

DEPARTMENT OF CHEMICAL ENGINEERING INDIAN INSTITUTE OF TECHNOLOGY MADRAS CHENNAI – 600036, INDIA

Ref. No. CHE/14-15/128/CHCX/RVIN

Date: 7 Nov. 2014 Due date: 28 Nov. 2014

Item: Diode Array UV-Visible Spectrophotometer

- 1. Quotations are invited in duplicate for the items shown overleaf (in Annexure I). The quotations duly sealed and superscribed on the envelope with reference no. and due date, should be addressed to the undersigned so as to reach on or before the due date mentioned above.
- 2. The quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
- 3. The total cost of the equipment in terms of CIP Chennai should be clearly mentioned.
- 4. Terms of warranty and guarantee should be explicitly mentioned.
- 5. Packing and delivery charges, customs and clearance duty should be clearly stated.
- 6. Goods shall not be supplied without an official supply order.
- 7. Local firms : Quotations should be for free delivery to this institute. If quotations for ex-godown delivery charges should be indicated separately.
- 8. 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.
- 9. 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 (CST) 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.
- 10. Payment : Specify the mode of payment and if advanced payment has to be made. Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later.
- 11. IIT Madras is exempt from payment of excise duty and is eligible for concessional rate of customs duty. Necessary certificate will be issued on demand.
- 12. IIT 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.
- 13. In case of any queries/clarifications, please contact Dr. R. Vinu, Chemical Engineering, IIT Madras, Chennai, E-mail: vinu@iitm.ac.in.
- 14. The sealed quotation may be sent to

Dr. R. Vinu Dept. of Chemical Engineering, IIT Madras Chennai – 600036 (P) +91-44-22574187



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Annexure I

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Technical Specifications for Diode Array UV-Vis Spectrophotometer

<u>Scope and application</u>: Collection of UV-visible spectra of liquid samples in less than 1 second. Capable of obtaining time spectra for kinetic analysis.

Spectral range - 190 to 800 nm

Bandwidth - 1 nm

Spectral accuracy - ± 1 nm

Photometric accuracy - $<\pm 0.01$ Abs

Stability (Baseline) - <0.005 Abs/hr

Light source: deuterium and tungsten lamps

Include standard consumables kit (for 1 year) including quartz cuvettes with 10 mm path length and different sample volumes (3 mL and 1.5 mL)

Should be possible to perform kinetic studies

Desired spec (but not compulsory): possibility of interfacing the system with HPLC pump, column and injector using a high pressure cell for HPLC analysis

Include desktop computer with preloaded software. Software should be capable of processing data for quantification, smoothing, area calculation and normalization. 3D-display of data (Abs vs wavelength vs time) for kinetic analysis (desired but not compulsory)

Power: 220 V, 50-60 Hz, Indian socket