for first 2 years.
- The supplier should demonstrate the functioning of the biototoxicity analyzer for the ongoing pharmaceutical wastewater research samples. Moreover, the supplier should ensure 1 year onsite warranty for the analyzer.

  
PROJECT CO-ORDINATOR