



**DEPARTMENT OF BIOTECHNOLOGY**  
**Indian Institute of Technology, Madras, Chennai, 600 036,**  
Telephone No.22574107, 22574100, FAX No.22574102

---

MUKESH DOBLE  
Professor and Head

Date: 05.10.2012

**Ref: BT/MUKE/2012/28/SPL**

**Dt.05.10.12**

**Due Dt.19.10.12**

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.

## **Technical specifications of Ultra Pure Water purification system**

1. System should utilize tap water as feed with no restrictions on feed water pressure, conductivity and hardness
2. Output water quality should be of ASTM (American Society for Testing and Materials) D1193, ISO (International Organization for Standardization) 3696 and CLSI-CLRW. (Clinical and Laboratory Standards Institute-Clinical Laboratory Reagent Water)
3. Type-I Water output must be >50 liters per day @ 1.2 l/min
4. Pre-filtration unit should include 1 $\mu$ m, 5 $\mu$ m and 10 $\mu$ m cartridges
5. The system must consist of RO filtration module, UV photo oxidation, Ultra filtration and deionization
6. System should support UV photo oxidation @ 180nm and 254nm
7. Sensors for Conductivity monitoring
8. Storage tank with built-in Water level sensor and Vent filter with storage capacity >7 Liters
9. Operating voltage should be 220V
10. 0.22  $\mu$ m Filter at water dispensing
11. System should have real time display of resistivity, water level in tank and temperature  
Built-in booster pump to maintain constant water pressure
12. Output Water should be essentially RNase, DNase and Pyrogen free, Bacterial content of <0.001EU/ml, Endotoxin <0.001EU/ml, Turbidity <1NTU, TOC <5ppb
13. Interfacing with computer for water quality recording will be desirable
14. Minimum warranty period of 3years including onsite repair and replacement of defective Part
15. The resistivity of output water should be greater than 18.2 M $\Omega$ .cm at 25°C
16. Conductivity of the output water should be 0.055  $\mu$ S/cm

**Ref: BT/MUKE/2012/28/SPL**

**Dt.05.10.12**

**Due Dt.19.10.12**

**Head of the Department**