



Telephone :

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Department of Chemical Engineering

Indian Institute of Technology, Madras

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

Ref. No.	CHE	2013	010	Dr. R. Ravikrishna
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Date: 27.2.2014

Address overleaf

Dear Sirs,

DUE DATE 28-3-2014

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

[Signature]
For HEAD OF THE DEPT.

**Strike out whichever is not applicable.*

Specifications for a portable instrument to measure optical particle size of ambient and laboratory aerosols

1. The instrument must be capable of measuring ≥ 16 size channels.
2. The number of channels must be user selectable
3. The instrument must be capable of measuring aerosols in the range of at least 0.3 microns to 10 microns.
4. The size resolution must be at equal to or better than 5% at 0.5 microns.
5. The instrument must be capable of measuring a maximum concentration of at least 2,500 particles per cc.
6. The instrument must include a built-in pump providing sample flow.
7. The instrument must low noise with HEPA filtered air.
8. The instrument must be capable of sample times as short as 1 second and sample time must be adjustable.
9. The sampler must be portable with a built-in rechargeable battery that can operate for at least 8 hours on battery power along with a charger.
10. The instrument must also be capable working on AC power supply if necessary.
11. The instrument must have an in-built filter (25 or 47 mm diameter) for post sampling analysis of the mass collected on the filter. The system must be supplied with at least one filter for operation.
12. The instrument must be capable of receiving and measuring a wide variety of solid or liquid particles.
13. The instrument must be capable of measuring both ambient aerosols and as aerosols synthetically generated in the laboratory through a suitable sampling tube.
14. The system must contain a screen displaying the distribution.
15. The system must be supplied with a software that can allow for data acquisition, processing and data display options.
16. The software must allow the download of all data (raw and processed) to a Microsoft Excel or equivalent spreadsheet format.
17. The instrument must include USB, Ethernet and USB flash drive interfaces.
18. The instrument must allow for corrections for density, shape and refractive index of particles
19. The instrument must have built-in data logging for up to $\geq 30,000$ sample sets of data.
20. The instrument must be able to operate under ambient temperatures of upto atleast 45 C and non-condensing relative humidities upto 85%.
21. The system must be supplied with minimum tools for operation and maintenance (cleaning of inlet etc.)
22. The system must be supplied with any accessories required for portable use including a carrying case or strap (if applicable).

Separate technical and commercial bids should be sent in separate sealed envelopes on or before March 28th to the address below:

Dr. R. Ravi Krishna
Associate Professor
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Chennai 600036