# Indian Institute of Technology Delhi Department of Chemical Engineering

Date: 29/10/2012 Ref. no: CHE/2012/WPS1

The Department of Chemical Engineering invites quotations for two ultrapurification water systems with the following specifications:

#### **PRE-FILTRATION UNIT**

 A pre-filtration unit with 5 & 1micron filter to remove the particulate matter & booster pump for feed pressure should be provided.

## Ist SYSTEM: Analytical grade water system

- RO grade water system with following purification stages:
- Prefilter with anti-scaling & activated carbon for the removal of free chlorine & organics.
- The system should handle the feed water conductivity up to 2000 microS/cm & free chlorine up to 3 ppm and fouling index: < 12 without the need of any extra carbon filter and GAC candle
- Reverse osmosis for removal of ionic & inorganic impurities.
- Conductivity cell present before RO stage (cell constant 0.01/cm) to measure the RO feed conductivity.
- To eliminate the need of deionization cartridges regular replacement, the water system should have self regenerating electro-deionization principle with carbon beads on cathode for less recurring cost & consistent water quality.
- Water quality: Flow rate: 3 L/hr, lons organics removal upto 99%, Resistivity: > 5 Mohm.cm, TOC
   < 50 ppb.</li>

#### **RESERVOIR**

Reservoir of 50 liter capacity or more.

### IInd SYSTEM: Ultrapure grade water system

- Ultrapure water machine producing water of resistivity: 18.2 MOhm.cm, Conductivity: 0.055uS/cm, Bacteria: < 0.1cfu/ml, Flow rate: > 1 liter/min, TOC: < 5 ppb, endotoxins < 0.001 Eu/ml.</li>
- Automatic recirculation feature.
- Remote dispenser
- Dual wavelength UV Lamp.

**WARRANTY:** 24 months warranty against all manufacturing defects from the date of installation.

#### Terms and conditions

- The technical and commercial bids must be submitted in separate sealed envelopes subscribed
  with "Technical Bid" or "Commercial Bid" as appropriate. Both the technical and the commercial
  bids should be enclosed in an envelope subscribed "Quotation for ultrapurification water system"
  and should be submitted to the undersigned.
- The supplier must be an authorized dealer/distributor of the principal/manufacturer and should furnish an authorization certificate from the principal/manufacturer.
- CIF New Delhi prices should be quoted with all the terms and conditions i.e. applicable taxes, installation, warranty and delivery schedule.
- The supplier should provide a list of institutions in India with the details of the ultrapurification water systems supplied and with the contact details of the institution/department.
- Quotations must be valid for at least two months from the date of the NIQ.
- Technical quotations should contain compliance against tender specifications in the order given.
- A special discount/rebate wherever admissible keeping in view that supplies are being made for educational purpose in respect of public institution of national importance may please be indicated.
- The institute reserves right to accept or reject any or all quotations without stating the reasons thereof.
- The quotations should reach Dr. Shalini Gupta, Block-I, Room-315, Chemical Engineering
  Department, Indian Institute of Technology-Delhi, Hauz Khas, New Delhi 110016 latest by 15
  November 2012.

Shalini Gupta

Department of Chemical Engineering

Indian Institute of Technology Hauz Khas, New Delhi 110016

Tel no.: 011 2659 1070