



**DEPARTMENT OF BIOTECHNOLOGY**  
**Indian Institute of Technology, Madras, Chennai, 600 036.**  
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Date: 01.11.2018

**Ref: BT/GUHA/2018/030/SPL**

**Dt. 01.11.18**

**Due Dt. 22.11.18**

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 Ex-Godown, 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-Godown, Packing, forwarding and freight charges must be indicated.
8. The rates 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.

## **Equipment: Water Purification System**

### **Specifications:**

**Inlet/ feed supply:** Tap water

The water dispenser should be designed such that various small filters/cartridges can be connected for obtaining specific quality water for different research needs (Ultra-pure water free of particulates, pyrogens, nucleases, VOCs, endocrine disruptors and organics for LC

### **Output:**

12. Type 2 water (Pure water): 70 - 150 L/day

13. Type 1 water (ultrapure water): 15-20 L/day

### **Type 2 water (Pure water) quality**

(A) Conductivity ( $\mu\text{S}/\text{cm}$ )  $<20$

(B) TOC  $< 50\text{ppb}$

### **Ultrapure (Type 1) water quality:**

1. Conductivity @  $25^{\circ}\text{C}$  :  $0.055 \mu\text{S}/\text{cm}$
2. Water Resistivity @  $25^{\circ}\text{C}$ :  $18.2 \text{ M}\Omega\text{- cm}$
3. Water TOC: 1 - 5 ppb
4. Water Bacteria  $<0.1 \text{ cfu}/\text{ml}$
5. Endotoxins / Pyrogen Level:  $<0.001 \text{ EU}/\text{ml}$
6. Water Particles  $>0.2 \mu\text{m}$  :  $< 1 \text{ per ml}$

### **Single system for both types of water with pretreatment filter**

### **Integrated Reservoir for Type 2 water:**

Capacity: 50 L

Easily cleanable (wide mouth / conical bottom)

With vent filter and level control

**Wall mounting assembly**

**Option to have multiple points-of-delivery (POD)**

**Quality Assurance:**

Certificate of Conformity/ Calibration/ Quality for built-in meters and consumables

**Graphical display**

**Water quality monitoring: continuous**

Resistivity/ conductivity

TOC

**Alarms for:**

Exceeding resistivity or TOC values

Maintenance/ replacement of parts

**Power fail safe, auto restart, automatic internal recirculation of ultrapure water (optional)**

**System material:** plastic

**Others:**

Regulatory compliance: CE

Should have international supply and service

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

Should have service in Chennai