

INVITATION FOR TENDER FOR SUPPLY OF EQUIPMENT

Sealed tender offers are invited in two separate sealed covers (Technical and Commercial offers) from eligible manufacturers/suppliers or their direct Indian agents for the supply of the following equipment.

Multi-purpose, large capacity ,floor-standing centrifuge and Freeze Dryer with inbuilt cooling Trap and vacuum pump

Please send offers, ALONG WITH DESCRIPTIVE CATALOGUE/ BROCHURE. The validity of the bid should be at least four months (120 days) or more from the date of the opening of this tender. Please ensure that your quotation reaches not later than **19.04.2018 at 15:00 Hrs** at the following address:

**Dr. SH Dey ,
Professor,
Department of Biotechnology,
Indian Institute of Technology Kharagpur – 721 302, West Bengal, India**

Earnest money of **Rs. 11,000/-** is to be deposited in the form of Account payee Demand Draft in favour of IIT Kharagpur, payable at Kharagpur, India. Any bid which is not accompanied with an EMD shall be summarily rejected. Earnest money deposited will be forfeited if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the earnest money of the unsuccessful bidders.

Tender Reference	IIT/SRIC/BT/OND/SD/17-18/EQ-4 ,Dated: 28.03.2018
Price of Tender Document	NIL
Last Date and Time for submitting the tender document	19.04.2018 at 15:00 Hrs (Indian time)
Time and Date of Opening of Technical Bids	19.04.2018 at 16:00 Hrs (Indian time)
Place of Opening Tender	Department of Biotechnology Indian Institute of Technology Kharagpur – 721 302, West Bengal, India
Address of Communication	As stated above
Contact Telephone Numbers	+91- 3222 - 282247
E-mail	sdey@hijli.iitkgp.ernet.in

DETAILED TECHNICAL SPECIFICATIONS FOR

Multi-purpose, large capacity ,floor-standing centrifuge and Freeze Dryer with inbuilt cooling Trap and vacuum pump.

1. Multi-purpose, large capacity ,floor-standing centrifuge -1 Unit

Multi-purpose, large capacity ,floor-standing centrifuge which should process samples at speeds up to >16500rpm (32,310 x g) and enables efficient centrifugation Ifor research and laboratory experiments.

PCR tubes and micros tube should run at 10000rpm (10,803 x g) and 16500rpm (31,147 x g) respectively and up to six of 500 ml capacity can go upto 8000rpm (11, 305 x g).

Swing out router with a capacity of four 250 ml for extends the flexibility of this multi-purpose centrifuge.

The centrifuge should posses compact footprint.

The centrifuge should be ideal for all kinds of basic and analytical experiments such as phenol extraction, NA preparation, cell harvest, precipitation, density gradient separation, etc.

Specification

Fixed angle rotor Max.RPM/RCF	>16,500/ 32,310 x g
Swing out Rotor	>3500/3,134 x g
Fixed angle Max.Capacity	6 x 500ml, 30 x 1.5/2.0 ml
Swing out Max.Capacity	4 x 250ml, 48 x 15 ml, 16 MTPs
Temp. range(Degree Centigrade)	-20 to +40
FAST cool button	Yes
Time control	Pulse, timed<10 hrs. or continuous
Time counting modes	Selectable, at set speed or from starting
RPM/RCF conversion	Yes
Noise level(dB)	~ 60
ACC/DEC	9/10 steps
Parameters on display window	RPM(RCF) Oper status, lid open/close. Hr:Min, Temp, ACC,DEC
Program memory	>90
Display	LCD
Automatic rotor identification	Yes
Imbalance cut- off	Yes

Safety lid lock	Yes
Lid drop protection	Yes
Motorized lid open & close	Yes
Chamber material	SS304
Power supply	230 V, 50 Hz(AC 220-230 V ,50/60 Hz;110V optional)
Weight without rotor (Kg)	<120
CE Mark	Yes

Features

- For up to 17,000 rpm (32,310 x g) with 6 x 50 ml tubes and 8,000rpm (11,305 x g) with 6 x 500 ml tubes
- With motorized lid mechanics, only a gentle touch is sufficient to close and open the lid.
- Lid drop protection design allows easiness and safety when loading or unloading sample.
- A large assortment of rotors, buckets and adaptors support diverse applications doable with one instrument.
- The cooling function to 4⁰C in 5 min for fast startup of cooled samples.
- The compressor off function when lid is open minimizes unnecessary cooling and frosting.
- Intuitive control interface with numeric input buttons allows easy setting and editing of running condition.
- A separate “PULSE” key for quick spin.
- Parameters can be changed during operation.
- Key lock function helps the set parameters secured during operation.

SWING-OUT ROTOR,

1 Nos with four bucket and 15ml,50ml adapter

4 Loadings
90°

Rack capacity (ea /4)- 12/48
Hole dimension (Ø x L mm) 1705 x 90

Rack capacity(ea /4)- 4/16
Hole dimension (Ø x L mm) 30.2 x 90
Rack capacity (ea /4)- 3/12
Hole dimension (Ø x L mm) 30.5 x 90

Fixed Angle Rotor,

1 Nos with one set of 500ml tube

6 x 500 ml
25°
Hole diameter (mm):70
Max.Height for tube fit (mm):170

Adaptor bore(Ø x L mm) 69 x 100
Radius (mm) 138.3
Max.RPM 8,000
Max RCF (g-force) 9,896

Fixed Angle Rotor	1 Nos	
Tube capacity	50ml X6	
Radius (mm)	100	
Angle 30°	Max.RPM	17,000
Hole diameter (mm): 29.5	Max.RCF (g-force)	32,310
Max. Height for tube fit: 125		

2. Freeze Dryer with inbuilt cooling Trap and vacuum pump.--- 1 unit

Laboratory scale freeze dryer for lyophilization phenomena. Freeze dryer should be designed for safety, robustness and convenience for the successful freeze drying and cold trap. It should be suitable for drying of aqueous products, various solvent and products with freezing point.

Chamber capacity of 3 Kg with condensing temperature, -55°C and -110°C and should guarantee high-performance and capacity as a cooling trap as well as the freeze dryer. The digital screen should indicated the actual temperature and operating time is simple and intuitive for user-friendly control. Also AWB (Alarm-Wait-Ok), Key lock, vacuum, defrost, power indicators of the display provide useful information. The condenser chamber should be Teflon coated for providing the chemical resistances against aggressive solvents and acids such as HCL, TFA, DMSO, etc. and ensure longevity, easy clearing and decontamination.

Large size cold trap with 8 Kg ice capacity that it can be used for prefreezer and which does not need the exclusive prefreezer system. In addition, freeze dryer should includes a high vacuum rotary vane pump in the body case without separate pump. Freeze dryer should have intuitive and easy control to turn on cooling and vacuum and adjust the time. LCD display shows the vacuum pressure, trap temperatures and the other processing parameters.

- Extended applications for concentrating wider range or large volume of solvents.
- The freeze dryer when equipped with manifolds or chambers, become a versatile freeze dryer.
- The compatible vacuum rotary vane pump should generates vacuum down inside the chamber.
- Effective for evaporating organic solvents as well as concentrating dissolved nucleic acid.
- Up to 12 external bottles can be accommodated by the manifolds.
- Automatic DE-Vac and De-ice functions installed.

Technical Specification:

Ultimate chamber Temp(at RT)(o C)	-110
Chamber volume(L)	4
Tap (chamber) size(Ø x L)	165 x 202
ICE condensing capacity(Kg)	3
ICE condensing performance(Kg/day)	2.5
Compressor	½ HP x 2
Refrigerant	R507/R1150
Power supply	230V, 50Hz, (AC 220-230V, 50/60Hz, 110V optional)
Power requirement(Resting VA)	819
Digital Readout	Temperature, Time

Function	KEYLOCK, DEFOREST, VACCUM, TIME
Cat no	Hyper-HC3110(Hyper-HC3110-110)

➤ Applications:

- Study and QC of dried food like dried fruits, meats etc.
- Stock of bacteria, virus, fungi, etc.
- Seed preservation of plants or mushrooms
- Improves preservation of flowers and dry display study
- Pharmaceutical study and production
- Research and production of vaccine and antidote
- Tissue or cell preparation for EM analysis
- Medical research
- Archaeological finds like books, textiles, leather
- Restoration of wet documents

Chamber and rack: 1 piece

Acrylic chamber trunk and top with 4 Rubber valves, Ø30 cm, height 40 cm

Both the equipment should be shipped in a single pallet or container from same indigenous or overseas port.

The quotation should be submitted by the Indian or Overseas OEM with declaration of manufacturing for both the equipments.

GENERAL TERMS & CONDITIONS

PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS AND COMPLY THE TERMS AS MENTIONED HEREUNDER:-

1. TENDERS ARE INVITED COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE COMPANY'S / FIRM'S LETTERHEAD NEATLY PRINTED / TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPS CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPS SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOP.

THE FOLLOWING DOCUMENTS ARE REQUIRED FROM THE INDIAN AGENTS OF FOREIGN FIRMS:

1.1 FOREIGN PRINCIPAL'S PROFORMA INVOICE INDICATING THE COMMISSION PAYABLE TO THE INDIAN AGENT AND NATURE OF AFTER SALES SERVICE TO BE RENDERED BY THE INDIAN AGENT.

1.2 COPY OF THE AGENCY AGREEMENT WITH THE FOREIGN PRINCIPAL INDICATING THE NATURE OF AFTER SALES SERVICES, PRECISE RELATIONSHIP BETWEEN THEM AND THEIR MUTUAL INTEREST IN THE BUSINESS.

2. TECHNICAL CATALOGUE/LEAFLET SHOULD BE ENCLOSED WITHOUT FAIL. PROVIDE COMPLIANCE STATEMENT WITH RESPECT TO THE TECHNICAL SPECIFICATIONS MENTIONED ABOVE.
3. PLEASE CONFIRM WHETHER YOU ARE AUTHORISED TO QUOTE ON BEHALF OF YOUR PRINCIPALS AND IF SO, PLEASE ENCLOSE A COPY OF SUCH AUTHORISATION WITH YOUR QUOTATION.
4. **PRICE BIDS FOR FOREIGN FIRMS:** PRICES ARE TO BE QUOTED ON 'EX-WORKS' DULY PACKED OR ON "FCA/FOB" INTERNATIONAL PORT" BASIS AND ALSO INCLUDING AGENCY COMMISSION PAYABLE TO YOUR INDIAN AGENTS, IF ANY SHOWING CLEARLY THE FOLLOWING BREAK UP:-

- I) EX-WORKS PRICE
- II) PACKING & FORWARDING
- III) FREIGHT
- IV) ANY OTHER RELEVANT EXPENSES.
- V) TAXES PAYABLE BY THE INSTITUTE

INSURANCE WILL BE PAID BY OUR INSTITUTE SEPARATELY AND SHOULD NOT FORM PART OF THE QUOTED PRICE.

PRICE BIDS FOR INDIAN FIRMS: PRICES ARE TO BE QUOTED ON F.O.R., IIT KHARAGPUR, ON DOOR DELIVERY BASIS CLEARLY SHOWING THE BREAK UP.

5. **PERIOD OF VALIDITY:** BIDS SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD OF 120 DAYS FROM THE DATE OF OPENING.
6. INDIAN AGENTS ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENTS IN INDIAN RUPEES ONLY AND NOT IN FE). PLEASE ENCLOSE COPY OF AGENCY AGREEMENT ENTERED INTO WITH YOUR PRINCIPALS INDICATING THE NATURE OF AFTER SALES SERVICES OF INDIAN AGENTS, PRECISE RELATIONSHIP & MUTUAL INTEREST IN THE BUSINESS.

7. **MEASUREMENTS/WEIGHT:** NETT/GROSS OF THE CONSIGNMENT. IN CASE OF AN ORDER, YOU SHALL USE AIR WORTHY PACKAGE (AS APPLICABLE) DULY CERTIFIED WITH DOCUMENTS – PLYTO – SANITARY CERTIFICATE (AS PER QUARANTINE ORDER 2003).

8. **SCOPE OF SUPPLY:** SHOULD INCLUDE FREE INSTALLATION AND COMMISSIONING

9. **PAYMENT TERMS FOR FOREIGN FIRMS**

The offer will be made on a single currency and only one PO will be issued for the entire scope of the supply.

A) 90% PAYMENT THROUGH SIGHTDRAFT/FORIGN DEMAND DRAFT/LC (EXCEPTIONAL CASES)/SWIFT TELE TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION AND 10% AFTER SUCCESSFUL INSTALLATION & COMMISSIONING.

B) BANK CHARGES ON LC/SD (WITHIN INDIA APPLICANT ACCOUNT AND OUTSIDE INDIA TO BENEFICIARY ACCOUNT).

PAYMENT TERMS FOR INDIAN FIRMS

A) 100% PAYMENT THROUGH CROSSED ACCOUNT PAYEE CHEQUE / ELECTRONIC TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER & CONDITION AND SUCCESSFUL INSTALLATION & COMMISSIONING.

B) ENSURE MENTIONING

i) BANK DETAILS OF THE BENEFICIARY, GST NO. AND PAN NUMBER

ii) FULL NAME AND ADDRESS OF THE BENEFICIARY ON WHOM ORDER HAS TO BE PLACED

10. WHETHER ANY EXPORT LICENCE IS REQUIRED FROM YOUR GOVERNMENT, IF SO, PLEASE CONFIRM WITH DETAILS.

11. COUNTRY OF ORIGIN OF THE GOODS IS TO BE MENTIONED.

12. THE INSTITUTE SHALL PROVIDE THE CONCESSIONAL CUSTOMS DUTY AND EXCISE DUTY EXEMPTION CERTIFICATE AS PER GOVT. NOTIFICATION NO. 51/96 CUSTOMS DATED: 23.07.1996 AND CENTRAL EXCISE DUTY EXEMPTION IN TERMS OF GOVT. NOTIFICATION NO. 10/97 – CENTRAL EXCISE DATED: 01.03.1997 AS AMENDED FROM TIME TO TIME.

13. **LIQUIDATED DAMAGES:** THE STORES SHOULD BE DELIVERED / DISPATCHED TO DESTINATION AND READY FOR OPERATION NOT LATER THAN THE DELIVERY DATE SPECIFIED. IF THE SUPPLIER FAILS TO DELIVER ANY OR ALL THE STORES OR PERFORM THE SERVICE BY THE SPECIFIED DATE, LIQUIDATED DAMAGES AT 1% PER MONTH OR PART THEREOF IN RESPECT OF THE VALUE OF STORES WILL BE DEDUCTED FROM THE CONTRACT PRICE SUBJECT TO A MAXIMUM OF 5%. ALTERNATIVELY, THE ORDER WILL BE CANCELLED AND THE UNDELIVERED STORES PURCHASED FROM ELSEWHERE AT THE RISK AND EXPENSE OF SUPPLIER.

14. **PATENT RIGHTS:** THE SUPPLIER SHALL INDEMNIFY THE PURCHASE AGAINST ALL THIRD PARTY CLAIMS OF INFRINGEMENT OF PATENT, TRADEMARK OR INDUSTRIAL DESIGN RIGHTS ARISING FROM USE OF THE GOODS OR ANY PART THEREOF IN INDIA.

15. ONLY THOSE BIDDERS WHO'S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL ONLY BE INVITED FOR PARTICIPATION IN THE PRICE BID.

16. THOSE BIDDERS WHO DO NOT RECEIVE ANY COMMUNICATION FOR PARTICIPATION IN PRICE BID OPENING MEETING MAY PRESUME THAT THEIR BID HAS NOT BEEN ACCEPTED BY THE INSTITUTE.

17. CONDITIONAL OFFER WILL NOT BE ACCEPTED.

18. LATE TENDERS I.E. TENDER RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.

19. BIDDERS TO ENCLOSE THE FOLLOWING DOCUMENTS:-

A) INCOME TAX RETURN (3 YRS) AND LATEST SALES TAX RETURN (GST No.), AND PAN NO.

B) BANKER'S SOLVENCY CERTIFICATE

C) SUMMARY OF AUDITED STATEMENT OF ACCOUNTS FOR THE LAST THREE YEARS TO BE ENCLOSED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSED AS PER FORMAT:-

COMPANY'S KEY PERFORMANCE

DESCRIPTION	JAN. TO MARCH	APRIL TO JUNE	JULY TO SEPT.
GROSS REVENUE			
PROFIT BEFORE TAX			
PROFIT AFTER TAX			
RETURN ON INVESTED			
CAPITAL (ROIC)			

D) CUSTOMER SATISFACTION CERTIFICATE FROM ONE SUCH ORGANIZATION IS TO BE ATTACHED WITH THE TECHNICAL BID AND PRICE BID.

E) NAME AND ADDRESS OF MINIMUM THREE CLIENTS TO WHOM SUCH EQUIPMENT HAVE BEEN SUPPLIED SHOULD BE MENTIONED.

20. **WARRANTY / GUARANTEE:** THIS COMPREHENSIVE WARRANTY / GUARANTEE SHALL REMAIN VALID FOR **12 MONTHS** AFTER THE GOODS (OR ANY PORTION THEREOF AS THE CASE MAY BE) HAVE BEEN DELIVERED AND COMMISSIONED TO THE FINAL DESTINATION.

21. THE INSTITUTE DOES NOT BIND ITSELF TO OFFER ANY EXPLANATION TO THOSE BIDDERS WHO'S TECHNICAL BID HAS NOT BEEN FOUND ACCEPTABLE BY THE EVALUATION COMMITTEE OF THE INSTITUTE.

22. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED / HANDED OVER TO **DR. SH Dey , Department of Biotechnology, INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR - 721 302** AND ACKNOWLEDGEMENT TO BE OBTAINED.

IMPORTANT

1. IIT Kharagpur authority may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The Institute at its discretion may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.
2. Promptly make arrangements for repair and / or replacement of any damaged item (s) irrespective of settlement of claim.
3. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.
4. For any query pertaining to this bid document correspondence may be addressed to **Dr. S H Dey** at the address mentioned above.

LAST DATE FOR SUBMISSION OF SEALED BIDS: 19.04.2018

- 1) Please Note that the Institute remains closed during Saturdays & Sundays and all specified government holidays.
 - 2) Fax, e-mail Tender will not be accepted.
 - 3) The General Terms and Conditions as stated above relate to supply of stores / equipment /assets etc. and for specific service other terms and conditions of the Institute will apply.
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