



बसु बिज्ञान मन्दिर

BOSE INSTITUTE

P-1/12, C.I.T. Scheme VII-M, Kolkata 700 054

BIDDING DOCUMENTS

For Tender Notice No.

BI-K/E-TEND/29/2019-20

To be addressed to:

Registrar (Officiating)

Bose Institute, Centenary Building,

P-1/12, CIT Scheme - VII -M

Kolkata - 700054 (INDIA)



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Ref : BI-K/E-TEND/29/2019-20

INVITATION TO BIDS

Bose Institute, Kolkata, West Bengal, India invites **online** offers from **foreign/Indian manufacturers** or their Authorized Dealers for supply, installation and commissioning of the following equipment :

Sl. No.	Name of the items	Qty.	Bid security (EMD)
1.	CO2-O2 Incubator	02	INR 28,000.00
2.	Fluorescence & Chemiluminescence-based Gel Imaging & Documentation Systems	01	INR 42,000.00
3.	Floor model Ultra Centrifuge	01	INR 1,00,000.00
4.	Automated Protein Purification System	01	INR 60,000.00
5.	Refrigerated Table top Centrifuge	01	INR 17,000.00

- **Details of specifications are enclosed in Annexure - I**

Sl. No.	Particulars	Date & Time
1.	Date of uploading of NIT & other documents (Online) (Publishing date)	14.02.2020
2.	Documents download start date (Online)	14.02.2020 at 17:30 hrs.
3.	Clarification Start date Queries to be sent to the mail id bipurchase@jcbosc.ac.in	14.02.2020 at 17.45 hrs.
4.	Clarification End date	19.02.2020 at 13:00 hrs.
5.	Prebid Conference	20.02.2020 at 15:00 hrs.
6.	Amendment (if any) (On line)	26.02.2020 at 17:00 hrs.
7.	Bid submission start date (On line)	27.02.2020 at 17:00 hrs.
8.	Documents download end date (Online)	05.3.2020 upto 17:00 hrs.
9.	Bid Submission closing (On line)	05.3.2020 upto 17:00 hrs.
10.	Last Date of submission of Earnest Money Deposit Including the technical brochure, if any (Off line)	06.3.2020 upto 17:00 hrs.
11.	Bid opening date for Technical Proposals (Online)	10.3.2020 at 13:00 hrs.
12.	Date of uploading list for Technically Qualified Bidder (online)	To be notified later
13.	Date for opening of Financial Proposal (Online)	To be notified later



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SECTION - A
INSTRUCTION TO BIDDERS

- A. General guidance for e-Tendering :** Instructions / Guidelines for electronic submission of the tenders have been annexed for assisting the vendors to participate in e-Tendering.
1. **Registration of Vendors :** Any vendor willing to take part in the process of e-Tendering will have to enrol and get registered in the Central Public Procurement (CPP) Portal, NIC, GOI through logging on to <http://eprocure.gov.in/eprocure/app> and the vendor is to click on the link for e-Tendering site as given on the above.
 2. **Digital Signature certificate (DSC) :** Each vendor is required to obtain a Class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders as applicable from the approved service provider of the National Informatics Centre (NIC) on payment of requisite amount. Details are available at the Web Site stated in Clause A.1. above. DSC is given as a USB e-Token.
 3. The foreign bidders can directly submit their bid through the e-procurement by obtaining their DSC applicable from NIC, India.
 4. The vendor can search & download N.I.T. & Tender Document(s) electronically from computer once they log on to the website mentioned in Clause A.1. using the Digital Signature Certificate. This is the only mode of collection of Tender Documents.
 5. **Submission of Tenders:** Tenders are to be submitted through online as stated in Clause A.1. in two folders at a time for each bid, one in Technical Proposal & the other is Financial Proposal before the prescribed date & time using the Digital Signature Certificate (DSC). The documents are to be uploaded should be virus scanned copy duly Digitally Signed. The documents will get encrypted (transformed into non readable formats).
5. A. **Technical Proposal:** The Technical proposal should contain scanned copies of the following in two covers (folders).
- (a) **Statutory Cover** containing the following documents :
 - (i) **NIT (Download the NIT & upload the same using digital signature)**
 - (ii) **Registration Certificate for enrolment with the Central Purchase Organization / other Govt. Dept. for quoting on behalf of the foreign principals, as per latest notification of Procurement Policy Division, Department of Expenditure, Ministry of Finance.**
 - (iii) Bidders' Information Form
 - (iv) Bid Form
 - (v) Techno-Commercial Bid Form
 - (vi) Manufacturer's Authorization Form
 - (vii) Bidder's Performance Statement Form
 - (viii) Service Support Details Form
 - (ix) Technical Compliance Statement Form
 - (x) **Fall Clause Certificate**



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- (b) **Non-statutory Cover** containing the following documents :
For indigenous quotes the bidder has to upload requisite registration / tax certificate like TAN, PAN, Trade License, CIN, GST etc.

Note : *Failure to submit any of the above mentioned documents (listed under 5(a) & (b) may render the bid liable to be summarily rejected for both statutory and non-statutory cover.*

5.B. **Financial Proposal :**

- a. The financial bid should contain the Bill of Quantities (BOQ) corresponding to this tender, which is available on the tender webpage as an MS-Excel file.
 - b. This file must be downloaded and opened with MS-Excel. The rate being quoted by the bidder must be entered in the space marked for this purpose in the file. **Quoted rate** will be encrypted under BOQ. **In case quoting any rate in Tender Form, the tender is liable to be summarily rejected.**
 - c. All fields in the BOQ file other than those allocated for the name of the bidder and the rate(s) being quoted are non-editable.
 - d. The BOQ file must be saved after this and should be uploaded using digital signature.
 - e. OPTIONAL ITEMS/Additional Warranty Charge beyond Standard warranty period and training charges (if any) must be separately quoted and uploaded as PDF file.
- **In the BOQ quoted in foreign currency (click to select currency) fill up the applicable column (i.e. 'Ex-works', 'Discount (if any)', 'Freight', 'Insurance', 'other taxes (if applicable)', 'Installation & commissioning charges (if applicable)' and ignore the other column.**
 - **In the BOQ quoted in INR (click to select currency) fill up the applicable column (i.e. 'Basic Rate', 'Discount (if any)', 'GST', 'Other taxes (if applicable)', 'Installation & Commissioning charges (if applicable)' and ignore the other.**
 - **Bidders are requested not to put any percentage (%) in any column of the BOQ.**
 - **As per Govt. Notification # 45/2017 dt.14th November, 2017, Scientific Research Institute funded by the Govt. of India, GST will be applicable @5% for the goods used for research purpose, for the bids where GST will be applicable, against DSIR Certificates to be provided by the Institute.**

6. **Earnest Money Deposit :**

- (a). Demand Draft / Bankers Cheque / Bank Guarantee towards Earnest Money (EMD) as prescribed in the N.I.T. should in favour of "Bose Institute" payable at Kolkata.
- (b). Demand Draft / Bankers Cheque / Bank Guarantee towards Earnest Money (EMD) as prescribed in the N.I.T. against each of the instruments **in favour of "Bose Institute" payable at Kolkata** (original hard copy) **alongwith a covering letter stating the bank details for releasing the said EMD online by the Institute, as per norms** to be submitted to the Purchase Section (Import) at the Centenary Building, P-1/12, CIT Scheme VII-M, Kolkata 700054.
- (c). **Bidder must upload copy of valid registration certificate (i.e. MSME, NSIC) for EMD exemption.**



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**THE ABOVE STATED STATUTORY / NON-STATUTORY DOCUMENTS
SHOULD BE ARRANGED IN THE FOLLOWING MANNER**

Click the check boxes beside the necessary documents in the My Document list and then click the tab " Submit Non Statutory Documents' to send the selected documents to Non-Statutory folder.

Next Click the tab "Click to Encrypt and upload" and then click the "Technical" Folder to upload the Technical Documents.

N.B.: Failure of submission of any of the above mentioned documents as stated in Sl. No. A.5.(a). and Sl. No. A.5.(b). And 6 (a) & (b) will render the tenderer liable to be rejected for both statutory & non statutory cover.



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1. Tender Evaluation Committee (TEC) : Evaluation Committee constituted as per Order of the competent authority of Bose Institute, Kolkata.
2. Opening & evaluation of tender : If any vendor is exempted from payment of EMD, copy of relevant Government Order needs to be furnished and uploaded in the portal as PDF file.
3. Opening of Technical Proposal : Technical proposals will be opened either by the Sr. Prof. & Incharge, Registrar's Office / Assistant Registrar / Accounts Officer / Audit & Finance Officer, Bose Institute, Kolkata or their authorized representatives electronically from the website using their Digital Signature Certificates (DSC).
4. Intending tenderers may remain present if they so desire
5. Cover (folder) for Statutory Documents (Ref. Sl. No. A.5.(a).) will be opened first and if found in order, cover (folder) for Non-Statutory Documents (Ref. Sl. No. A.5.(b).) will be opened. If there is any deficiency in the Statutory Documents the bid will summarily be rejected.
6. Decrypted (transformed into readable formats) documents of the non-statutory cover will be downloaded & handed over to the Tender Evaluation Committee.
7. Pursuant to scrutiny & decision of the Tender Evaluation Committee, the summary list of eligible tenderers will be uploaded in the web portals.
8. During evaluation the committee may summon of the tenderers & seek clarification / information or additional documents or original hard copy of any of the documents already submitted & if these are not produced within the stipulated time frame, their proposals will be liable for rejection.
9. **Financial Proposal :**
 - a). The vendor is to quote the rate online in the space marked for quoting rate in the BOQ. For optional items as mentioned in the specifications may be quoted separately in the additional sheet as enclosed in the Financial Cover.
 - b). Only downloaded copies of the above documents are to be uploaded virus scanned & Digitally Signed by the vendor.
 - c). Penalty for suppression / distortion of facts:

If any tenderer fails to produce the original hard copies of the documents on demand of the Tender Evaluation Committee within a specified time frame or if any deviation is detected in the hard copies from the uploaded soft copies, it may be treated as submission of false documents by the tenderer and action may be referred to the appropriate authority for prosecution as per relevant IT Act.
 - (d). Rejection of Bid:

Director, Bose Institute reserves the right to accept or reject any Bid and to cancel the Bidding processes and reject all Bids at any time prior to the award of Contract without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the ground for Institute's action.
 - (e). Award of Contract :

The Bidder whose Bid has been accepted finally (both technical and financial), will be informed by the Institute authority for award of contract.
The notification of award will constitute the formation of the Contract.



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<u>GENERAL INSTRUCTIONS</u>
<ul style="list-style-type: none">The bids would be opened in the presence of the bidders who wish to attend the Bid-opening. However, the representative should bring with them a letter of authority from the corresponding bidders, without which, they are not permitted to attend the bid opening.
<ul style="list-style-type: none">The acceptance of the quotation will rest with the competent authority of Bose Institute, Kolkata who does not bind himself to accept the lowest quotation and reserves the right to himself to reject, or partially accept any or all the quotations .
<ul style="list-style-type: none">The offer shall be valid for ninety days from the date of opening of the quotations. No revision in price will be allowed after opening the quotation.
<ul style="list-style-type: none">Unsolicited / conditional / in complete / unsigned digitally tenders shall not be considered.
<ul style="list-style-type: none"><u>Offers that have been blindly copied from the tender specifications are not acceptable and shall be rejected.</u>
<ul style="list-style-type: none">The Bidder / Company should not be in the list of black listed firms by any Govt. Dept. / agencies.
<ul style="list-style-type: none">The price comparison will be decided as per BOQ comparative chart on the date of opening of financial bid.
<ul style="list-style-type: none">Prices are required to be quoted in units. When quotations are given in terms of other units, relationship between two sets of units should be furnished. Quantity discounts, if any should also be indicated. The items should be quoted indicating the serial nos.
<ul style="list-style-type: none">To assess in the examination / evaluation, comparison and post qualification of the bids, purchaser may at its discretion, ask the bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in the prices or substance of the bids shall be sought, offered or permitted. Any clarification submitted by the bidder in respect of its bid which is not in response to a request by the purchaser shall not be considered.
<ul style="list-style-type: none">Either the Indian Agent on behalf of the Foreign principal or the Foreign principal can bid directly in a tender but not both. However, the offer of the Indian Agent should also accompany the authorisation letter from their principal. To maintain sanctity of tendering system, one Indian Agent can not represent two different Foreign principals in one tender.
<ul style="list-style-type: none">Please indicate the agents in India, their address, the details of service rendered by them & the percentage of commission payable to them. In normal courses agency commission is not allowed.
<ul style="list-style-type: none">Two or more vendors cannot submit bid quoting the rates on behalf of same OEM.
<ul style="list-style-type: none">The Institute is registered with Department of Scientific & Industrial Research, Govt. of India and thus is exempted from Customs/Central Excise duty vide notification no. 10/97 dated 01.3.1997 and 16/2007 dated 01.03.2007. The present details of registration are no. 11/106/1988-TU-V dt. 31.3.2018 valid upto 31.3.2021.
<ul style="list-style-type: none">The mode of dispatch of the items must be mentioned clearly in the quotation.
<ul style="list-style-type: none">Samples, if called for, shall be submitted free of charge and on no obligation basis.
<ul style="list-style-type: none">The offered delivery period shall have to be strictly adhered to in case an order is placed.



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SECTION B

TERMS & CONDITIONS

1. **Price :**

- Bidders are requested to give their final and best offer. Techno-Commercial Discussions will be held with the Lowest Bidder only, if necessary.
- Vendors, who do not accept our standard commercial terms are liable to be ignored. **A categorical confirmation of acceptance of all our terms and conditions in toto will have to be observed which enable speedy processing of the offers.**
- Pre-conditioned, incomplete offers, not in line with the terms and conditions of the tender documents, are liable to be rejected.

a. **For Foreign Quotation :**

- The price of the goods, quoted FOB/FCA port of shipment should include Export Packing, Loading Charges, Inland Freight, carriage etc. in the shipper country to be paid by the Supplier.
- The price for transportation / carriage and insurance and other costs incidental to delivery of the goods upto the port of despatch (CIF/CIP).
- Prices quoted by the bidder shall remain fixed during the entire period of contract and shall not be subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non - responsive and rejected.
- Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid. Conditional offers indicating changes to price quoted due to price increase / decrease by the principal firm, market fluctuations, foreign exchange fluctuations etc. shall make the bid liable to be cancelled.

b. **For Indigenous Quotation :**

- The price of the goods, quoted (ex-works / ex-factory / ex-showroom / ex-warehouse, or off-the-shelf, as applicable), including all duties and sales and other taxes already paid or payable.
- The amount payable on account of GST should be mentioned clearly. **If there is no explicit mention of taxes in your offer then quoted price will be deemed inclusive of such taxes. No other charges except those mentioned clearly in the quotation will be paid.**



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- Rates should be quoted FOR, Bose Institute, Kolkata inclusive of packing, forwarding, installation and documentation & commissioning charges etc. If ex-works prices are quoted then packing, forwarding, documentation, freight and insurance charges must be clearly mentioned separately. Vague terms like “packing, forwarding, transportation etc. extra” without mentioning the specific amount/percentage of these charges will NOT be accepted. Such offers shall be treated as incomplete and rejected. **Where there is no mention of packing, forwarding, installation and commissioning, freight, documentation, insurance charges, such offers shall be summarily rejected as incomplete.**
- 2. **Period of validity of Bids :**
 - Bids shall remain valid at least for 90 days after the date of bid opening prescribed by the Purchaser.
 - In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity.
- 3. **Bid Currencies :** Prices shall be quoted in Indian Rupees or in freely convertible foreign currency wherever possible for comparison.
- 4. **Purchaser's Right to vary Quantities at the Time of Award :** The Purchaser reserves the right at the time of Contract award to increase or decrease the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions. However, the Purchaser reserves the right to call the lowest firm for negotiation in case of increase in quantity.
- 5. **Order acceptance :** The successful bidder should submit acceptance of the Purchase Order immediately but not later than 30 days in any case from the date of issue of the Purchase Order failing which it shall be presumed that the vendor is not interested and his bid security is liable to be forfeited.
- 6. **Patent Rights :** The Supplier shall indemnify the Purchaser 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.
- 7. **Insurance :** The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner
- 8. **Transportation :** Where the Supplier is required under the Contract to transport the Goods to a specified place of destination within India defined as Project site, transport to such place of destination in India including insurance, as shall be specified in the Contract, shall be arranged by the Supplier, and the related cost shall be included in the Contract Price.



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9. **Change Orders :**

- The Purchaser may at any time, by written notice given to the Supplier make changes within the general scope of the Contract in any one or more of the following:
 - Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
 - The method of shipping or packing;
 - The place of delivery; and/or
 - The Services to be provided by the Supplier.
 - The delivery schedule
 - If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within fifteen (15) days from the date of the Supplier's receipt of the Purchaser's change order.

10. **Penalty :**

- If the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to the percentage of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage. Once the maximum is reached, the Purchaser may consider termination of the Contract.
- The applicable rate is 0.5% per week and the maximum deduction is 5% of the contract price.

11. **Applicable Law :** The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction at Kolkata.

12. **Right to Use Defective Goods :** If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.

13. **Payment :**

Payments shall be made promptly by the Purchaser normally after submission of the invoice or claim by the Supplier.

a. **For Foreign Payment :**

In case of imports, payments are usually made through Letter of Credit (LC) / wire transfer / FDD wherever applicable. The LC will be opened for 100% value but the payment shall be released partly after despatch and partly after installation & commissioning. 90% of payment will be released on



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shipping documents and remaining 10% on successful installation and commissioning with submission of Performance Bank Guarantee of 10% of the order value. **In case of Purchase Order value equivalent to INR 5 Lakh and above, 10% Performance Bank Guarantee (PBG) should be submitted** before establishment of the LC/release of the payment.

b. For Indigenous Payment :

- The general conditions of payment for any indigenous items are 100% payment after successful installation & commissioning of the equipment. In case the equipment does not need any installation & commissioning the period shall be reckoned from the date of delivery & inspection. In case of Purchase Order value equivalent to INR 5 Lakh and above, 10% Performance Bank Guarantee (PBG) should be submitted before release of the payment.

14. Delivery :

a. For Foreign Consignment :

- Delivery of the consignment(s) should be made within a maximum of **8 weeks from the date of placement of purchase order unless otherwise specified so.** Within 24 hours of shipment, the supplier shall notify the purchaser and the insurance company by cable/telex/fax/e mail the full details of the shipment including contract number, railway receipt number/ AWB etc and date, description of goods, quantity, name of the consignee, invoice etc. The supplier shall mail the following documents to the purchaser with a copy to the insurance company :
 - 4 Copies of the Supplier invoice showing contract number, goods' description, quantity, unit price, total amount;
 - Acknowledgment of receipt of goods from the consignee(s) by the transporter;
 - Insurance Certificate if applicable;
 - Manufacturer's/Supplier's warranty certificate;
 - Inspection Certificate issued by the nominated inspection agency, if any, and the Supplier's factory inspection report;
 - Certificate of Origin; and
 - Two copies of the packing list identifying the contents of each package.
- The above documents should be received by the Purchaser before arrival of the consignment(s) (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.

b. For Indigenous Consignment :

The delivery of the consignment(s) should be made within 4-6 weeks from the issue of the Purchase Order, unless otherwise specified.



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15. **Bank Charges : For Foreign Procurement** : The bank charges inside India to the applicant account and outside India to the beneficiary account.
16. **Installation** : Installation should be Free of Cost and should be completed within maximum 07-10 days after delivery of the consignment.
17. **Warranty** :
- The Supplier shall warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier shall further warrants that all Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Purchaser's Specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination. The warranty should be comprehensive and on site.
 - This warranty shall remain valid at least for 12 months after the Goods or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract, or for 18 months after the date of shipment whichever period concludes earlier
 - The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall immediately, within a reasonable period, arrange to repair or replace the defective goods or parts thereof free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts/goods thereafter. In case any component has to be imported the same shall be done on DDU Kolkata basis and the purchaser shall provide the customs duty exemption certificate. If the supplier having been notified fails to remedy the defects within a reasonable period, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expenses and without prejudice to any other rights, which the purchaser may have against the supplier under the contract.
 - Warranty period shall be 12 months from date of acceptance of Goods. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests. **The warranty should be comprehensive on site.**
 - If a different period of warranty has been specified in the 'Technical Specifications' shall stand modified to that extent.
 - The necessary warranty certificate in this effect should be furnished along with the consignment.



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18. **Training** : The Supplier is required to train the designated Purchaser's technical and end user personnel to enable them to effectively operate the total equipment.
19. **Supporting Equipment** : If equipment will require indigenous supporting instruments/accessories (computer, printer, online UPS etc.) at the time of the installation, the same should be quoted in separate quotation.
20. **Service Facility** : Supplier should mention about the possible service set up in India and how capable they are to provide after sales service.
21. **Force Majeure** :
 - The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
 - If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
22. **Director, Bose Institute reserves the right to accept or reject any or all tenders either in part or in full. The reasons for rejecting the tender of a prospective bidder will be disclosed only when enquiries are made.**



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Bidder Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted. This should be done of the letter head of the firm]

Date: [insert date of Bid Submission] Tender No.: [insert number for Invitation for bids]

1. Bidder's Legal Name [insert Bidder's legal name]
2. In case of JV, legal name of each party: [insert legal name of each party in JV]
3. Bidder's actual or intended Country of Registration: [insert actual or intended Country of Registration]
4. Bidder's Year of Registration: [insert Bidder's year of registration]
5. Bidder's Legal Address in Country of Registration: [insert Bidder's legal address in country of registration]
6. Bidder's Authorized Representative Information
Name: [insert Authorized Representative's name]
Address: [insert Authorized Representative's Address]
Telephone/Fax numbers: [insert Authorized Representative's telephone/fax numbers]
Email Address: [insert Authorized Representative's email address]
7. Attached are copies of original documents of: [check the box(es) of the attached original documents]

Signature of the Bidder
Name
Business Address



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BOSE INSTITUTE

P-1/12, C.I.T. Scheme VII-M, Kolkata 700 054, West Bengal, India

Ref : BI-K/E-TEND/29/2019-20

BID FORM

(to be submitted on the official letterhead of the bidder)

**The Director,
Bose Institute,
P-1/12, CIT Scheme-VII/M,
Kolkata - 700054 (W.B.) India**

Sir,

Having examined the bidding documents the receipt of which is hereby duly acknowledged, I/We agree to furnish required supplies/services in conformity with the Techno-Commercial Bid or such portions thereof at the prices given in the Price Bid on receipt of order for the same.

I/We agree to hold this offer open until _____ and to supply, install and commission the equipment and complete the whole of the work and hand over to the purchaser within the period of _____ weeks, from the date of receipt of intimation from you regarding acceptance of this tender/receipt of supply order.

I/We agree to submit the bank guarantee as specified in the form prescribed by your goodself for the due performance of the contract, if our bid is accepted.

I/We understand that you are not bound to accept the lowest or any bid you may receive.

(_____)
Signature of Bidder
With Office Stamp
Name & Address

Telephone No.:

FAX No.:

E-mail address:

Name & Designation of the Contact Person:



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Ref : BI-K/E-TEND/29/2019-20

TECHNO-COMMERCIAL BID FORM

1.	Tender reference No	:	
2.	Due date of bid submission	:	
3.	Main Item Model No.	:	
4.	Life Expectancy of the Equipment (in years)	:	
5.	Warranty Period (in years)	:	
6.	Delivery Period of the Equipment	:	
7.	Details of Bank Guarantee enclosed as Bid Security :	:	
	Name of the Bank	:	
	Branch	:	
	Address with Phone, FAX & E-mail Nos.	:	
	Amount Rs.	:	
	Valid Upto	:	
8.	Country of the Origin of the Equipment	:	
9.	Bid currency	:	

Contd.....



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10.	Schedule of Requirements :	:	
I.	Whether agreeing to all the terms and conditions including payment terms as mentioned in the bidding documents		
II.	Port of Shipment		
III.	Approximate Shipment Weight (chargeable weight) in Kg. of the packed consignment		
IV.	Approximate Dimensions/ Volume of the packed consignment		
Note ::			
1.	Adhering to the format given above is a pre-requisite for considering your bid.		
2.	All columns must be filled up.		
3.	Separate list should be attached where required in the same format giving details of each item.		
4.	Please indicate applicability.		
I/we certify that I/We have completely read and understood and agree to all the terms & conditions given in ITB.			

(
Signature of Bidder
With Office Stamp
Name & Address
)



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MANUFACTURERS' AUTHORIZATION FORM

No. _____

Dated _____

**The Director,
Bose Institute,
P-1/12, CIT Scheme-VII/M,
Kolkata - 700054 (W.B.) India**

Dear Sir:

I/We _____ who are established and reputable manufacturers of _____ having factories at _____ (address of factory) do hereby authorize M/s. _____ (Name and address of Agent) to submit a bid, negotiate and receive the order from you against your tender enquiry.

No company or firm or individual other than M/s. _____ is authorized to bid, and conclude the contract in regard to this business.

I/We hereby extend our full guarantee and warranty as per Clause 15 of the General Conditions of Contract and Clause of the Special Conditions of Contract for the goods and services offered by the above firm.

Yours faithfully,

(Name)

(Name of manufacturers)

Note: This letter of authority should be on the **letterhead of the manufacturer** and should be signed by a person competent and having the power of attorney to bind the manufacturer. It should be included by the Bidder in its techno-commercial unpriced bid.



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BIDDER'S PERFORMANCE STATEMENT FORM
(For a Period of Last 3 Years)

Name of the Firm.....

Order placed by (full address with Tel. No., Fax No. & e-mail address of purchaser)	Date	Description and quantity of ordered equipment	Date of completion of delivery as per Contract/ Actual	Remarks indicating reasons for late delivery, if any	Has the equipment been installed satisfactory? (Attach a certificate from the purchaser/ Consignee)

Place :

Signature :

Date :

Office stamp



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SERVICE SUPPORT DETAILS FORM

Sl. No.	Nature of training imparted	List of similar type equipments serviced in the past 3 years	Address, Telephone Nos., Fax and e mail address of the firm located in Kolkata, if any	Value of minimum stock of consumable spares held at all times.

Signature and Seal of the manufacturer/Bidder.....

Place :

Date :



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TECHNCAL COMPLIANCE STATEMENT FORM

An item-by-item commentary on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.

ITEM NAME			
Sl.No.	Tender Specifications	Bidder's Specifications	Deviation/ Remarks, if any Including justification

(Technical literature/brochures/manuals should be attached along with this format)

Please note:

1. Compliance/Deviation statement comparing the specifications of the quoted model to the required specifications. This statement should also give the page number(s) of the technical literature where the relevant specification is mentioned.
2. Bids must have supporting documents (technical literature or copies of relevant pages from the service manual or factory test data) for all the points noted above, failure regarding which may result in rejection of bid.
3. In case the bidder furnishes wrong or false information wilfully in the technical compliance chart, such action shall be viewed strictly and the bidders may be blacklisted.
4. Where there is no deviation, the statement should be returned duly signed with an endorsement indicating "No Deviations" .

Signature and Seal of the manufacturer/Bidder.....

Place :

Date :



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Quotation No.....

Date :

PROFORMA OF FALL CLAUSE CERTIFICATE

If on any subsequent date after submission of quotation or placing of supply order, the manufacturer (the term manufacturer will also include his authorized distributor / agent) reduces the sale price of such stores or sells such stores to any party at a price lower than the price charged / chargeable against supply order placed by Bose Institute, Kolkata, the manufacturer (including his authorized distributor / agent) as aforesaid in case the quotation is submitted by them and supply / service is also effected by them) will forth-with notify such reduction in sale price to Bose Institute, Kolkata and price payable for the stores to be supplied against the Supply Order after the date of such reduction in sale price coming into force shall reduced **correspondingly and will be reimbursed to the Institute.**

(Signature & Date of Bidders with Rubber Stamp)

*** This certificate should be uploaded on the letter head of the company / firm / agency*



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Ref : BI-K/E-TEND/29/2019-20

BID SECURITY FORM

(To be executed by a scheduled Bank in India on non-judicial stamp paper)

To
The Director,
Bose Institute,
P-1/12, CIT Scheme-VII/M,
Kolkata - 700054 (W.B.) India

Dear Sir,

Whereas (Name and address of Bidder) (hereinafter called "the Bidder") in response to your Tender Notification No. ----- dated ----- is submitting its bid for the supply of (Name and/or description of the goods) (Hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE (Name of bank) of (Name of country), having our registered office at (Address of bank) (Hereinafter called "the Bank"), are bound unto **Director, Bose Institute, Kolkata, INDIA** (Hereinafter called "the Purchaser") for the sum of (Amount of the Guarantee in Words and Figures) for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this ____ day of _____ 20 ____.

THE CONDITIONS of this obligation are:

1. If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity:

contd.....



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3. Fails or refuses to execute the Contract Form if required; or
4. Fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders.
5. This guarantee is valid up to(six months from date).

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including forty-five (45) days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

Date:

Signature.....

Place:

Seal of Bankers

(Complete Address/Contact Details with Tel./Fax/email etc)

Witness: 1.

2.



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BOSE INSTITUTE

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Ref : BI-K/E-TEND/29/2019-20

PERFORMANCE SECURITY FORM

(To be executed by a scheduled Bank in India on non-judicial stamp paper)

To
The Director,
Bose Institute,
P-1/12, CIT Scheme-VII/M,
Kolkata - 700054 (W.B.) India

Dear Sir,

Sub: Your Contract No. -----dated -----for

1. You have entered into a contract with reference no as given above with _____ (herein after referred to as the contractor) for the supply, installation, and commissioning of _____ (herein after referred to as stores) for the price and on the terms and conditions contained in the said contract.
2. In accordance with the terms of said contract, the contractor has undertaken to produce a bank guarantee for Rs. _____ (Rupees _____ only) being 10 % of the total value of the said stores supplied to you, for the due fulfilment of its obligations to you for due performance as per the contract during warranty period.
3. In consideration thereof, we hereby expressly, irrevocably and unconditionally undertake and guarantee as principal obligator on behalf of the contractor that in the event you submit a written demand to us that the contractor has not performed according to the contractual obligations included in the said contract, we will pay you on written demand, without demur and without reference to the contractor any sum up to a maximum amount of Rs _____ (Rupees _____ only). Your demand shall be conclusive evidence to us that such payment is due under the terms of the said contract. Payment by us to you will be made within thirty (30) days from receipt of your request making reference to this guarantee and on demand.
4. This guarantee shall not be revoked without your express consent and shall not be affected by your granting any indulgence to the contractor, which shall include but not be limited to postponement from time to time of the exercise of any powers vested in you or any right which you may have against the contractor and to exercise the same in any manner at any time and either to forbear or to enforce any covenant contained or implied in the said contract or any other course or remedy or security available to you, and our Bank shall not be released from its obligations under this guarantee by your exercising any of your rights with reference to matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on your part or any other indulgence shown by you or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving our Bank from its obligation under this guarantee.



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5. Notwithstanding anything herein contained, our liability under this guarantee is restricted to Rs _____ (Rupees _____ only) and the guarantee shall remain in force up to and including the _____ day of being reported to us by you and returned to us duly discharged.
6. Unless a demand or claim under this guarantee is made on us in writing on or before the aforesaid expiry date as provided above or unless this guarantee is extended by us all your rights under this guarantee shall be proscribed and we shall be discharged from the liabilities hereunder.
7. This guarantee shall not be affected by any change in the constitution of our Bank or of the contractor or for any other reason whatsoever.

Date:

Signature.....

Place:

Seal of Bankers

(Complete Address/Contact Details with Tel./Fax/email etc)

Witness:

1.

2.



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Specifications for Single Chamber-CO₂O₂ Incubator

Technical Specifications for Incubator:

1. Chamber volume should be at least 160 lts.
2. Relative Humidity (rH): $\geq 90\%$ at 37°C.
3. **CO₂-O₂ management:**
 - CO₂ range: 1-20% or better.
 - O₂ range: 1-20% or better
 - control: $\pm 0.2\%$ or better.
 - sensor: IR/TC. ZrO₂ type is allowed as O₂ sensor.
4. **Temperature**
 - range: 4°C above ambient to at least 50°C or better.
 - control: $\pm 0.2^\circ\text{C}$ or better.
 - uniformity: less than $\pm 0.3^\circ\text{C}$.
5. **Rapid Recovery of all critical parameters as follows:**
 - Temperature recovery: in < 5 mins
 - %RH recovery: < 10 min
 - % CO₂ recovery with IR Sensor: < 6 min
6. The incubator should be equipped HEPA air filtration system that achieves ISO class 5 chamber air quality in less than 5 min of door opening and filters entire chamber volume every 60 seconds or less.
7. Systemic sterilization capability: $\geq 120^\circ\text{C}$ High Temperature Sterilization or automated chemical sterilization (H₂O₂) without user intervention.
8. Water pan to maintain %RH.
9. Water pan directly heated by chamber's bottom heater.
10. Guided air circulation passing the chamber air above the surface of water.
11. Humidification of gases (CO₂) before they reach the cells / culture.
12. Temperature probe and gas sensors should be located inside the chamber to allow precise monitoring of conditions as the cells.
13. Dual temperature probe for over temperature protection.
12. Interior chamber: electro-polished stainless steel or 100% solid copper.
13. Exterior chamber: powder coated steel with minimum thickness.
14. Access port: 40-45 mm diameter
 - Number of shelves: at least 2
 - Max. load per shelf / total load at least 10/30 kg
 - Input voltage 230-240V, 50/60Hz (without transformer)

Contd.....

14. The CO₂ Incubator should feature a water level sensor and alarm to alert user when humidification water refill is required.
15. The unit should incorporate touch screen user interface, a bright, and easy to read control module display.
16. Should be supplied with two high-pressure gas cylinders (separate cylinders for CO₂ and N₂) of capacity around 30kg along with regulator, adapter etc that should make it ready to use with the said incubator.
17. **Warranty:** 2 years of comprehensive warranty for the whole system.
18. **Service:** Service calls should be attended within 24hrs of reporting.

Optional quote:

- Unit should come with its accessories to be used as a stackable unit (on top of another chamber).



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Technical Specifications for Fluorescence and Chemiluminescence-based Gel Imaging & Documentation Systems

SI Nos.	Category	Items
1	Applications Required	<ul style="list-style-type: none">- Fluorescence- Colorimetry- Chemiluminescence- Protein & DNA gels- Western Blots- 2D-Strips- Colony Plates- Gel Documentation
2	Light Source	<ul style="list-style-type: none">- Epi-White LED & Trans Green (LED) (450-550nm) <p>OR,</p> <ul style="list-style-type: none">- Epi-White; Trans-White; Trans-UV (302-312nm); Trans Blue LED 450-550nm; Epi-blue, -green, -red, -near IR (>450 nm to >770 nm excitation)
3	Filter Sets	<ul style="list-style-type: none">- Minimum 4 filter sets spanning the range 450 nm to 780 nm, with multiplexing for at least 3 colours
4	Camera	<ul style="list-style-type: none">- Detector & Resolution- Cool CCD > 6 MP- Field of View- should be at least 21×16cms- Cooling mechanism-Peltier based or Thermo-electric

5	System Interface	<ul style="list-style-type: none"> - Integrated Touchscreen-Capacitive LCD should be greater than 12inch - Display Resolution-be at least 1024x768 pixel
6	Sample Loading	<ul style="list-style-type: none"> - Should have automated sample loading capacity
7	Software	<ul style="list-style-type: none"> - Onboard-autofocus, autozoom, auto-exposure, preferably with option to change exposure times, auto image analysis - Standalone-image capturing as well as analysis software, preferably multi-device should be provided, which may be installed in separate PC/desktop for image analysis
8	Storage, Connectivity & Hardware	<ul style="list-style-type: none"> - USB & Ethernet Port-at least 2 USB & 1-Ethernet port - Hard Drive Capacity-should be at least 120GB - Image File Format-16-bit/8-bit grayscale, TIFF, JPG
9	Accessories	<ul style="list-style-type: none"> - Accessory items (trays, holders and alignment guides) for Coomassie stain and SYBR stain imaging should be included with the system
10	Warranty& Other Documentation	<ul style="list-style-type: none"> - Minimum 3 Years comprehensive warranty from manufacturer, from the date of installation. - Locally based service must be provided, who should be able to provide technical service within 24 hours of complaint. - Company should provide company printed brochure for the instrument, as supporting document. - Company should provide credentials for at least 5 similar instruments nationally, and at least one similar instrument in eastern zone.



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TENDER SPECIFICATIONS OF FLOOR MODEL ULTRACENTRIFUGE

Centrifuge should have the following control specifications

- Maximum RCF (x g) : 800,000g or more
- Maximum speed (rpm) : 100,000
- Speed Control : ± 2 rpm (1000 rpm to max speed)
- Timer : 1 min to 999 hours 59 min (with 1 min increments) with HOLD function
- Set Temperature : From 0°C to 40°C in 1°C increments
- Temperature Accuracy : $\pm 0.5^\circ\text{C}$ of set temperature
- Temperature display : Actual rotor temperature in 0.1°C increments
- Large touch-screen display with adjustable positions
- Drive type: Imbalance tolerant direct drive
- Refrigeration system: Solid state thermoelectric temperature control system (CFC/HCFC/HFC-free).
- Vacuum system: Moisture purging / Moisture removal system
- Ambient operating range should be +10°C to +30°C
- Acceleration / Decelerations profile: 10/10 or more
- System should come with colored large LCD touch screen operation for RPM / RCF / Temp. / Time (Run / Hold) / Vacuum display with error alarms.
- Convenient rotor catalogue and rotor tracking by serial number
- Power requirement: 200-240 VAC, 50/60 Hz,
- Simulation software feature which can provide Sedimentation Coefficient & Protocol Optimization before the experiment run

Rotor Specific Requirements:

1. Fixed Angle Titanium Rotor 1:

- i. Rotor Capacity: Volume must be 8 x 12 mL or more and the same sample VOLUME of the rotor can be run with 690,000 x g or MORE or 90,000 rpm or MORE.
- ii. Rotor k-factor: MUST BE 25 or more
- iii. Sealable tube of 13 mL or MORE capacity should be able to run at 694,000 x g or more. Should include – 100nos
- iv. Polycarbonate Bottle assembly(with caps) of 10 mL or More capacity tubes should be able to run at 362,000 x g or more. Should include – 100nos

2. Fixed Angle Titanium Rotor 2:

- i. Rotor Maximum Capacity: Volume must be 6 x 90 mL or more and the same sample VOLUME of the rotor can be run with 235,000 x g or MORE or 45,000 rpm or MORE.
- ii. Rotor k-factor: MUST BE 135 or less
- iii. ULTRA CLEAR tube of 90 mL or MORE capacity should be able to run at 235,000 x g or more. Should include – 100nos
- iv. Polycarbonate Bottle assembly (with caps) of 70 mL or More capacity tubes should be able to run at 235,000 x g or more. Should include – 100nos

3. Other Essential Features:

1. Drive Cooling: Air-cooled
2. Adaptors to accommodate small volume samples
3. Ability to remove moisture with vacuum
4. Error alarms and fail safe mechanisms should be in place
5. Advanced Software features:
 - i. Expert software with inbuilt calculations, simulations and references
 - ii. Real-time run graphing
 - iii. Powerful on-board simulation and calculation tools

Warranty:

- The Instrument should come with 5 years comprehensive warranty. Rotor warranty at least 10 years.
- Service should be able to provide technical service within 24 hours of complaint.
- Company should provide company printed brochure for the instrument, as supporting document.
- Company should provide credentials for at least 5 similar instruments nationally, and at least one similar instrument in eastern zone.

Optional items

Fixed Angle Titanium Rotor:

- Rotor Max Capacity: 8 x 6 mL or more with 800,000 x g or 100,000 rpm/12x2 ml or more with 420,000 x g or 80,000 rpm or more
- Sealable tube of 2 mL capacity should be able to run. Should include – 300nos
- Sealable tube of 6 mL capacity should be able to run at 800,000 x g or more. Should include – 300nos

Swinging Bucket titanium Rotor:

- Rotor Maximum Capacity: 6 x 13.0mL or more with rotor maximum Force of 285,000 x g and RPM of 40,000 or more
- Rotor k-factor: MUST BE 138 or less
- 14ml or more seal tubes and Ultra clear tubes should be included. Total Qty-200 tubes. All the tubes should run at a g-force of minimum 2,85,000g and above
- 4 ml or more seal tubes -50 nos should be included. These tubes should run at 2,85,000g or more with K factor of Less than 60
- 10 ml conical thin wall tubes (50 nos) should be included. These tubes should run at 2,85,000g or more with K factor of Less than 125.

Price for tubes compatible to above mentioned all the rotors should be quoted separately.



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Specifications for Automated Protein Purification System

System:

- Inert biocompatible flow path.
- Working sample amount ranges from microgram to gram scale
- **Flow rate:** Range ≤ 0.01 ml/min to ≥ 10 ml/min, without changing pump-heads for the entire flow range.
- **Pressure limit:** ≥ 10 MPa.
- **UV monitor:**
 - Wavelength range: ≤ 200 to ≥ 700 nm.
 - Source: Single/Dual lamp for the entire range.
 - Detection: Multi wavelength simultaneous detection (at least 3).
 - Should allow the user to choose at least 2 lengths(2mm and 10mm) of the flow cell depending upon the input protein concentration.
 - Sensitivity: ≤ 0.001 mAU.
 - Lamp life: ≥ 3000 hrs. May be met with additional lamps.
 - Noise: < 0.1 mAU.
- Automatic gradient (linear and step) formation from 0 to 100% over the entire flow range, with an appropriate gradient mixer.
- **Injection Valve:** For Sample Loading that is controllable by the software without manual intervention.
- **Fixed Volume Sample Loops:** Fixed volume sample loops of 100 μ l, 250 μ l, 500 μ l, 1ml, 2ml & 5ml PEEK loops should be provided along with the Instrument.
- Multiple (at least 10 each) male-female connectors for joining various loops/tubings, different connectors to connect 3rd party columns (at least 5) should be provided.
- Should be equipped with column control valve with following features:
 - with integrated bypass function, which enables washing of the system without removing the column.
 - with reverse flow capability.
- Should be equipped with Outlet control valve: to direct the flow to the fraction collector, waste or other outlet ports.

I

F

M

- Should be equipped with conductivity monitor:
 - Range: ≤0.02 to >900 mS/cm.
 - Accuracy: at least ± 0.02 mS/cm.
- The system should be equipped with **a fraction collector** with following features:
 - Software controlled Flexible capacity fraction collector.
 - Capable of collecting fractions based on time, & volume. Collection of peaks by peak detection, time windows, or a combination of both.
 - Drop arm movement in an x, y motion over each collection vessel.
 - Dispenser arm should be manually adjustable to tube heights.
 - Should carry numerous off-the-shelf racks to accommodate tubes (12–20 mm diameter), microcentrifuge or other micro tubes (0.5, 1.5, or 2.0 ml), or scintillation vials.
 - Rack for micro plates and tubes that adhere to SBS standards should be provided.
 - Precise collection of small volumes into micro plates should be possible.
- System should run at 230-240V, 50/60Hz, single phase without additional transformer.

Software and Computer:

- Works on a single control software platform with full networking capabilities.
- At least two license of the software.
- Track column usage and performance by the software.
- Automatic peak recognition.
- Data analysis by software
 - Compare different runs, for example by overlaying.
 - Peak integration.
 - Transfer of data (ASCII or binary) to be analyzed in third party softwares
- The system should come with appropriatedesktop computer (Minimum specifications for Windows computer (branded) i7, 8GB or more RAM, 500GB or moreHDD, Windows 10 or Mac with comparable hardware specs, Monitor flatscreen minimum 22 inches).
- At least three years comprehensive warranty for each component.
- Service calls should be attended within 24hrs.

Optional Features which can be added to the standard Configuration

- The system should be able to connect to third party fluorescence or Multi Angle Light Scattering instruments.
- Operation and maintenance tool kit.
- Quotation for additional 2yrs AMC and CMC beyond the mandatory warranty period.



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Ref : BI-K/E-TEND/29/2019-20

Technical specifications of Refrigerated Table top Centrifuge

- Max Capacity: 4x400ml
- Maximum Speed: Above 15000 RPM in fixed angle Rotor and 6000 RPM in swinging out rotor
- Maximum RCF: at least 25000 xg
- Drive system: Direct, brushless induction low profile motor
- Temperature range: -10 °C to +40 °C
- Centrifugation Chamber: Corrosion-resistant, high-thermal conductivity, 304 grade stainless steel
- Maximum Timer Range: 99h, 59min + continuous
- Time Setting: Both Countdown from start and countdown from set speed
- The Centrifuge should have a feature to install and remove rotor without tool in less than 5 seconds with just a push of a button for quick and easy change of rotors for different applications
- The centrifuge must be able to display both air/chamber temperature as well as temperature in the sample.
- Dual Timer mode- At Start and at Speed
- The centrifuge must have capability of password protection for the programs.
- The centrifuge must have capability of password protection for lid opening.
- The centrifuge must be able to display set parameters together with actual values, and parameters must be readable at a distance of at least 5 meters.
- The centrifuge must have a minimum of 5 “direct recall” program keys, and capability for up to 99 programs.
- The centrifuge must be CE, CSA and UL certified for safety containment.
- The Centrifuge should be *certified and maintained in accordance to the ISO 13485 international standards.*
- The centrifuge should confirm to IVD directives.
- The angle rotors must be manufactured from a highly corrosion and fatigue resistant Carbon Fiber material. The Fixed Angle rotors should be warranted for at least 12 to 15 years
- The bucket lids for Swing out rotors must operate in a safe manner without spring clips or metal components. The buckets and rotor sealing lids must be certified for bio-containment by a 3rd party lab of worldwide recognition.

- Should have imbalance detection system
- Should have pre-cooling system with direct button
- The centrifuge must be capable of running a minimum of 48 x 2 ml microtubes at speeds of at least 25000 x g in certified sealed conditions.

ROTORS:

- The centrifuge must be supplied with Swing out Rotor capable of running up to 4 x 400 ml Bottle with speed not less than 5000 RPM and 4600 x g along with 12 units 400 ml Bottles.
- The centrifuge must be supplied with a Fixed Angle rotor with capacity 8 x 50ml conical tube with speed not less than 14500 RPM and 24000 x g standard along with extra adapter for 50ml round bottom tube and 15ml conical tube.
- One set of self-manufacturing pipettes (0.2 to 1000 μ L) need to supply along with the centrifuge.
- Warranty: Minimum Two years

Suitable voltage stabilizer need to be quoted as optional.
Should have service centre at Kolkata.