

**DEPARTMENT OF BIOTECHNOLOGY – INDIAN INSTITUTE OF TECHNOLOGY
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**Dr.KARUNAGARAN
Prof & Head**

Date: 14th Jan 2015

**Ref : BT/GUHA/ 2014/033/SPL
Due date : 30th Jan 2015**

Terms and Conditions

1. Quotations are invited in duplicate for the various items shown below/overleaf/ enclosed list.
2. The quotations duly sealed and super scribed 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 ExGo down, delivery charges should be indicated separately.
7. **Firms outside Chennai:** Quotations should be for F.O.R Chennai. If F.O.R. Consigner Stationer freight charges by passenger train/lorry transport must be indicated. If Ex-Go down, Packing, forwarding and freight charges must be indicated.
8. The rates of Sales/General Taxes and the percentage of such other taxes legally livable 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 livable 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 late

Specification

Equipment: Protein purification System

Specifications:

Bench-top system

System Pump:

Pump type: Piston pump with mixing

Operating pressure: Up to 20 MPa (200 bar)

Maximum operating flow rate: 25 ml/min

Flow rate increment: 0.1 ml/min

Flow rate accuracy and precision: $\pm 5\%$

Gradient composition accuracy: $\pm 5\%$ for 5% to 95% Buffer B

Sample pump:

Pump type: Piston pump

Maximum flow rate: 50 ml/min

Flow rate accuracy: $\pm 5\%$

Valves:

Solenoid/ rotary type

For: Buffer A, Buffer B, Sample valve, Wash valve, Outlet valve

Should be able to add additional valves later

Monitoring:

UV-Visible:

Variable wavelength

Wavelength range: 190 - 700 nm

Simultaneous detection at multiple wavelengths – up to 3

Absorbance range: 0 to 5 AU

Linearity < 5% up to 1 AU

Flow cell path length: 2 mm

Conductivity

Range: 0 to 900 mS/cm

Resolution: 1 mS/cm

Accuracy: $\pm 5\%$

With temperature compensation

pH

Range: 2 to 14

Accuracy: ± 0.1 pH units

With temperature compensation

Fraction collector:

Number of fractions: Minimum 30

Ability to collect fractions in 12mm, 18mm, 30 mm tubes, 15 ml vials, 50 ml vials, 1.5/2 ml microfuge tubes, and 250 ml bottles

Ability to collect fractions by volume or time or peak detection

Fraction volume range: 0.1 – 250 ml

Others:

Air sensor

Compatible to work in cold room

Display: LED/LCD

Control through PC software

Compatible with pre-packed columns

Optional accessories: Pre-packed columns for gel filtration, ion exchange, and affinity

Chromatography and empty columns

Optional: Cold cabinet

Should have service in Chennai

Should have international supply and service

Should have supplied to IIT Madras before or provide a reference from a reputed lab in Chennai