DNOTICE INVITING QUOTATION

Quotations are invited for purchase of the **"MOLECULAR DISTILLATION SYSTEM"** for Center for Rural Development and Technology. The interested suppliers are requested to submit their quotation as per the specification given below.

Technical specifications of the equipment:

The molecular distillation system with processing capacity 500-1000g/Hr to separate Mono-Glyceride (MG), Di-Glycerides (DG), Triglycerides (TG) and Glycerol (GL) from the reaction mixture with following specifications. Particularly the instrument should be designed to distill,

A. Fatty acid ester
B. Hydrogenated vegetable oils
C. Glycerides
D. Waxes
E. Dimer acids
F. Fatty acid amides
G. Epoxy resins
H. Essential Oil
I. Monoesters
J. Di-Octyl phthalate
K. Vitamin A
L. Tocopherols (Vitamin E)
M. Bio-Oil and Pyro-oil

The vacuum distillation unit should have;

1. **Vacuum pump system**

   (i) Mechanical high vacuum pump with cold trap made up of Stainless steel vacuum manifold and valve with Vacuum range (1-700x10^{-3} Torr)

2. **Still assembly attached with**

   (i) Degassing feed chamber with heated rotor, Water-cooled condenser, Feed valve, Distillate/residue valve and Distillate/residue collecting vessels.

   (ii) There should be recycle line from residue vessel to the degassing chamber for multiple operation

   (iii) Vacuum trap with vacuum controller as per process within the vacuum range of (1-700x10^{-3} Torr)

3. **Control system**

   (i) Digital electric heating with PLC control system (temperature range (50-300 ^{0}C)

   (ii) Two Digital vacuum gauges with high sensitivity vacuum monitor pressure gauge with leak detection (main chamber and fore line)

   (iii) Digital temperature controller with PLC digital/mechanical vacuum controller

   (iv) Individual switch for each components (rotation, heater, mechanical pump, diffusion pump)

   (v) Switched/variable power outlet for the addition of heat tapes

   (vi) Supply electricity should be 220 volt (AC)

4. **Spare parts for the day to day operation of the system such as;**

   Gasket Plate seal, O-Rings, trap gasket, ball bearing, Pump oil Convoil, mechanical Pump Oil, glass Disk condenser, glass Disk Degasser, cup Glass Collector and etc.

Terms & Conditions Covering Submission of Quotations

- The quotation must have validity of three months.
- The delivery period to be clearly specified.
- The quotation for the equipment in foreign exchange, if it is to be imported. The cost of spares and optional equipment to be quoted separately. The cost should be based on FOB New Delhi. If equipment is indigenous the quote should be in INR and all taxes applicable should be mentioned clearly.
- Institute makes payment after delivery and successful installation of the equipment. If equipment is to be imported, the address of the company in whose name the LC is to be opened should be stated.
- The product will be used for the educational purpose. Any applicable academic institution discounts should be offered and stated. Detailed brochures should accompany the offer.
- Proprietary item certificate from the principals, if applicable.

- If the bidder is an authorized dealer, then the authorized Indian dealership certificate from the principals should be enclosed.
- Quotations should be send in sealed cover, marked on the top of our NIQ reference number and "Technical specification for Molecular Distillation Unit" and due date for opening, as otherwise this will not be considered.

  Quotation should contain,

  Technical bid

  Commercial bid
- List of the organizations along with address where this equipment has been supplied during last 5 years should be attached with the technical bid.
- Genuine comparative statements should be attached with the quotation.
- Quotation not conforming to the set procedures as above will be rejected.
- Institute reserves the right to accept or reject any one or all the quotations without assigning any reasons thereof.
- Comprehensive on-site warranty for two years is required.

The quotations should be submitted by dt.**18-06-2012, 05:00 PM** at address given below;

Dr. S. N. Naik, Block-III, Floor-2nd, Room No-389/390, Center for Rural Development and Technology, Indian Institute of Technology, Hauz Khas, New Delhi-110016 (INDIA)