



Environmental Geochemistry Laboratory
Department of Civil Engineering
Indian Institute of Technology Kanpur

Inquiry no.: IITK/CE/AS/10-2015/2
Closing date and time: 22.10.2015 at 12 noon

Date: 09.10.2015

Sub: Call for quotation for supply and installation of a benchtop freeze dryer and accessories

Sealed quotations (**Technical and Financial bids separately**) are invited from authorized suppliers for items and their specifications given below before **12 noon of 22.10.2015**.

The quotation for supply and installation of a **benchtop freeze dryer** should be sent in two parts in sealed envelopes, clearly marked as "Technical Bid" and "Financial Bid". The Technical Bid should contain detailed specifications of the product being offered and should not mention any prices. The Financial Bid should include the detailed price quotation clearly, including the cost of the equipment, taxes, service charges, shipping and handling charges, if any. Financial bids will be opened only when Technical Bids are found acceptable. Our organization is an educational institute of repute and liable to get maximum education discount from manufacturer. Please specify it, separately.

S. No.	Product Name & Specifications	Quantity
1.	<p>Laboratory Benchtop Freeze Dryer</p> <p>This freeze dryer should be an energy efficient, microprocessor controlled, freely programmable and compact user friendly system. It should be able to handle routine environmental samples from diverse matrices including samples of corrosive nature. It should be CE compliant, <u>HCFC/CFC-free</u>, and should meet environmental and safety regulations of India.</p> <p>Technical specifications:</p> <ul style="list-style-type: none">• Ice holding capacity before defrost should be 2.5 kg (or L) or higher.• Sublimation rate should be 2 kg (or L) of water per 24 hours or higher.• Condensation/collector temperature: -50 °C or lower• Drain valve for disposal of defrosted material.• Collector should be made with stainless steel coil and be PTFE coated inside the chamber to trap acidic moisture.• Power supply: AC 220-240V, 50/60 Hz• A display for setup and operating parameters, such as ice condenser temperature, vacuum level and alarm messages, should be provided.• It should have alarms for abnormal operation.• Vacuum break and vacuum control valves should be provided to prevent oil back streaming.• Should contain a moisture sensor to protect vacuum pump.• Refrigeration system should be HCFC and CFC free with 1/3 hp.	1



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	<ul style="list-style-type: none"> • Vender should quote large mouth flask (No round flask), rubber top for easy clean and retrieval of sample in powder form along with stainless steel connectors 45 deg angled. • RS-232 port for data logging • Automatic start-up switch for collector cool-down and vacuum pull-down with manual override switches. • Vender should also provide silicon free vacuum grease along with system. 	
2.	Compatible 12-Port Drying Chamber <ul style="list-style-type: none"> • Type 304 stainless steel • 1/2" thick acrylic lid with neoprene gasket, complete with 12 neoprene valves with moulded plastic knobs that accommodate both 1/2" and 3/4" adapters for connection of flasks. 	1
3.	Compatible Rotary vane Vacuum Pump <ul style="list-style-type: none"> • It should come with filter exhaust • Capacity of 98 litres/min. • Power supply: 220-240V, 50Hz • Ultimate Vacuum : 2×10^{-3} mBar (1.5 μ bar) 	1
4.	Tube Holder <ul style="list-style-type: none"> • Stainless steel • Should accommodate up to 30 each 2.0 ml micro-centrifuge tubes in an upright position inside a compatible flask. 	1
5.	Tube Holder <ul style="list-style-type: none"> • Stainless steel • Should accommodate up to 15 each of 12 or 13 mm diameter tubes in an upright position inside a compatible flask. 	1
6.	Support Shelves <ul style="list-style-type: none"> • Should be able to be attached easily without tools to the sides of the Freeze Dry System to provide support for large flasks attached to the drying chamber or manifold. • There should be provisions for height adjustment of the shelves to support various sizes of flasks. 	1
7.	80 ml Complete Freeze Flask <ul style="list-style-type: none"> • Flask Top Adapter Diameter : 1/2" • Dimensions / Flask Bottom : 115 mm x 34 mm • Should be complete with all parts/accessories such as rubber top, glass bottom and filter paper 	1
8.	120 ml Complete Freeze Flask <ul style="list-style-type: none"> • Flask Top Adapter Diameter : 3/4" • Dimensions / Flask Bottom : 68 mm x 59.2 mm • Should be complete with all parts/accessories such as rubber top, glass bottom and filter paper 	1
9.	300 ml Complete Freeze Flask <ul style="list-style-type: none"> • Flask Top Adapter Diameter : 3/4" • Dimensions / Flask Bottom : 45 mm x 59.2mm 	1



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	<ul style="list-style-type: none">• Should be complete with all parts/accessories such as rubber top, glass bottom and filter paper	
10.	900 ml Complete Freeze Flask <ul style="list-style-type: none">• Flask Top Adapter Diameter : 3/4"• Dimensions / Flask Bottom : 190 mm x 90.2mm• Should be complete with all parts/accessories such as rubber top, glass bottom and filter paper	1
11.	45° Bend Adapter <ul style="list-style-type: none">• Stainless Steel• 1/2" Flask Top to 1/2" valve	1
12.	45° Bend Adapter <ul style="list-style-type: none">• Stainless Steel• 3/4" Flask Top to 3/4" valve	3
13.	Soda Acid Trap <ul style="list-style-type: none">• Should be compatible with dryer and pump.• Should be complete including all compatible accessories/parts for functioning.	1

Terms and Conditions:

- All parts should be from original equipment manufacturer.
- The vendor should supply list of installation in India of the same model quoted against this enquiry, preferably at IITK.
- Manufacturer should have ISO 9001 certification and a copy of same should be furnished.
- If the Financial Bid is included in the Technical Bid, then the quotation will be rejected.
- **Quotation should have minimum validity of 90 days from the date of opening.**
- Delivery period should be within 60 days from the receipt of the purchase order. Shorter delivery time may be given preference.
- Taxes, packaging, forwarding freight charges, if any should be mentioned.
- Quotation should carry proprietary certificates and authorization letters/certificates.
- Prices should include installation and training of the equipment.
- Provide contact number/address for complaint, else quotes may be rejected.
- The warranty period should be min. 1 year from the date of installation. Higher warranty period may be preferred. Also, quote must include prices for AMC with the manufacturer.
- The firms may also quote for optional accessories which will extend the capability or ease of use of the equipment.
- **All quotations should be in the currency of the country of origin of the instrument, on FOB and CIF, Delhi (if imported) basis, and also converted to ₹.**



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- The Institute is exempted from excise duty and pays a nominal customs duty of ~5% under Govt. of India notifications 10/97 and 51/96, respectively. Custom Duty exemption certificate under notification 51/96 and road permit will be provided if applicable.
- Normal payment terms for the Institute will be applicable (90% on delivery of the items and the remaining 10% after satisfactory installation/ inspection).
- The Institute reserves the right for accepting and rejecting any quotations without assigning any reason thereof. **Also, the Institute reserves the right to reject or accept all or any of the offers made above.**

Thanking you,

Sincerely,

Dr. Abhas Singh

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I.I.T. Kanpur, Kanpur- 208016, Uttar Pradesh, India.