

**Foundation for Innovation and Technology Transfer  
(FITT)**

**Notice Inviting Quotation**

<b>Details of the item</b>	<b><u>BIOREACTOR FOR MAMMALIAN CELL CULTURE</u></b>
<b>Reference No.</b>	<b>FT/03/1964/2018</b>
<b>NIQ start date</b>	<b>10-01-2020 9:000 AM</b>
<b>NIQ closing date</b>	<b>16-01-2020 1:00 PM</b>
<b>Tender Opening date</b>	<b>17-01-2020</b>

**BIOREACTOR FOR MAMMALIAN CELL CULTURE**  
**TECHNICAL SPECIFICATION**

- 1 Vessel volume : Working volume max - 2.5 L, minimum - 500 mL and total volume - 3 L
- 2 Measurement and control Requirement with probe:  
pH (0-14) with 0.01 precision,  
Dissolved oxygen (0-100%) with 0.1% precision,  
Temperature (0-100 °C) with 0.1°C precision.  
All the probes should have minimum of 2 m cable.
- 3 Agitation motor – 20 to 250 rpm with precision of 2 rpm error.
- 4 Peristaltic pump: (working range 0-50 rpm with precision of 1 rpm.)  
2 bidirectional pump fix speed for acid and base  
1 variable speed pump  
Each pump should be calibrated and assignable, range selectable 1-30 ml/min, 3-50 ml/min, 5-90 ml/min (according to inner tube diameter)
- 5 Mass flow controllers – 4 no's (one each for air, oxygen, carbon dioxide and nitrogen gases).
- 6 Gas flow rate 0 - 6 liter per minute with precision of 0.05%.
- 7 Single walled vessel with wet part thermostatic circuit for temperature control
- 8 SCADA software for control with licenses and remote access for external PC/Laptop.

- 9 Material Vessel Borosilicate Glass (autoclavable) with spherical bottom, Lid Port: Stainless Steel AISI 316L including fittings, ports and necessary accessories for cultivation.
- 10 2 no's - Pitched blade impellers for cell culture application made of AISI 316L electro-polished
  - 1 Exhaust Condenser made of AISI 316 L electro-polished
  - 1 -Ring-Sparger Interchangeable gas diffuser
  - 1- Micro-sparger line gas diffuser
  - 1- Overlay gas by-pass
  - 2 - PG13.5 ports for pH, DO probes
  - 4 - liquids addition inlets for (acid, base, foam, feeding)
  - 1 - Septum for inoculation
  - 1 - aseptic sampling assembly
  - 2 - Gas filters for inlet and exhaust
- 11 Stainless Steel 316 L Vessel top plate with 18 ports which should include 2 additional DN12 / PG13.5 ports for two new additional probes in the top plate.
- 12 Assistance for application support with 2 year warranty on the instrument and accessory parts.
- 13 Remote control through Ethernet, Data export through USB port, Analog port for system extension.
- 14 Free installation and Demo

### **Terms & Conditions Details**

**Preparation of Bids:** The offer/bid should be submitted in two bid systems (i.e.) Technical bid and financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. Financial bid should indicate item wise price for the items mentioned in the technical bid

**Opening of the tender:** The bid will be opened by a committee duly constituted for this purpose. Only one representative will be allowed to participate in the tender opening. The technical bid will be opened first and it will be examined by a technical committee (as per specification and requirement). The financial offer/bid will be opened only for the offer/bid which technically meets all requirements as per the specification, and will be opened in the presence of the vendor's representatives subsequently for further evaluation. The bidders if interested may participate on the tender opening Date and Time. The bidder should produce authorization letter from their company to participate in the tender opening.

**Acceptance/ Rejection of bids:** The Committee reserves the right to reject any or all offers without assigning any reason.

The quote should reach the following address on or before –

**Anurag S.Rathore, Ph.D.**  
**Professor, Department of Chemical Engineering**  
**Coordinator, DBT Center of Excellence for Biopharmaceutical Technology**  
**Indian Institute of Technology, Delhi**  
**Hauz Khas, New Delhi, 110016, India**

Please quote prices for FOB New Delhi, inclusive of all taxes and duties.

Quote should be in Indian Rupees for agents of Indian manufacturers, or in foreign currency, for agents of foreign manufacturers, and needs to be valid for at least three months.

Attach all the technical literature and a list of similar installations done in India.

If the quote is being submitted by a representative of the manufacturer, a valid agency-ship or dealership certificate authorizing the agent to quote to IIT Delhi on behalf of the manufacturers should be enclosed. The principal and the vendor, both, are not allowed to quote for the same product.

Complete set of manuals for the operation of the equipment should be given.

Please specify all of your terms and conditions clearly, including delivery period.

Mode of payment for purchases in foreign currency are through irrevocable letter of credit, or through wire transfer on delivery. Only bank charges within India are payable by FITT, IIT Delhi, all bank charges outside India are the responsibility of the seller. For purchases in INR, payment is on delivery.

