

ICAR - CENTRAL INSTITUTE OF FISHERIES EDUCATION

(Deemed University), Indian Council of Agricultural Research
PanchMarg, Off Yari Road, Versova, Andheri (West), Mumbai-400061

Tel. No. 022-26361446/7/8

Fax No. 022-26361573 Web Site : www.cife.edu.in



BIDDING DOCUMENT



BIDDING FOR EQUIPMENTS



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INVITATION FOR BIDS

F.No. 36-08 /16-17/XIIthPlan Equip./P/

Dated: 10.10.2016

1. **The Director, Central Institute of Fisheries Education (Deemed University) (Indian Council of Agricultural Research), Ministry of Agriculture, Government of India** invites **SEALED TENDERS** from the reputed Indian/Foreign manufacturers or their accredited/sole authorized distributors/dealers for supply of the following equipment's **under single bid system.**

Sr. No.	Particulars	Qty.	Sr. No.	Particulars	Qty.
	Aquaculture			PHT	
1.	Colour Analyzer for Ornamental Fish (EFC)	1	21.	Hydraulic Sausage Filler/ Stuffer (Proj)	1
2.	Laminar Flow (EFC)	1	22.	-	-
3.	Muffle Furnace (EFC)		23.	-	-
4.	Water Bath Shaker (EFC)	1	24.	-	-
5.	Water Purification System (EFC)	1	25.	Patty maker (Proj)	1
6.	Air Blowers (EFC)	1	26.	De-scaling machine (Proj)	1
7.	Feed Dryer (EFC)	1	27.	Sausage clipper (Proj)	1
8.	Flame Photometer (Replacement)	1	28.	Meat Slicer (Proj)	1
9.	UV visible Spectrophotometer (Replacement)	1	29.	Tray packer (Proj)	1
10.	Water Bath (Replacement)	1	30.	Centrifuge (Proj)	1
11.	RO Treatment Plant 300 LPH (SDAE)	1	31.	Microwave Muffle Furnace (EFC)	1
	AEHM			FNBP	
12.	Biosafety Cabinet (EFC)	1	32.	Pulverizer / Grinding Mill (EFC)	1
13.	Gel Documentation System(EFC)	1	33.	Small scale sinking fish feed pelletizer (EFC)	1
14.	Microbead beater (EFC)	1	34.	Respirometer (EFC)	1
15.	Electronic Balance (EFC)-	1	35.	Electronic Balance (EFC)	1
16.	Hot Air Oven (EFC)	1		Powarkheda Centre	1
17.	Water bath (EFC)		36.	Centrifuge (EFC)	
	FGB		37.	D. O. Meter	1
18.	Refrigerated centrifuge (Replace)	2		Kolkata Centre	
19.	Tissue Homogenizer (Replace)	1	38.	Refrigerated Centrifuge (EFC)	1
	FRM	1	39.	Colour measurement system (EFC)	1
20.	Incubator (EFC) - Retendering	1	40.	Rotary vacuum evaporator (Replace)	
			41.	Stereozoom microscope (EFC)	1

	Kakinada Centre			Rohtak Centre	
42.	Fully automatic orbital shaker (EFC)	1	44	Electrophoresis unit (EFC)	1
	TSP		45	Autoclave vertical (EFC)	1
43	Field oxygen and pH meter (EFC)	1	46	Electronic balance (EFC)	1
			47	pH and conductivity meter (EFC)	1
			48	Student microscope (EFC)	1

2. **The Director, Central Institute of Fisheries Education (Deemed University)(Indian Council of Agricultural Research), Ministry of Agriculture, Government of India** invites **SEALED TENDERS** from the reputed Indian/Foreign manufacturers or their accredited/sole authorized distributors/dealers for supply of the following equipment's in **two bid system i.e. Technical Bid & Commercial Bid.**

Sr. No.	Particulars	Qty.	Sr. No.	Particulars	Qty.
	Aquaculture			FNBP	
49	Cooling Centrifuge (EFC)	1	56	Fluorescent Spectrophotometer (EFC)	1
50	Microscope with phase contrast and digital photo (EFC)	1	57	Real Time PCR (EFC)	1
	AEHM		58	Blood Gas Analyzer (EFC)	1
51	Real Time PCR (EFC)	1	59	Nanodrop Spectrophotometer (EFC)	1
	PHT		60	Bomb Calorimeter (Replace)	1
52	Accelerated Freeze Dyer (EFC)	1		FEES	
	Rohtak Centre		61-66	Professional Communication Studio / Lab – 6 items (EFC)	1 each
53	Fluorescent Microscope (EFC)	1		PHT	
54	Ice Flaking Machine (EFC)	1	67	HPLC (SDAE)	1
55	Refrigerated Centrifuge (EFC)	1			

3. Tender must be submitted in the original prescribed form separately for each equipment with rates for delivery at this office including all levies, taxes, installation etc, complete, if applicable duly addressed to the Director, CIFE, Mumbai-400 061 in a sealed cover superscribing as **TENDER FOR EQUIPMENT FOR THE YEAR 2016-2017** with the **Name of Equipments and Item No.**
4. The Tender documents containing terms & conditions may be obtained from the Purchase Section of CIFE, Mumbai-400 061 on any working day between **11.00 hrs to 16.00 hrs.** up to the last date of sale of Tender, on payment of **Rs.1000/- (Non-Refundable).** Also enclose **Earnest Money Deposit @ 2.5% of the tendered amount for items listed under single bid system or @ Rs. 15,000/- per equipment listed under two bid system** in the shape of Demand Draft/Pay Order drawn in favor of **“ICAR Unit CIFE,”** payable at, Mumbai. Tender documents complete in all respect should be submitted along with requisite EMD failing which tender is liable to be rejected. NSIC certificate will not be entertained for imported items. NSIC certificates of only manufacturers will be considered.
5. The Tender documents containing Terms & Conditions is also available on our web site: www.cife.edu.in which can be downloaded and submitted along with the cost of Tender documents of **Rs.1000/- (Non-Refundable)** separately for each equipment in form of D.D/Pay Order drawn in favor of **“ICAR Unit CIFE” Payable at Mumbai** along with **EMD as mentioned in Para 4** failing which tender shall be rejected.
6. For items listed under **two-bid system Technical Bid & Commercial Bid** should be sealed in separate envelopes and both the bids should again be sealed in a big envelope failing which it will be rejected. The Technical bid shall be opened on the date of opening of Tender. The date of opening of commercial bid of successful Technical bidder/bidder's shall be

communicated separately. Details of 3 previous purchase orders to be provided.

7. FOB and CIF rates to be quoted for imported items.
8. Tenders received after the **DUE DATE and TIME** will not be accepted in any circumstances.
9. In no case request for blank Tender documents by post shall be entertained. The duly filled in tender form send by post received after due date and time shall not be accepted.
10. In case the date of issue/receipt of opening of Tender is declared as Holiday for unexpected reasons the tender will be issued/received/opened on the next working day at the same time. The tender documents are non-transferable. Director of the institute reserves the right to accept / reject any or all the tenders without assigning any reason thereof.
11. Amendments if any shall be published only on CIFE web site up to 7 days before the last date of submitting tender which may be watched by the perspective bidders for downloading and incorporating in the tender.

AAO (Purchase)



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F.No. 36-08/65-17/XIIthPlan Equip./P/

Dated: 10.10.2016

1. Issue of tender document on	10.10.2016
2. Last date for issue of tender document on	31.10.2016
3. Date of Pre-bid Meeting	24.10.2016
4. Acceptance of sealed tenders 13.00 hrs on	31.10.2016
5. Opening of tender at 15.00 hrs on	31.10.2016

Name of the equipment: _____

Item No. : _____

**TENDER FORM SHALL HAS TO BE PURCHASED AND
SUBMITTED SEPERATELY IN SEALED ENVELOPES.**

To,
M/s.
.....

Sub : Supply of Tender Form - reg.

Dear Sir,

With reference to your application dated _____, please find enclosed herewith tender form along with the detailed specifications receipt _____ Dated _____ for ` _____ for the supply of following equipment.

Kindly acknowledge the receipt of the same.

Yours faithfully,

AAO (Purchase)



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Invitation to Tender and instructions to Tenders
Also See Annexure
I, II, III, IV, V, VI

Tender No. _____

F.No. 36-08/16-17/XIIthPlan Equip./P/

Dated: 10.10.2016

Note: The envelope containing the tender as well as all subsequent
Communication should be addressed and delivered to :-

Director,
ICAR - Central Institute of Fisheries Education
(ICAR - Deemed University)
PanchMarg, Off Yari Road,
Versova, Andheri (W), Mumbai - 400 061

**All communications must be addressed to the Officer named above by Title only
and not by name**

To,

M/s. _____

Dear Sirs,

On behalf of the purchaser (Named in the schedule attached to tender form enclosed), I invite you to tender for the supply of the stores detailed in the said schedule. The conditions of contract, which will govern any contract made, are those contained in the general conditions of contract applicable to the contracts placed by Indian council of Agricultural Research and the Research Institute under it and the special conditions detailed in the Tender Form (and those attached herewith).If you are in a position to quote for supply in accordance with the requirements stated in the attached schedule, please submit your quotations to this office on the prescribed tender form attached.

2. EARNEST MONEY :

EMD of Rs. _____ (which is 2.5% of Bid Amount for single bid and Rs. 15.000/- for two bid system) should be enclosed along with the bid in the form of demand draft or cash may be remitted at the cash counter.

In no circumstances Government Promissory Notes, State Bank Pass Book or Cheque will be received with Tender as Earnest Money.

THE TENDER MAY NOT BE CONSIDERED IF THE EARNEST MONEY RECEIPT IS NOT SENT WITH THE TENDER. No request for transfer of any previous deposit of Earnest Money will be entertained.

It is understood that the tender document has been issued to the tender and the tender is being permitted to tender in consideration of the stipulation on his part that after submitting his tender, he will not resale from his offer or modify the terms and condition thereof. Should the tender fail to observe and comply with the foregoing stipulation the aforesaid amount will be forfeited to the Central Institute of Fisheries Education. In the event of the offer made by the tendered not being accepted, the amount of Earnest Money deposited by the tendered will be refunded to him after he has applied for the same in manner prescribed by Indian Council of Agricultural Research/Central Institute of Fisheries Education.

The Earnest Money Deposit of the successful Bidders is likely to be forfeited in case he fails to supply the Equipment/Stores or fails to submit Security Deposit as per Supply Order.

The Earnest Money should not on any account fall short of the amount actually required.

NSIC certificate will not be considered for imported items and only NSIC certificates of manufacturers will be considered.

3. SECURITY DEPOSIT:

The successful bidder will have to submit 10% of the amount of supply order excluding of Taxes etc. as Security Deposit in form of Bank Guarantee or Demand Draft before supplying the material.

The Security Deposit shall be released/ refunded only after successful completion of Guarantee/Warranty period.

4. PREPARATION OF TENDER:

- (a) The Schedule to the tender form should be submitted in prescribe format only..
- (b) The Schedule to the tender form should be returned intact whether you are quoting for any item or not. Pages should not be detached but when items are not being tendered for the corresponding space should be defaced by some such words as "Not quoting"
- (c) In the event of space on the schedule from being insufficient for the required purpose, additional pages may be added. Each such additional page must be numbered consecutively, bear the tender Number & be fully signed by the tenderer. In such cases reference to the additional pages must be made in the tender from.
- (d) If any modification of the schedule is considered necessary, tenderer should communicate the same by means of a separate letter sent with the Tender.

5. SIGNING OF TENDER:

- (e) The Tender is liable to be ignored if complete information is not given there in or if the particulars and date (if any)/asked for in the schedule to the Tender are not fully filled in. Specific attention must be paid to delivery dates and also to the General Conditions of the Contract, as the Contract would be governed by them.
- (f) Individual signing the tender or other documents connected with a contract must specify whether he signs as: -
 - (I) A sole proprietor of the firm or constituted attorney of such sole proprietor.
 - (II) A partner of the firm if it be a partnership, in which case he must have authority to refer to arbitration disputes concerning the business of the partnership either by virtue of the partnership agreement or a power of attorney.
 - (III) Constituted attorney of the firm if it is a company.

N B. (A) In case of (ii) a copy of the partnership agreement or general power of attorney in either case attested by a notary public should be furnished unless the same has been previously furnished to Indian Council of Agricultural Research/Central Institute of Fisheries Education, or affidavit on stamped paper of all the partners admitting execution of the general power of attorney should be furnished.

(B) In the case of partnership firms where no authority to refer disputes concerning the business of the partnership has been conferred on any partner, the tender and all other related documents must be signed by every partner of the firm.

(C) A person signing the Tender Form or any documents forming part of the contract on behalf of another shall be deemed to warrant that he has authority to bind each other and if on enquiry it appears that the person so signing has no authority to be so the purchaser may without prejudice to other civil and criminal remedies cancel the contract and hold the signatory liable for all cost and damages.

(d) Each page of the tender, schedule to tender and annexure, schedule to tender and annexure, if any should be signed by the tenderer.

6. DELIVERY OF TENDER:

The original copy of the Tender is to be enclosed in a double cover. The inner cover should be sealed. **The outer cover should be superscribed in bold letters” Tender for the supply of**” **Right is reserved, to ignore any tender which fails to comply with the above instructions.** All outstation tenders should be sent by registered post. Only one tender should be included in one cover. Where more than one tender is included in a cover, all tenders so enclosed in one cover will be liable to be ignored.

7. LATEST HOUR FOR RECEIPT OF TENDER:

Unless otherwise specified in the schedule to tender, your tender must reach this office not later than 13.00 hrs. on the date of opening of the tender; Tenders sent by hand delivery should be put in the Tender box at this office located at New Campus in the Administrative Wing not later than 13.00 hrs. on the due date unless otherwise stipulated in the schedule to tender.

8. PERIOD FOR WHICH OFFER WILL REMAIN OPEN:

- (I) Firms tendering should note that it is desired that their offers should remain open for acceptance for 90 days from the date of opening of tender, If the firms are unable to keep their offers open for the specified period their tenders are likely to be rejected.
- (II) Quotations qualified by such vague and indefinite expressions such as “SUBJECT TO IMMEDIATE ACCEPTANCE, ‘SUBJECT TO PRIOR SALE’” WILL NOT BE CONSIDERED.

9. OPENING OF TENDER:

You are at liberty to be present or authorize a representative to be present at the time of opening of the tender at the time and date as specified in the schedule. The name and address of the representative who would be attending the opening of the tender on your behalf should be indicated in your tender please also state the name and address of your permanent representative, if any.

10. PRICES:

- I. (i) The prices quoted MUST BE PER UNIT SHOWN in the schedule and must specify separately all packing and delivery charges. Refunds on account of returnable packages (if any) are to be separately specified. Prices and refund must be clearly shown in figures and words in Indian currency or in foreign currency, if it is an imported equipment. Please quote the Indian agents commission if the equipment is imported, which will be paid in Indian Rupees after installation of the equipment.. All bank charges outside India will be borne by the tenderer. L.C. amendment charges will be borne by the tenderer.
 - (ii) The price must be stated for each item separately. The percentage of reduction, in the total price for the entire demand should also be quoted, and order to that extent be placed with you.
- II. (i) If it is decided to ask excise duty, Octroi, sales tax or any other charges as extra, the same must be specifically stated in the absence of any such stipulation it will be presumed that the prices include all such charges and no claim for the same will be entertained.
 - (ii) The price quoted by the tenderer should exclusive of sales tax (and should be clearly stated to be so), which will be paid by the purchaser, if legally livable at the rate ruling on the date of supply as specified in the Acceptance of Tender.

Please note CIFE is eligible for payment of custom only at concessional rates and fully exempted from payment of Central Excise Duty as per Govt. Notification No. 51/96-Customs dated 23 July 1996 and No. 10/97-Central Excise dated 01 March 1997 as amended from time to time respectively.

11. TERMS OF DELIVERY:

The delivery of stores is required by date (s) specified in the schedule to Tender. If however, it is not possible for tender to affect delivery by the date (s) you should specify the date by which you can guarantee delivery in prescribed schedule to the tender.

12. SAMPLES:

Tender samples are not required unless specifically called for

QUOTATIONS WITHOUT SAMPLES WHERE SAMPLES ARE SPECIFICALLY CALLED FOR ARE LIABLE TO BE IGNORED.

Samples of what you offer to supply should not be less than the quantity necessary for test as per specification, if any, or in the schedule to tender. In case the quantity of sample required for test is given either in specification or in the schedule to tender, this should be adhered to. Each sample should bear either in specification or in the schedule to tender:-

- (a) Your name and address.
- (b) Tender No.
- (c) Date of opening of tender.
- (d) Item No. against which tender submitted.
- (e) Any other description if necessary, written clearly on it.

The samples should be sent to the Officer to reach him by the date specified in the schedule. The cost & freight of sending the sample shall be borne by the tender & there will be no obligation on the part of the receiving officer for their safe custody. Tenders who do not submit the sample by the time specified in the schedule will run the risk of their tenders being ignored.

SAMPLES SENT 'FREIGHT TO PAY' WILL NOT BE ACCEPTED. The packages & the Railway Receipt should be addressed to the Inspecting officer or other officer concerned & nuds to 'self'.

If the samples are sent by Railway parcel, the Railway Receipt should not be enclosed with the tender documents but should be posted separately to the office to Whom the samples are sent (under a covering letter giving the necessary particulars to enable him to connect the Railway receipt easily with the parcel), Samples submitted by Tenders whose offers are not accepted (provided they have not been destroyed during testing) will be delivered to their representatives if they call for the same or can be returned to them at their cost provided the application for return is made to the officer to whom the samples are sent, within one month after the contract is placed on the successful tender, or after notification of cancellation of demand. If no application is received within the due date, the samples will be disposed of by public auction and the sale proceeds credited to council /CIFE (ICAR) Mumbai, India.

13. EXAMINATION OF PATTERNS OF CERTIFIED SAMPLE:

When sealed patterns of stores are mentioned in the schedule to the tender form, specification in these or certified samples thereof may be seen at the place stated in the schedule to tender and should be examined by a competent person on your behalf (who should take this invitation with him) before the tender is submitted.

14. PACKING:

Unless a method of packing is medicated in the specification or on the Schedule to the tender form the method of packing which the contractor proposes to employ must be described in the schedule to Tender Form. Contractors are at liberty to quote for additional alternative sizes and description of packs and these must be described in the schedule to tender.

15. RIGHT OF ACCEPTANCE:

This office does not pledge itself to accept the lowest or any tender and reserves to itself the right of accepting the whole or any part of the tender or portion of the quantity offered and tender shall supply the same at the rate quoted. Tender is at liberty to tender for the whole or any portion or to state in the tender that the rate quoted shall apply only if the entire quantity is taken from the tender.

16. COMMUNICATION OF ACCEPTANCE:

Acceptance by the purchaser will be communicated by telegram, Fax, express letter of acceptance or formal "Acceptance of tender. In case where acceptance is communicated by telegram or express letter, the formal Acceptance of Tender, will be forwarded to tender, by registered post as soon as possible but the instructions contained in the telegram or express letter should be acted upon immediately.

17. RESERVATION OF RIGHT TO ORDER ADDITIONAL QUANTITY:

The purchaser reserves the right to place order on the successful tender for additional quantity (up to 25%) of the quantity offered by them at the rate quoted. Tenders are bound to accept if placed on them within six months from the date of issue of acceptance of Tender.

18. PRE-INSPECTION OF STORES BY THE SUPPLIER:

In case a contract is placed on you as a result of this tender, you should satisfy yourself that the stores are in accordance with the terms of the contracts and fully conform to the required specifications by carrying out thorough pre-inspection, such precaution on your part should minimize the chance of rejection in inspection and the consequences thereof.

For and on behalf of

ICAR - Central Institute of Fisheries Education
Indian Council of Agricultural Research
(Deemed University)
PanchMarg, Off Yari Road,
Versova, Andheri (W), Mumbai- 61

(Signature)



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GENERAL CONDITIONS OF CONTRACT APPLICABLE TO CONTRACTS PLACED BY THE INDIAN COUNCIL OF AGRICULTURAL RESEARCH OR THE INSTITUTES UNDER IT

GENERAL CONDITIONS OF CONTRACT

1. DEFINITIONS and interpretations:

- (1) In the contract the general and special condition governing it, unless the context Otherwise requires: -
 - (a) “Acceptance of tender” means the letter of memorandum communication to the contractor the acceptance of his tender and includes an advance acceptance of his tender.
 - (b) “Consignee” mean the persons to whom the stores are required by the acceptance of tender to be delivered in the manner therein specified.
 - (c) “Contractor” means the invitation to tender; instructions tenders, tenders tender acceptance of tender, particulars and the general and special conditions specified in the acceptance of tender and includes a repeat order which has been accepted or acted upon by the contractor.
 - (d) “Contractor” means the person with whom the contract is made and includes his heirs. Executors administrators or successors and permitted assignees, as the case may be.
 - (e) “Drawing” means the drawing or drawing or drawings specified in or annexed to the Schedule or Specification.
 - (f) “Council” means the Indian Council of Agricultural Research or the Institute etc. under its administrative control.
 - (g) “Inspector” means the person specified in the contract for the purpose of inspection of stores of work under the contract and includes his authorized representative.
 - (h) “Material” means anything used in the manufacture or fabrication of the stores.
 - (i) Particulars include :-
 - (i) Specification

- (ii) Drawing
- (iii) Pattern bearing the seal and signature of the inspector (hereinafter called the sealed pattern) which shall include also a certified copy thereof sealed by the purchaser for the guidance of the inspector.
- (iv) Sample sealed by the purchaser for the guidance of the inspector (hereinafter called the certified sample) which shall include a certified copy thereof sealed by the purchaser for the guidance of the inspector;
- (v) Trade pattern, that is to say a pattern, stores conforming to which are obtainable in the open market & which denoted a standard of the Indian Standards Institute or other standardizing authority or a general standard of the industry;
- (vi) Proprietary mark or brand means the mark or brand of a product which is owned by an industrial firm;
- (vii) Any other details governing the construction, manufacture or supply of stores as may be prescribed by contract;
- (j) “Purchase officer” means the officer signing the acceptance of tender & includes any officer who has authority to execute the relevant contract on behalf of the Purchaser ;
- (k) “Purchaser” means the purchaser named in the Schedule of acceptance to the tender & includes his successor or assignees;
- (l) (a) “Secretary” means the Secretary of Indian Council of Agricultural Research & includes any other officer of the Council or of any other body, Institution or Organization under the Administrative Control, of the Council, who has been authorized for the time being to execute relevant contracts relating to purchase of stores on behalf of the purchaser.

(b) Director means the Director of Central Institute of Fisheries Education, (ICAR), Versova, Mumbai, India.
- (m) “Schedule” means the Schedule annexed to the acceptance of tender.
- (n) “Signed” includes stamped, except in the case of an acceptance of tender or any amendment thereof.
- (o) “Site” means the place specified in the Schedule at which any work is required to be executed by the contractor under the contract or another place approved by the Secretary/ Director for the purpose.
- (p) “Stores” means the goods specified in the schedule which the contractor has agreed to supply under the Contract.
- (q) “Supply order” means an order for supply of stores & includes an order for performance or service.
- (r) “Test” means such test as is prescribed by the particulars or confided necessary by the Inspector, whether performed or made by the Inspector or any agency acting under the direction of the Inspector.

- (s) "Unit" & "quantity" means the unit & quantity specified in the schedule;
- (t) "Writing" includes matter either in whole or in part, in manuscript, typewritten lithographed, cyclostyled, or printed, or under or over signature or seal as the case may be;
- (u) The delivery of stores shall be deemed to take place on delivery of the stores in accordance with the terms of the contract, after approval of the Inspector to :-
 - (i) The consignee his premises or.
 - (ii) The consignee at the destination station in case of contracts stipulating for delivery of stores at destination station.
- (v) Words in the singular include the plural & Vice-Versa.
- (w) Words importing the masculine gender shall be taken to include the feminine gender & word Importing persons shall include any company or association or body of individuals, whether incorporated or not.
- (x) The heading of these conditions shall not affect the interpretation or construction thereof.
- (y) Terms & expression not herein defined shall have the meaning assigned to them in the Sale of Goods Act, 1930 or the Indian Contract Act. 1872 or the General clause Act 1897, as the case may be.

2. (a) PARTIES:

The parties to the contract are the contractor and the purchaser, named in the schedule.

(b) AUTHORITY OF PERSON SIGNING THE CONTRACT ON BEHALF OF THE CONTRACTOR:

A person signing the tender or any other documents in respect of the contract on behalf of the contractor without disclosing his authority to do so shall be deemed to warrant that he has authority to bind the contractor. If it is discovered at any time that person so signing has no authority to do so. The Secretary may without prejudice to any other right or remedy of the purchaser cancel the contract and make or authorize the making or purchase of the stores at the risk and cost of such person and hold such person liable to purchaser of all costs and damages arising from the cancellation of the contract including any loss which the purchaser may sustain on account of such purchase. The provisions of clause 14 shall apply to every such purchase as far as applicable.

(c) ADDRESS OF THE CONTRACTOR AND NOTICES AND COMMUNICATION ON BEHALF OF THE PURCHASER:

(I) For all purposes of the contract, including arbitration there under, the address of the contractor mentioned in the tender shall be the address to which all communications addressed to the contractor shall be sent, unless the contractor has notified a change by a separate letter containing no other communication and sent by registered post acknowledgment due to the Director, CIFE. The contractor shall be solely responsible for the consequence of an omission to notify a change of address in the manner aforesaid.

(II) Any communication or notice on behalf of the purchaser in relaxation to the contract may be issued to the contractor by purchase officer and all such communications and notices may be served on the contractor either by registered post or under certificate if posting or by ordinary post or by hand delivery at the option of such officer.

3. AUTHORITY OF THE SECRETARY/DIRECTOR:

For all-purpose of the contract including arbitration proceedings there under, the Secretary / Director shall be entitled to exercise all rights and powers to the purchaser.

4. RESPONSIBILITY OF THE CONTRACTOR FOR EXECUTING THE CONTRACT:

(1) Risk in the stores: - The contractor shall perform the contract in all respects in accordance with the terms and condition thereof. The stores and every constituent part thereof, whether in the possession or control of the contractor, his agents or servants and the purchaser his agents or servants shall remain in every respect at the risk of the contractor until their actual delivery to the consignee/person specified in the schedule at stipulated place or destination. The contractor shall be responsive for all loss, destruction damage or deterioration of or the stores from any cause whatsoever while the stores after approval by the Inspector are awaiting dispatch or delivery or are in the course of transit from the contractor to the consignee/person named in the Schedule. The contractor shall alone be entitled and responsible to make claims against a railway administration or other carrier in respect or non-delivery, mis-delivery, destruction, damage or deterioration of the goods entrusted to such carrier by the contractor for transmission to the consignee.

(2) Consignee's right of rejection :- Notwithstanding any approval which the inspector may have given in respect of the store or any materials or the contract (whether with or without any test carried out by the contractor or Inspector or under the direction of the Inspector) it shall be lawful for consignee, to reject the stores or any part, portion or Consignment thereof within a reasonable time acute; devour thereof to him at the place or destination specified in the contract if such stores or part, portion or consignment thereof is any less, deterioration or damage before dispatch or delivery or during transit or/otherwise howsoever,

The provision contained in clause 17 relating to the removal of stores rejected by the purchaser's Representative shall MUTATIS MUTANDIS; apply to stores rejected by the consignee as herein provided.

(3) (a) SUBLETTING AND ASSIGNMENT:

The contractor shall not, save with the previous consent in writing of the Secretary /Director, Sublet, transfer or assign the contractor or any part there of or interest therein or benefit or advantage thereof in any manner whatsoever, provided, nevertheless that any such consent shall not relieve the contractor any obligation, duty or responsibility under the contract.

(b) CHANGE IN A FIRM:

(i) Where the contractor is a partnership firm, a new partner shall not be introduced in the firm except with the previous consent in writing of the Secretary/Director which may be granted only upon acceptance of a written undertaking by the new partner to perform the contract & accept all liabilities incurred by the firm under the contract prior to the date of such undertaking.

(ii) On the date of retirement of any partner of the contractor firm before complete performance of contract the Secretary/Director may at his option cancel the contract and in such case the contractor shall have no claim whatsoever to compensation against the purchaser.

(iii) If the contract is not determined as provided in sub clause (ii) above not with standing the retirement of a partner from the firm he shall continue to be liable under the contract for acts of the firm until a copy of the public notice given by him under section 32 of the partnership Act has been sent by him to the Director High Security Central Institute of Fisheries Education.

(c) CONSEQUENCE OF BREACH:

Should the contractor or a partner in the contractor's firm commit breach of either of the conditions (a) or (b) (I) of this sub-clause, it shall be lawful for the Secretary/Director to cancel to contract & purchase or authorize the purchase of the stores at the risk & cost the contractor & in that event the provisions of clause 14 shall as for as applicable, apply.

(d) THE DECISION OF THE SECRETARY ICAR:

Director, CIFE to any matter or thing concerning or arising out of this sub-clause or on and any question whether the contractor or any partner or the contractor firm has committed a breach of any of the conditions in this sub-clause contained shall be final and binding on the Contractor.

(4) USE OF RAW MATERIALS SECURED WITH COUNCIL'S ASSISTANCE:

(1) Where any raw material for the execution of the contract is procured with the assistance of the Council by purchase or under arrangement made or permit, license, quote certificate or release order issued by or on behalf or under authority from the Council or by any officer empowered in that behalf by law or is issued from Council's stock and where advance payment are made to the contract to enable him to purchase such raw materials for the execution of the contract, the contractor:-

- (i) Shall hold such materials as trustee for the Council.
- (ii) Shall use such material economically and solely for the purpose of contract.
- (iii) Shall not dispose of the same without the previous permission in writing of the Secretary/Director; and
- (iv) Shall tender due account of such material and return to the Council at such place as the Secretary may direct all surplus or unserviceable material that may be left after the completion of the contract or its termination for any reason whatsoever.

(5) Where the contract is terminated due to any default on the part of the contractor the contractor shall pay all transport charges incurred for returning any material up to such destination as may be determined by the Secretary/Director and the decision of the Secretary/Director in that behalf shall be final and binding on the contractor.

(6) If the contractor commits breach of any of the conditions in this clause specified he shall without prejudice to any other liability; penal or otherwise be liable to account to the Council/ CIFE for all moneys advantages or profits accruing from or which in the usual course would have accrued to him by reason of such breach.

(7) Where the stores manufactured or fabricated by the Contractor out of the materials arranged or procured by or on behalf of the Council / CIFE, pay to the Council / CIFE, on demand the cost price or market value of such materials whichever is greater.

(8) QUOTATIONS OR RATES BY CONTRACTORS:

(I) The price quoted by the contractor shall not be higher than the controlled price fixed by law for the stores or where there is no controlled price, save for special reasons stated in the tender, be higher than the price usually charged by the contractor for stores of the same nature, class or description to a private purchaser.

(II) In the price quoted higher than the controlled price or where there is no controlled price, the price usually charged by the contractor for private purchase for the stores of the same of the same nature class or description, the contractor will specially mention this fact in his tender given reason for quoting higher price (s). If he fail, to do or make any misstatement, it shall be lawful for the Secretary/ Director:- (i) to revise the price at any stage so as to bring it in conformity with sub clause (I) above, or (ii) to terminate the contract and purchase stores at risk and the cost of the contractor and in that event the provision of clause 14 shall apply as for as applicable it the contractor has failed to deliver the stores within the period fixed.

(9) CORRUPT PRACTICES:

(i) The contractors shall not offer or give or agree to give to any person in the employment of the purchaser or working under the order of the Secretary/Director any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or airborne to do any act in relation to the obtaining or execution of the contract or another contract with the Council/CIFE (ICARI) Mumbai or for showing or for beating to show favour or disfavor to any person in relation to the contract or any other contract with Council/CIFE (ICAR) Mumbai. Any breach of the aforesaid condition by the contractor, or any one employed by him or acting on his behalf (whether with or without knowledge of the contractor) or the Commission of any offence by the contractor or by any one employed him or acting on his behalf under Chapter IX of the India Penal Code. 1860 or the Prevention of Corruption Act, 1974 or any other Act enacted for the prevention of corruption by public servants shall entitle the Secretary/Director to cancel the contract and all or any loss arising from such cancellation in accordance with the provisions of Clause 14.

(ii) Any dispute of deference in respect of either the interpretation effect or application of the above condition or of the amount recoverable there under by the purchaser from contractor shall be decided by the Director General, Indian Council of Agricultural Research or his nominee whose decision thereon shall be final & binding on the contractor.

10. INSOLVENCY AND BRAECH OF CONTRACT:

The Secretary/Director may at any time, by notice in writing, summarily terminate the contract without compensation to the contractor in any of the following events that is to say: -

(i) If the contractor benign individual or if a firm any partner thereof, shall at any time be adjusted insolvency or shall have a receiving order or order or order for administration of his estimate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any conveyance or assignment of his effect or enter into any arrangement of his effect or enter into any arrangement or composition with his credits or suspend payment or, if the may be dissolved under the partnership Act, or

(ii) It the contractor being a company is wound up voluntarily or by the order of a court or a Receiver, liquidator or Manager on behalf of the Debenture holders in appointed or circumstances shall have arisen which entitled the court or Debenture holders to appoint a Receiver, liquidator or Manager, or

(iii) If the contractor commits any breach of the contract not herein specifically provided for: - Provided always that such determination shall not prejudice any right action or remedy which shall have accrued or shall accrue thereafter to the purchaser for any extra expenditure is thereby put to, the contractor shall under no circumstances be entitled to any again on repurchase.

11. ARBITRATION :

In the event of any question, dispute to deference arising under these conditions or any special conditions of contract, or in connection with this contract, (except as to any matters the decision of which is specially provided for by these or special conditions) the same shall be referred to the sole arbitration of an officer appointed to be the arbitrator by the Director General, Indian Council of Agricultural Research. It will be no objection that the arbitrator is a Govt. Servant/Council's Servant that had to deal with the matters to which the contract relates or that in the course of this duties as a Govt. Servant/Council's Servant he has expressed views on all or any of the matters in dispute or difference. The award of the arbitrator shall be final & binding on the parties to this contract.

In the event of the arbitrator dying, neglecting or refusing to act, or resigning being unable to act for any reason, or his award being set aside by the Court for any reason, it shall be lawful for the Director General Indian Council of Agricultural Research to appoint another in place of the out-going arbitrator the manner aforesaid.

It is the further a term of this contract that no person other than the person appointed by the Director General India Council of Agricultural Research as aforesaid should act as arbitrator and that, if for any reason that is not possible, the matter is not to be referred to arbitrator at all.

The arbitrator may from time with the consent of all the parties to the contract enlarge the time for making the award.

Upon every and any such reference, the assessment of the costs incidental to the reference and award respectively shall be in the discretion of the arbitrator.

Subject as aforesaid, the Arbitration Act. 1940 and the rules there under and any statutory modification thereof for time being in force shall be deemed to apply to the arbitrator proceedings under the clause.

Work under to contract shall, if reasonably possible, continue during the arbitration proceedings and in payment due to or payable by the purchaser shall be withheld on account of such proceedings.

The venue of arbitration shall be the place from which the acceptance note is issued or such other place as the arbitrator at his desecration may determine. In this clause the expression the "Director General, Indian Council of Agricultural Research" means the Director General, Indian Council of Agricultural Research for the time being & includes, if there be no Director General, Indian Council of Agricultural Research, the officer who is for the time being the administrative head of the Indian Council of Agricultural Research whether in addition to other functions or otherwise.

SPECIAL INSTRUCTIONS:

- (1) Purchaser: Central Institute of Fisheries Education, Versova, Mumbai India.
- (2) The stores are required by (time indicated in supply order). Please quote earliest possible guaranteed date by which you can offer supply.
- (3) Consignee : The Director, (CIFE) Mumbai
- (4) The tender must quote clear delivery terms indicating F.O.B. (Free on Board) F.A.S. (Free at ship port of export for imported stores & CIP destination/delivery at site/F.O.R. destination for indigenous as applicable. Incomplete tender is liable to be ignored.

(5) Conditions of contract as contained in Special/General conditions of contract & Schedule and annexure to the tender attached herewith.

(6) Tenders are bound to accept order for additional quantity (up to 25%) at the rate quoted only if order is placed on them within six months from the date of issue of Acceptance of Tender.

(7) In case the tender wants to furnish in separate covering letter any additional information particulars or quote conditions (e. g. those relating to allowance discount, rebate etc) which cannot be accommodated in the tender form an indication to that effect should be given in the tender form by means of note. In the absence of such indication in the tender form, the contents of the covering letter will be ignored in consideration of tender.

(8) Firms tendering should note that it is desired that their offers should remain open for acceptance for 90 days from the date of opening of tender, If the firms are unable to keep their offers open for the specified period their tenders are likely to be rejected

(9) Unattested amended figures overwritten figure will not be considered.

(10) (a) Where there is provision for payment of Sales tax, it will only be paid if registration number both under State and Central Sales Tax Rules/Act are specifically mentioned on the bill/invoice.

(b) Photostat Copy, duly attested a correct, of the Sale-tax declaration to the effect that firm is registered under the Sales-tax department, and

(c) 3-GA (5)' or 3/ga (2) Form, as the case may be, should be attached along with each bill or supply; otherwise the purchase tax as may be applicable, will be deducted from each bill of supply.

If the above requirement are not fulfilled and Photostat copy of registration certificate issued by the sales- tax Deptt is not attached with the tender form may not be accepted even though the rates may be the lowest.

MANUFACTURES NAME THEIR TRADE MARK AND BRAND, IF ANY, SHOULD INVARIABLY BE MENTIONED IN THE TENDER ILLUSTRATED LEAFLETS GIVING TECHNICAL PARTICULARS, OPERATION MANUFAL ETC, SHOULD BESENT ALONGWITH THE TENDER TO FACILITATE CONSIDERATION OF OFFER.

Dated _____

(Signature of the Tenderer)

ANNEXURE - I



ICAR - CENTRAL INSTITUTE OF FISHERIES EDUCATION

(Deemed University), Indian Council of Agricultural Research

PanchMarg, Off Yari Road, Versova, Andheri (West), Mumbai-400061

Tel. No. 022-26361446/7/8, Fax No. 022-26361573 Web Site : www.cife.edu.in



TENDER NO.

Full name & address of the Tender, in addition to post Box No. if any, should be Quoted in all communications To this office.

1. Contractor's Telegraphic Address _____
2. Telephone No. _____
3. Fax No. _____

To,
THE DIRECTOR
ICAR - CENTRAL INSTITUTE OF FISHERIES EDUCATION
(I.C.A.R.) DEEMED UNIVERSITY, PANCH MARG,
OFF YARI ROAD, VERSOVA, ANDHERI (W), MUMBAI – 400 061

Dear Sir,

I/ We hereby offer to supply the stores detailed in the schedule here to or such portion thereof as you may specify in the acceptance of Tender at the price given in the said schedule and agree to hold this offer open till _____ I/We shall be bound by a communication of acceptance dispatched within the prescribed time.

2. I/We understood the instruction to Tenders & Conditions of Contract included in General Conditions of Contract covering contracts placed by the Indian Council of Agricultural Research & research Institutes under if & in the Special Conditions of contract & have thoroughly examined the specification drawing & /or pattern quoted in the schedule thereof & /are fully aware of the nature of the stores of the stores required & my/our offer is to supply stores strictly in accordance with the requirements.

3. The following pages have been added to & form part of this tender _____

Yours faithfully,

(SIGNATURE OF TENDERER)

Address _____

Signature of witness: _____

Dated _____

Address _____



ICAR - CENTRAL INSTITUTE OF FISHERIES EDUCATION

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ANNEXURE - II



ANNEXURE TO SCHEDULE TO TENDER (to be returned by Bidders along with the Tender duly signed)

1. GENERAL

Tenders should furnish a clear declaration as follows:

I/We declare that I am/we are:-

- (I) Manufactures
- (II) Manufacture's authorized agents.
- (III) Holders in stock of the stores tendered for.

(Strike out what is not applicable)

2. CONDITIONS OF CONTRACT.

Printed on cyclostyled or such terms & conditions of the tendering firms not appearing in the body of the tender, will not be considered as forming part of their tender. Tendering firms should, quote on the basis of the conditions of contract applicable to the Invitation to Tender are not acceptable to the tendering firms they should specifically state deviation there from the body of their tender.

3. PRICES :

- a) Prices must be in terms of new coinage system, via Rupees and Paise.
- b) The unit prices should be for the same units indicated in the schedule to tender inquiry and not any other unit.
- c) Prices quoted should be invariable for delivery Station of Destination in India & exclusive of charge as packing forwarding, freight insurance, excise custom, duty, Octroi etc where ever applicable, which should be indicated separately in clear terms as mentioned in item 9 of invitation to tender & instructions to tenders.
- d) Quantity discount, if any, should be indicated prominently.
- e) The F.O.R. Station of Dispatch Prices shall be deemed to include free delivery to the consignee situated within Municipal Corporation limits/radius of 10 kilometers from the firm's premises in case of local delivery.
- f) **Offers on firm price will only be accepted and multi quotation shall be rejected.**

5. CUSTOMS DUTY:

I. For imported stores offered against forward delivery, the tenders shall quote price thereto exclusive of custom duty. **The quotation shall specify separately the F.O.B. Price, C.I.F. Price & the custom Duty payable.** They will also indicate correctly the rate of customs duty applicable along with Indian Customers Tariff number.

II. In cases where all the tenders have quoted only for imported stores against forward delivery the tenders will be on prices exclusive of customers duty. In such cases, the amount of Customs duty as legally livable calculated with reference to the tariff value of the stores declared by the tenders in their tender, but not exceeding the actually paid, will be reimbursed to the successful tender.

III. Customs Duty actually paid, not exceeding the amount legally livable, will be provisionally reimbursed to the successful tender to the extent of 90% on production of relevant document (bill of entry etc.) along with advance payment of 90% that may be stipulated in contract provided that the said imported stores are delivered in full or before the date quoted in the contract and accepted by the Council/CIFE MUMBAI in case of delay in the delivery thereof, only 90% of the Customs duty as defined above will be subject to final adjustment on satisfactory completion of the supply stipulated in the contract, If is a specific condition of this Tender Inquiry that any increase in customs duty payable or paid by the successful tender due to the delivery of the said imported stores or part thereof alter the date of delivery stipulated in the contract shall not be reimbursed.

IV. If the purchaser is of the opinion that the Custom Duty has been wrongly assessed either because of wrong classification or any reason whatsoever, the supplier shall be bound at the request of the purchaser to pursue all legal reediest to challenge that assessment at the suppliers cost. If, as a result of such proceedings a refund is obtained, it shall be deposited forthwith by the supplier with the Director, CIFE Mumbai, India.

6. TRANSIT INSURANCE.

The purchaser will pay separately for transit insurance, in case of imported equipments only. The supplier will ensure that the entire stores contracted for arrive in good condition at destination.

The consignee will, as soon as possible, but not letter than 30 days of the date of arrival of stores at destination, notify the supplier of any loss or damage to the stores that may have incurred during transit,

7. PRICE PREFERENCE FOREARLIER DELIVERY :

It should be noted that if a contract is placed on a higher tender as a result of this invitation to tender in preference to the lowest acceptable offer in consideration offer earlier delivery the supplier will be liable to pay to the Council / CIFE Versova Mumbai the difference between the contract rate & that of the lowest acceptable tender on the basis of F.O.R., destination including all elements of freight, Sales tax local taxes, duties, & other incidentals in case of failure to complete supplies in terms of such contract within the date of delivery specified in the tender and incorporated in the contract. This is in addition to & without prejudice to other right under the terms of the contract.

8. PAYMENT TERMS:

(I) For Domestic/ Indigenous goods /stores not requiring, installation & Commissioning, 100% payment shall be released on receipt and acceptance of goods and for goods requiring, installation & commissioning by the supplier 90% payment shall be released on receipt and acceptance of goods by the institute and balance 10% shall be released after successful installation, commissioning and demonstration by the supplier.

(II) For Imported Goods where installation, erection and commission are not the responsibility of the supplier 100% net FOB/FAS price shall be released against invoice, shipping documentations, inspection certificate (Where applicable), manufacturer test certificate etc. Cases where installation, erection and commissioning are the responsibility of the supplier 90% net FOB/FAS Price will be released against invoice inspection certificate (Where applicable), shipping documents etc. and balance after 21-30 days of successful installation and commissioning at the site and accepted by CIFE/ICAR.

(III) If payment is desired to be made to the Suppliers Bankers or other parties, the endorsement must be completed in the bill form & signed separately. & the word self-scored out in addition a power of attorney or transfer deed will be necessary in such cases conferring authority on the Bankers or the party concerned to receive payment on behalf of the contractor.

(IV) Payment shall be released by Cheque/ Demand draft by speed post within 30 days after acceptance of goods, installation, commissioning, Demonstration as the case may be to the Domestic / Indigenous supplier.

(V) For goods which are imported payment will be made by establishing irrevocable letter of credit (L/C) through S.B.I. Trade Finance CPC, TFCPC, Hallmark Business Plaza, 2nd Floor, Sant Dnyaneshwar Marg, Bandra (E) Mumbai. Or by Wire Transfer, after receiving material or proof of dispatching the consignment (i.e. Bill of lading/Airways bill, Packaging list, etc). In no case payment in advance will be made.

9. ADDITIONAL PARTICULARS TO BE FURNISHED BY THE TENDERER:

Tenders shall submit along with their tenders:-

- (i) Permanent Account Number along with photo state copy of PAN Card.
- (ii) Name & full address of their Banker.
- (iii) The equipment they possess for the manufacture of stores & for quality Control.

10. GUARANTEE/ WARRANTY:

The tenders shall furnish along with their quotations the under noted guarantee/ warranty.

- (i) Guarantee that they will supply spare parts if & when required on the agreed basis of or an agreed price. The agreed basis could be an agreed discount on the published catalogues or on agreed percentage of profit on the landed cost.
- (ii) Warranty to the effect that before going out of production for the spare parts they will give adequate advance notice to the purchaser of the equipment so that the latter may undertake the balance of the life requirements.
- (iii) The warranty to the effect that they will make available operation manual (s), the blueprints or drawings of the equipment/spares, if any, when required in connection with the main equipment.
- (iv) The contractor shall furnish the following warranty in case contract is placed on him :-

The contractor/seller hereby declares that the good/store, articles sold to the buyer under this contract shall be of the best quality & workmanship & shall be strictly in accordance with the specification & particulars contained/mentioned in the clause 8 of general conditions of contract applicable to contracts placed by the ICAR or Research Instt. Under it & sub-clause here & the contractor/seller hereby guarantees that the said goods/stores/articles would continue to confirm to the description & quality aforesaid for a period of one year from the date of delivery of the said goods/stores/articles to the purchaser & that notwithstanding the facts that the Purchaser(Inspector may have inspected and/or approved the said good/stores/articles, if during the aforesaid period of one year the said good/stores/articles be discovered not to confirm to the description quality. On such rejection the good/articles/store will be at the seller's risk & all the provision herein contained relating to rejections of goods etc. shall apply the contractors seller shall if so be called upon to replace within a period as may be extended from time to time by the purchaser in his discretion on an application made thereof by the purchaser & in such an event the above mentioned warranty period shall apply to goods/stores/articles replaced from the date of replacement thereof otherwise the contractor/seller shall pay to the purchaser such damages such damages as may arise by reason of the breach of the condition herein contained. Nothing herein contain prejudice any other right of the purchaser in that behalf this contract or otherwise.

11. JURISDICTION:

All questions disputes or difference under, out of or in connection with the contract if concluded shall be subject to the exclusive jurisdiction of the Court within the local limits of whose jurisdiction the place which the Acceptance of Tender is issued, is situated i.e. Mumbai.

Dated _____

(Signature of Tenderer)

**ANNEXURE -
III**



ICAR - CENTRAL INSTITUTE OF FISHERIES EDUCATION

(Deemed University), Indian Council of Agricultural Research

PanchMarg, Off Yari Road, Versova, Andheri (West), Mumbai-400061

Tel. No. 022-26361446/7/8, Fax No. 022-26361573 Web Site : www.cife.edu.in



ANNEXURE TO SCHEDULE TO TENDER

(to be returned by Bidders along with the Tender duly signed)

TENDERERS MUST GIVE SPECIFIC ANSWERS AGAINST EACH OF THE FOLLOWING QUESTIONS. TENDERS CONTAINING EQUIVICAL OR EVASIVE REPLIES WILL BE IGNORED

1. Whether stores offered conform to particulars quoted in the schedule: if not, details of deviations must be stated here.
2. (I) Brand
(II) Name & Address of manufacture:
(III) Station of manufacturer
3. Guaranteed date by which delivery can be completed.
4. **PACKING THAT IS PROPOSED TO BE EMPLOYED.**
Whether specification packing will be adhered to:
5. Whether sample submitted.
 - (1) Stock in hand at the Present time consist of
 - (a) (Held by us _____)
 - (b) Held by M/S _____ over which we have secured an option
 - (2) Stock enrouted to India.
 - (3) If the stores offered are manufactured in India whether all the raw materials, components etc., used in their manufacture are also produced in India. If not give details of materials components, etc. that are imported and their countries of origin. A clear up of the indigenous and imported components together with their value and the proportion it bears to the total value of the stores should also be given.
6. Raw materials are held in stock sufficient for the manufacture of
7. (I) State specifically whether the price tendered by you is to the best of your knowledge and belief , not more than the price usually charged by your for the stores of the same nature, class or description to any private purchaser domestic or foreign, as well as purchaser Government, Autonomous Organization etc. If not, state the reason thereof and also indicates the margin difference.

(II) In respect indigenous stores for which there is controlled price fixed by law, the price quoted shall not be higher than the controlled price. If the price quoted exceeds the control price the reason thereof shall be specifically stated.
8. Business name constitution of tendering firm registered under :-
 - (i) The Indian companies Act 1956
 - (ii) The Indian Partnership Act 1932 (Please give the names of parties).
 - (iii) Any Act, if not, who are the owners (Please give full names).

9. Do you agree to the arbitration clause stipulated? (Your acceptance or not acceptance on this clause will not influence the decision of the tender. It should however, be noted that an omission to answer the above question will be deemed as an acceptance of the clause).

(FOR PARTNERSHIP FIRMS WHETHER REGISTERED OR NOT REGISTERED UNDER INDIAN PARTNERSHIP ACT 1932)

Should the answer to this question by a partnership firm be in the affirmative, please state further

(a) Whether by the partnership agreement authority to refer disputes concerning the business of the partnership to arbitration has been conferred on the partner who has signed the tender.

(b) If the answer to (a) is in the negative, whether is any general power of attorney executed by all the partners of the firm authorizing the partner who has signed the tender to refer dispute concerning business of the partnership to arbitration.

(c) If the answer to either (a) or (b) is in the affirmative, have you already furnished a copy of either the partnership agreement or the general power of attorneys the case may be to CIFE (ICAR) Mumbai. Please quote the reference to the communication by which this was done.

N.B.: If of neither the partnership agreement nor the general power of attorney has previously been furnished to the CIFE (ICAR) Mumbai, please attach to the tendered copy of other documents on which reliance is placed for authority of partner or the partner or the partners signing the tender to refer disputes to arbitration. The copy should be attested by a notary public or its execution should be admitted by affidavit on a properly stamped paper by all the partners. If-Where authority to arbitration has not been given to the partner signing, the tender must be signed by every partner of the firm.

10. (FOR MANUFACTURING FIRMS)

- i) What is your installed capacity?
- ii) What is your working capacity?
- iii) What is the existing load?
- iv) What portion of your capacity are you prepared to reserve and allocate to this Rate Contract?

(FOR SOLE AGENTS/STOCKIST)

- i) What is your present stock?
- ii) What is the column of order (including Government and others) pending with you at present?
- iii) What is the rate of issue?
- iv) What is the rate of issue?

11. i) What stock you will maintain at each importance centre in India.

ii) What is the time and rate required for replenishment of the stocks at these rates?

12. Whether earnest money has been deposited? If so, the receipt No. Date & Amount deposited quoted.

Date _____

(Signature of Tenderer)



ICAR - CENTRAL INSTITUTE OF FISHERIES EDUCATION

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ANNEXURE TO SCHEDULE TO TENDER

(To be returned by Bidders along with the Tender duly completed and signed)

Name of Equipment: _____

Item No. : _____

Sr.No.	Description	Qty.	Rate	Total

Gross total cost ` _____ (in figures) (` _____
_____ (in words).

We agree to supply the above goods in accordance with the Technical specifications for a total contract price (Including all taxes & Octroi, Transportation, Installation Freight charges, etc.) of ` _____

(in figures) (` _____

_____ (in words) within the period specified in the invitation for Quotations.

We also confirm that the normal commercial warranty/guarantee of _____ months shall apply to the offered goods.

(Bidder)

Name : _____

Signature : _____

Date : _____

Equipment Specifications

DIVISION: AQUACULTURE

Item No. 1: Colour Analyzer for Ornamental Fish (EFC)

Technical specifications

- Benchtop Color measurement Spectrophotometer for Colour Measurement of products like dry fish powder, feeds, fish skin.
- Complete with Ring & Disk set as well as glass sample cup.
- Port insert for sample cup.
- Sample cup opaque cover.
- 45°/0° Geometry for Visual Correlation.
- 45° circumferential Illumination using a cylindrical mirror & 0° viewing.
- Should have large port diameter 1.25" for accuracy.
- Convenient Port Up configuration.
- Should provide Calibration standards Traceable to NIST
- Should provide a calibrated diagnostic green tile for performance validation
- Glass Covered Port Insert
- Color Scales: CIE L*a*b*, Hunter Lab, CIE L*c*h, CIE Yxy, CIE XYZ
- Indices and Metrics: E313 Whiteness (C/2° or D65/10°), E313 Tint (C/2° or D65/10°), E313 Yellowness (C/2° or D65/10°), D1925 Yellowness (C/2°), Y Brightness, Z%, 457 nm Brightness, Opacity, Color Strength (Average and Single Wavelength), Gray Change, Gray Stain, Metamerism Index, Shade Number.
- Wavelength range of 400 to 700 nm
- Wavelength Resolution < 3 nm
- Reporting Interval: 10nm
- Detection: 2-channel polychromator with 256-element scanned array (half for sample channel, half for monitor)
- Light Source: Pulsed Xenon lamp > 1 million flashes
- Standards Conformance: CIE 15:2004, ISO 7724/1, ASTM E-1164, DIN 5033, Teil 7 and JIS Z 8722 Condition C
- Built in software. Can be also operated as standalone system.
- Measurement Storage Capacity 2000 readings & 250 product setups.
- Optional Easymatch QC Software for Data Acquisition System.
- Data Views: Color Data, Color Difference Data, Tristimulus Color Plot, Spectral Data, Spectral Difference Data, Spectral Plot, Spectral Difference Plot
- USB Flash Drive Features: Backup of Setups and Data, Setup Transfer to Multiple Units, Data Export to Excel
- Illuminants: A, C, D50, D55, D65, D75, F2, F7, F11.
- Mention warranty period / AMC rates for a total period of two years.

Item No. 2: Laminar Flow (EFC)

Technical specifications

- Class II, Type A2
- Direction of Flow: Vertical
- Exhaust: 30% Exhaust And 70% Recirculation
- Work Area: Four Feet, Work Table: Made Of Stainless Steel 306
- Front Door: Clear, polycarbonate/Toughened Sliding Door of 5-6 mm thickness

- Main body should be made of stainless steel ((304 grade) - Heavy gauge- 16 G)
- It must utilize DC motor technology to ensure lower levels of energy consumption and heat emission.
- Dual blower for independent control for inflow& down flow velocities.
- Filter: High performance particle air filter (HEPA), filtering efficiency 99.995% at 0.3 micron particle size.
- Noise Level: 50-60 DBA+-5%
- Fitted with Fluorescent light and UV light
- Universal Service fittings for gas and air should be provided with gas burner
- Should have Switches & Electrical sockets outlets for 15/5 amp
- The microprocessor must display the number of hours of use on the HEPA filters, air flow, alarm etc. on LED display
- Supplied with stand with castors and additional UV lamp.
- Designed in compliance with International standards with NSF/ANSI 49.
- Certified from any internationally reputed independent accredited agency such as EN12469, TUV Nord (Germany) for complete safety.
- Installation, validation/ performance demonstration should be carried out at site with all testing facilities like velocity test, Laser based particle test etc.
- Mention warranty period / AMC rates for a total period of two years.

Item No. 3: Muffle Furnace (EFC) - Retendering

Technical specifications

Chamber Volume	4.25 ltr
Range	Up to 1200 ^o C
Accuracy	+ / - 3 ^o C of set Value
Heat up time	60 min. upto 1200 ^o C without load
Controller	Digital Display Electronic Controller
Sensor	CR / AL Thermocouple
Internal Chamber	Silimenite muffle
External	Mild Steel Powder Coated
Insulation	Ceramic Wool
Heater Element	Kanthal A1
Door brick insulation	HFK Bricks
Optional	
Safety device	Energy Regulator or Blind Controller
PID Control	Microprocessor based PID Controller
Timer	ON / OFF Cycle
Solid State Fuse	Electronic Solid State Fuse
Air Circulation	VenturyEjector at back as per A.S.T.M.
Electronic requirements AC 230 V & 50 Hz cycle	
Mention warranty period / AMC rates for a total period of two years.	

Item No. 4: Water Bath Shaker with temperature autostat (EFC)

Technical specifications

- Constant temperature water bath
- Temp. range: 5 ^oC above ambient to 100^oC.
- Temp. control: Digital
- Insulation: Glass wool

- Inner chamber: S.S
- Outer: S.S
- Heater: S.S. immersion heater
- Circulation: Circulatory pump with shaker/ stirrer
- Capacity: 20-30 lit.
- Mention warranty period / AMC rates for a total period of two years.

Item No. 5: Water Purification System (EFC)

Technical specifications

- System should contain inbuilt prefiltration containing filter, activated carbon and polyphosphate granules, designed to produce Type II water from tap water
- Prefiltration System: A Two - Stage purification 5 micron and 1 micron polypropylene graded density wrapped type depth filter with low voltage 20 watts powered DC pump with noise levels of 50 Db prefilter should be attached with tap water.
- System should include reverse osmosis (Up to 20% recover) with conductivity sensors before and after the membrane to ensure the quality of purification
- System should have automatic warnings and alarms regarding the water quality
- Resistivity: 5 Mohm.cm at 25°C
- TOC: <30 PPb
- Product water delivery: 3L/hr
- Bacteria < 10 cfu/ML
- The system should be quoted with proper prefilter & Iron Removal Filter
- Mention warranty period / AMC rates for a total period of two years.

Item No. 6: Air Blowers (EFC)

Technical specifications

- Motor capacity: 5 HP, 2880-3000 RPM
- Low Noise Level (65dba Normal, 85 dba Max.)
- Oil-Free Air
- Suitable for Environmental Protection
- No, Vibration
- Cooler running, double sealed
- Provided with inlet and outlet silencer/ filter
- Mention warranty period / AMC rates for a total period of two years.

Item No. 7: Feed Dryer (EFC)

Technical specifications

MOC Internal	Mild Steel Sheet Duly Painted With High Temperature Aluminium Paint
MOC External	Powder Coated Mild Steel Sheet
Heater	Tubular Air Heaters
Temperature Range	Ambient 5°C - 200°C
Circulation	Forced Air Circulation By ¼ / ½ HP Motor & Axial Flow Fan
Insulation	Mineral Wool

MOC Trays	Aluminium
Drip Tray	Mild Steel Painted
Door Gasket	Asbestos Packing Door
Safety Device	Thermostat
Power Supply	220/230V Or 400/430V, 3 Phase A.C. Supply
Inner Size (WxHxD)	965 x 1275 x 1450mm
Tray Capacity	12
Heater Load	4.0 KW
Temperature Controller	Microprocessor Based PID Digital Temperature Indicator-Cum-Controller
Electric Supply	220/230V Or 400/430V, 3 Phase A.C. Supply
<ul style="list-style-type: none"> • Mention warranty period / AMC rates for a total period of two years. 	

Item No. 8: Flame Photometer (Replacement) - Retendering

Technical specifications

- Microprocessor Flame Photometer (2F) with Sodium (Na) & Potassium (K) Filters, Auto 5 Point Calibration
- Additional Filters Calcium (Ca) & Lithium (Li)
- Direct Readout in ppm & Meq/l
- Auto Filter Selection
- Auto Ignition, 20x4 Line
- Single Aspiration
- PC interface, Printer Attachment Facility.
- With compressor and other accessories for lab use.
- 20 x 4 Alphanumeric backlit LCD display
- LPG dry oil free flame system
- Silicon photodiode detector
- Axial flow type atomiser
- Air supply by oil free mini compressor unit with pressure regulator
- Combustion gas LPG controlled by precision regulator
- Software for computer interface
- Mention warranty period / AMC rates for a total period of two years.

Item No. 9: UV visible Spectrophotometer (Replacement)

Technical specifications

- Double Beam Spectrophotometer with samples reference cuvettes position
- Deuterium and Tungsten/Xenon flash
- 190 – 1100 nm
- Concentration, Absorbance, % Transmission, Multi wave length, Spectrum, Kinetics
- Automatic wavelength calibration
- Accuracy: ± 1 nm

- Automatic cell recognition
- Communication interface should be available
- Onsite one year warranty
- Repeatability: < 0.002 A
- Spectral bandwidth 1 nm width microcell optimization Absorbance, % Transmittance, Concentration
- UPS-2 KVA with 30 minutes back up and should be quoted separately
- Sparable suitable cuvette for 1-5 ml
- CE/FDA certified
- Suitable computer for working in software if required
- Mention warranty period / AMC rates for a total period of two years.

Item No. 10: Water Bath (Replacement)

Technical specifications

- Constant temperature water bath
- Temp. range: 5 °C above ambient to 100°C.
- Temp. control: Digital
- Insulation: Glass wool
- Inner chamber: S.S
- Outer: S.S
- Heater: S.S. immersion heater
- Circulation: Circulatory pump with shaker/ stirrer
- Capacity: 20-30 lit.
- Mention warranty period / AMC rates for a total period of two years.

Item No. 11: 300 LPH RO Treatment Plant (SDAE)

Technical specifications

1. Pressure Sand Filter – FRP (12” x 48”) 500 LPH capacity (vertical)
2. Activated Carbon Filter - FRP (12” x 48”) 500 LPH capacity (vertical)
3. Cartridge Filter – FRP (4” x 20”) 1.5 M³/Hr (2 nos)
4. Micro-carbon Filter - PP (4” x 20”) 1.5 M³/Hr (2 nos)
5. Polishing Cartridge Filter - PP (2” x 20”) 1.0 M³/Hr
6. SS Pump (VCMS) – 2.0 HP (12 KG / CM²) 1.2M³/Hr.
7. Pressure Tube – SS (4” x 82”)
8. RO Membrane – TFC POLYAMIDE (4” x 40”) Filmtec, USA
9. Digital TDS Meter – 0 – 200 µS / CM (4 digit)
10. Analogue Pressure Gauge – 0 – 20 Kg / CM² (4 nos)
11. High Pressure Switch – 1 no
12. Low Pressure Switch – 1 no
13. Pressure Control Valve – 1 no
14. Auto Flushing Switch with Solenoid Valve – 1 no
15. Powder coated Electrical Panel Box – 1 no
16. Powder coated Skid Frame – 1 no

The **End Water** quality shall be achieved subjected to:

- Feed quality is same as specified in your enquiry. In case of any change in the quality of raw water, the same may have an implication on the operating parameters and End- water quality of the system.
- Feed limiting condition mentioned in our offer is strictly maintained.
- Operation of Water treatment plant is strictly followed in totality as per our operating manual & instructions.
- Mention warranty / AMC rates for a total period of 2 years.

DIVISION: AEHM

Item No. 12: Bio-Safety Cabinet (EFC)

Technical specifications

- Class II, Type A2
- Direction of Flow : Vertical
- Exhaust : 30% Exhaust And 70% Recirculation
- Work Area : Four Feet, Work Table : Made Of Stainless Steel 306
- Front Door : Clear, polycarbonate/Toughened Sliding Door of 5-6 mm thickness
- Main body should be made of stainless steel ((304 grade)- Heavy gauge- 16 G)
- It must utilize DC motor technology to ensure lower levels of energy consumption and heat emission.
- Dual blower for independent control for inflow& down flow velocities.
- Filter: High performance particle air filter (HEPA), filtering efficiency 99.995% at 0.3 micron particle size.
- Noise Level : 50-60 DBA+-5%
- Fitted with Fluorescent light and UV light
- Universal Service fittings for gas and air should be provided with gas burner
- Should have Switches & Electrical sockets outlets for 15/5 amp
- The microprocessor must display the number of hours of use on the HEPA filters, air flow, alarm etc. on LED display
- Supplied with stand with castors and additional UV lamp.
- Designed in compliance with International standards with NSF/ANSI 49.
- Certified from any internationally reputed independent accredited agency such as EN12469, TUV Nord (Germany) for complete safety.
- Installation, validation/ performance demonstration should be carried out at site with all testing facilities like velocity test, Laser based particle test etc.
- Mention warranty period / AMC rates for a total period of two years.

Item No. 13: Gel Documentation System (EFC)

Technical specifications

- The system should be able to image fluorescent DNA, RNA and protein gels, colorimetric gels & blots and colony arrays. Provision for up gradation should be there.
- Microprocessor controlled darkroom with necessary electronics for controlling all functions of camera, lens and lightning via computer
- Electromagnetic door latch
- UV and white light source: UV Transillumination area with White Light Converter
- Motorized lens with adjustable aperture (f 1.2) or better

- Auto UV shutoff
- High data acquisition
- High resolution CCD camera with minimum 3.8 + mega pixel resolution or more
- Must provide software for imaging and analyzing 1-D electrophoretic gels, dot blots, slot blots, and colony counts. Software should be able to do:
 - Software must have following features
 - Quantitate and analyze a variety of data,
 - Rapid molecular weight determinations with choice of multiple regression models. Band/lane matching analysis
 - Background subtraction correction of gradient gels
 - Annotation tools to add text and lines
 - Molecular weight determination
- A Branded Work Station- Laptop with latest configuration with 17" TFT, Windows XP Pro, compatible must be provided.
- Mention warranty period / AMC rates for a total period of two years.

Item No. 14: Micro Bead Beater (EFC)

Technical specifications

- A compact tabletop system micro homogenizing system is required that should be able to disrupt and emulate a wide range of organisms including bacteria, animal and plant tissues, yeasts, algae, and fungi
- A system with extremely powerful mixing for lysis, grinding & homogenization should be there.
- Should have multiple angle high speed motion for quick disruption of tissues and resistant cells
- Should have wide range of rotation speed settings from 2,000 to 5000 rpm
- Capacity rotor of 2.0ml×12 tubes must be supplied. (optional 6x5 ml tube holder)
- Time setting from min 1 sec - + 200 sec
- Should have LCD digital display with back light
- Safety features for following Lid opening detector, overheating and rotor error should be there
- Preference: Brushless motor realizing.
- Mention warranty period / AMC rates for a total period of two years.

Item No. 15: Electronic balance (EFC)

Technical specifications

- Compact table top electronic balance with user friendly, touch screen panel and digital display, auto guiding for weighing the sample
- Weighing range 0.01-200 gm
- Readability: 0.1mg
- Calibration internal
- Display: LCD or better
- Calibration/ auto adjustment: External
- All-glass draft chamber
- Overload protection
- Mention warranty period / AMC rates for a total period of two years.

Item No. 16: Hot Air Oven (EFC)Technical specifications

- **Power:** 230V, 50Hz single phase AC supply and having temperature ranging between 50-200°C
- **Structure:** Should be made of double walled chamber -Inner made of stainless steel and powder coated outer surface.
- **Heating elements:** Should provide with three heating elements on three sides of the equipment for uniform temperature on all shelves.
- **Fan:** Should be provided with air circulating noise less fan.
- **Digital display:** microprocessor based digital temperature controller with digital display and thermometer should be provided separate
- **Size:** Should have a minimum chamber size of (L*B*H) 450*450*450 with 2 stainless steel trays with holes. Should provide with air ventilations.
- Even heat distribution
- Over heating protection system should be provided.
- Mention warranty /AMC rates for a total period of 2 years.

Item No. 17: Water bath (EFC)Technical specifications

- Table top shaking water bath with lid.
- Double layered stainless steel body
- Temperature range ambient to 80 degree (10-80 degree +/- 1)
- Should have digital display for setting of timer, shaking speed control, temperature control
- Noise free shaking and heavy bottom for avoiding vibrations and movement of the water bath on table
- Adaptor for 50 ml, 250ml and 1 liter flasks
- Capacity 14 L+
- Provision for water draining
- Mention warranty period / AMC rates for a total period of two years.

[DIVISION: FGB](#)**Item No. 18: Refrigerated Centrifuge (Replacement)**Technical specifications

- Max. Speed: 14,500 rpm
- Temperature range between 0°C and + 40°C
- Rotors with lid: 24x 1.5/2 ml tubes; 6x15ml tubes; 6x50 ml tubes
- Metal rotor
- Rotor autoclavable at 120⁰ C
- Chemical resistant rotor and rotor lid
- Digital display of time and speed
- Acceleration time to maximum speed : <13s
- Braking time to maximum speed : <11s
- Automatic imbalance detection
- Noise Level: 50 dBA or less
- Operating at 220 volt 50Hz (Indian conditions)

- Safety lid interlock to prevent lid opening during centrifuge
- Dimensions: compact, table top
- The company should have provided the equipment to at least 5 reputed Institutes
- Mention warranty period / AMC rates for a total period of two years.

Item No. 19: Tissue Homogenizer (Replacement)

Technical specifications

- Processing range : <200 μ L to 100mL
- Probes : stainless steel
- Power Rating : 125 watt
- Speed Control : Variable from 5,000-35,000rpm
- Sound Level : < 72 db.
- Warranty : One year motor warranty
- Standards Approval : CE approved
- Sterilizable dispersing elements/probes for the entire operating range
- The company should have provided the equipment to at least 5 reputed Institutes
- Mention warranty period. Also provide AMC rates for additional 1 year if applicable.

DIVISION: FRHPHM

SECTION: FRM

Item No. 20: Incubator (EFC) - Retendering

Technical specifications

- **Programmable LED-based illumination:**
 - warm white or cool white LED-light panels
 - precise intensity control in the range of 1 % to 100 % of total output
 - user-programmed function (optional) or daylight simulation (optional)
- **Light intensity:**
 - Up to 500 – 1000 μ mol(photon)/m².s (at 30 cm from the light source); optionally up to 1,000 or 1500 μ mol(photon)/m².s (with Light Upgrade, cool white only)
 - Lower panels: up to 100 μ mol(photon)/m².s (at 30 cm from the light source);
- **Day length settings:** Day length adjustable with auto switch off control
- **Temperature control:**
 - programmable controller ramps temperature up or down in the range of +15 to +45 °C (shaking ON, maximum illumination ON)
 - **Intuitive programming:** allows parameter changes to timing, temperature, photosynthetic light, and shaking speed
- **Agitation:** bench-scale orbital shaker with the speed range of 30-500 RPM and loading capacity up to 5 kg (optional)
- **Controlled Temperature Range:**
 - +15 °C to +45 °C (shaking ON, maximum illumination ON)
 - +10 °C to +55 °C (shaking ON, maximum illumination ON) - optional
- **LED Light Illumination:**
 - Upper LED light panel: 25 x 35 cm; white LEDs with added far-red LEDs 735 nm (separately controllable)

- Lower two LED light panels: 33 x 46 cm; white LEDs with added far-red LEDs 735 nm (shared control)
- **External Dimensions:** 170 x 60 x 62 cm (H x W x D)
- **Internal Volume:** 265 L
- **Compressor:** 220 - 240 V; ~ 50 Hz; 200 W ; 1 A
- **Power/Power Input:** 600W/900 W
- **Mention warranty period / AMC rates for a total period of two years.**

SECTION: PHT

Item No. 21: Hydraulic Sausage Filler/ Stuffer (Proj)

Technical specifications

- Should be Handy unit easy to operate capable of filling fish mince/surimi in casings
- Should operate at Indian conditions at 220v/50hz
- Must have changeable dia functions
- Hydraulic operated stuffer should have capacity of 15 lit capacities
- Should have stainless steel body suitable for food handling and cleaning
- Electrical appliances must confirms to safety levels
- Preferably Low noise and high speed of operation
- Should be adoptable to different size of sausages
- The unit should be with wheels for easy relocation/and handy to carry
- Capacity 200 kilo or more per hour
- Mention warranty and AMC rates for a total period of 2 years

Items 22 – 24 : Cancelled

Item No. 25: Patty Maker (Proj)

Technical specifications

- Manually operated Table top model
- Device to regulate the thickness of burger patty (0 to 40 mm)
- Totally rust proof can be easily dismantled for cleaning
- Patty round mold adjustable if possible 55 to 100mm hole plate
- Should be light weight and portable
- Must qualify safety use and easy cleaning in general
- Mention warranty and AMC rates for a total period of 2 years

Item No. 26: Descaling Machine (Proj)

Technical specifications

- Fish scaling machine to remove different types of scales
- Should be fitted with motors that can operate for long time
- Should be insulated to provide safety to the user
- Electrical components should have well protection from water
- Stainless steel/rust proof fish contact surfaces
- Should not hold fish particles and easy to clean
- Operable at Indian conditions 220v/50 and portable
- Mention warranty and AMC rates for a total period of 2 years

Item No. 27: Sausage clipper (Proj)Technical specifications

- Should have high speed closing of filled sausage casing with aluminum clip
- Must have stainless steel body
- Should be fully pneumatic operation
- Must use multiple size clips can be used
- Should be light weight and portable
- Clip size
- Mention warranty and AMC rates for a total period of 2 years

Item No. 28: Meat Slicer (Proj)Technical specifications

- Should operate in Indian condition 220/50 hz
- Must provide electrical safety
- Should be able to slice fish/meat of size 5 - 20 mm (adjustable) or more
- With rotary knife of approximately 25 -30 cm
- Should have Medium and high quality stainless steel
- Must have energy efficient motor with cooling fan
- Should be capable of cutting frozen meat
- Must takes care of operators safety
- Should have Inbuilt knife sharpener
- Must qualify safety use and easy cleaning in general
- Mention warranty and AMC rates for a total period of 2 years

Item No. 29: Tray Packer (Proj)Technical specifications

- Should provide constant temperature during packing
- Should provide auto shrink and auto cut facility
- Should able to pack for foods, fruits, and fast foods
- Electrical appliances must confirms to safety levels
- Preferably Low noise and high speed of operation
- Light in weight and portable
- Mention warranty and AMC rates for a total period of 2 years

Item No. 30: Centrifuge (Proj)Technical specifications

- Micro process controlled – Graphical display for RCF and timer
- Should operate in both refrigerated and in the temperature range RT (0 – 37 degree Celsius)
- Should be ISO certified company
- Should have Brushless Induction Motor
- Preferably Low noise (< 100 db)
- Having Door locks system (Safety of Operation)
- Electrical safety feature
- Should operate 220-230v/50-60 Hz India condition
- 6x50 ml angle rotor – to reach 11500-12000 rcf

- Available of timer up to 90 min operation
- Body with mild steel with corrosion proof coating or stainless steel
- Mention warranty and AMC rates for a total period of 2 years

Item No. 31: Microwave Muffle Furnace (EFC)

Technical specifications

- High Temperature Furnace
- Electrical Ratings: 220-240 VAC, 50 Hz, 10 amps
- Power Output: 1350 watts \pm 50 watts
- Magnetron Frequency: 2455 MHz
- Furnace Chamber Volume: 1.8 liters
- Furnace Chamber Dimensions: 21.0(W) x 11.6(D) x 7.6(H) cm
- Holding capacity: up to 15 (25-mL) crucibles
- Programmable temperature control
- Auto-Start/Auto-Shutdown software
- Built-in exhaust system
- Entry and storage of up to 20 methods
- Built-in calibration software
- Over-temperature and thermocouple failure safeguards
- Built-in system diagnostics
- Automatic door interlocks
- With IR door sensor, holder for door and manual door stop
- Mention warranty period and further AMC rates for a total period of two years.

DIVISION: FNBP

Item No. 32: Pulveriser/Grinding mill (EFC)

Technical specifications

- Scale: Small scale for laboratory and gives a better indication of production process capability
- Capacity/Power: 1 to 2 HP electric motor with production capacity of 5-10 kg/hrs
- Process type: Mills or crushes size reduction of dry solids agricultural grains.
 - Continuous/semi-continuous process of the materials
- Equipment type: Cone / Gyrotory Crusher/ Screen Mill / Hammer Mill/ other
- Screen no: 0.17 mm to 0.8 mm which can grind wheat, soybean, oil cakes, maize and other agricultural grain to the desired size
- Hoppers: 1 to 3 hoppers suitable for grinding of the grains& oil cake
- Rotors: Rotor having 4 to 8 arms directly couple with 1-2 HP electric motor
- Mention warranty period and further AMC rates for a total period of two years.

Item No. 33: Small scale sinking fish feed pelletizer (EFC)

Technical specifications

- Small scale feed pelletizer driven by electric motor which makes it more energy-saving and environmental friendly.
- Simple to operate and spare parts easy to change and equipped with high quality alloy steel roller and die by advanced craft.
- Electric motor power: up to 2HP
- Pelleting diameter: 1.5 to 6 mm for different kind of fishes and can make according to preference with providing extra pelleting die of different range

- Capacity (kg/hr): 5 to 10 kg capacity of pellet diet production
- Electric motor rotation: 800-2000 RPM
- Mention warranty period and further AMC rates for a total period of two years.

Item No. 34: Respirometer (EFC)

Technical specifications

- The system should essentially have at least 5 L chamber capacity of swim tunnel
- It should essentially support fish under study from 5.0 gram to 25.0 gram size.
- System should have speed regulators and should be operated at 3 to 150 cm/sec speed.
- It should have a pump with motor with motor size 0.4 KW at 230 Volt / 50 Hz.
- It should flush flow rate of 5-10 L /minute.
- It should have in build high sensitivity DO and temperature probe
- Should have an automatic calibration for all the measured parameters
- All essential accessories to be quoted with the main equipment and not as optional.
- Mention warranty period and further AMC rates for a total period of two years.

Item No. 35: Electronic Balance (EFC)

Technical specifications

Capacity	120 gm or 150 gm
Least capacity	0.1/0.01 mg
Readability	≤ 0.05 mg
Linearity	± 0.1 mg
Response time	3s or less
Pan size	More than 80 mm diameters
Other Specifications	With backlight display, inbuilt calibration weight, PSC, interval timer output, analog display
<ul style="list-style-type: none"> • Mention warranty period / AMC rates for a total period of two years. 	

[POWARKHEDA CENTRE](#)

Item No. 36: Centrifuge (EFC)

Technical specifications

- Microprocessor controlled
- Minimum speed should be 200 rpm and maximum speed should be 14000 rpm or more
- Pre selection time : 0-60 min in 1 min increment and continuous run facility
- Temp start range from at least 4°C onwards
- Imbalance switch off
- Automatic rotor recognition facility
- Motorized lid lock
- Programme memory for minimum 10 run
- Quick button for short runs
- Digital display for both preset and actual values for speed, RCF, temp and time, RCF run facility
- **ROTOR:** Fix Angle rotor for 1.5 ml /2 ml microtubes, Fix Angle rotor for 5 ml tubes
- Mention warranty period / AMC rates for a total period of two years.
- To be **delivered at CIFE Centre Powarkheda, Madhya Pradesh.** Taxes/ Delivery charges, if any, to be quoted separately for these locations.

Item No. 37: D. O. Meter (EFC)Technical specifications

- Accuracy: DO: $\leq 0.5\%$ (± 1 digit)
- Calibration Curves Display: Slope and assymetry potential displayed
- Dimensions (H x W x D): 38 mm x 73 mm x 186 mm
- Display: Backlit LCD with pictograms
- Display Type: 128 x 64 pixel, simultaneous readings
- DO Measurement Range: 0 to 60 mg/L
- DO Resolution: 0.01 mg/L depending on measurement range
- DO sensor calibration: 1 to 2 point, saturated air, 0% DO
- Mention warranty and further AMC rates for a total period of two years.
- Delivery at Powarkheda, M. P. Please mention freight charges, taxes as applicable.
-

Item No. 38: Refrigerated CentrifugeTechnical specifications

- Microprocessor controlled
- Minimum speed should be 300 rpm and maximum speed should be 14000-15000 rpm or more
- Pre selection time : 0-60 min in 1 min increment and continuous run facility
- Temp range - 5 to -10 °C
- Imbalance detector /switch
- Automatic rotor recognition facility
- Motorized lid lock
- Radius correction feature for accurate g value
- Pre cooling facility for rotors
- Programme memory for min 10 run
- Digital display for both preset and actual values for speed, RCF, temp and time, RCF run facility
- Power requirement: 220-230 V Preferably
- ROTOR
- Fix Angle rotor for 24x 1.5 ml/2ml
- Fix Angle rotor for at least 8x 5.0 ml

Item No. 39: Colour Measurement System (EFC)Technical specifications

- Spectral range: 400-700 nm
- Spectral resolution: 1-2 nm
- LCD display
- Portable to use
- Photometric range: 0 to 100 %
- Specifically for colour of fish and fish products
- Light source: Xenon lamp

- Chromatic system: CIE, L* a* b*, XYZ, L a b, ΔE, Hunter l a b difference
- Illuminant: CIE illuminant C or D65
- Multicalibration and back up of data
- Superior battery performance with sparable battery
- Data memory at least for 100 spectral storage
- Appropriate software with provision for statistical calculation
- All the accessories including computer and data input system
- Mention warranty period and further AMC rates for a total period of two years.

Item No. 40: Rotary Vacuum Evaporator (EFC)

Technical specifications

- Mention warranty / AMC rates for a total period of 2 years
 - Driving unit: Induction Motor with electronic speed control
 - Condenser: Vertical Double spiral glass coil
 - Drive unit: Motorized drive unit
 - Jack up Function: for lifting of the flasks
 - Rotation speed: 280-300 rpm with microprocessor control
 - Display: Digital display of rotation speed and heating bath
 - Evaporating flask from 50-4000 ml can be used on the same joint adapter without additional connection.
 - Vacuum seal: PTFE seal (should be covered in standard warranty period of three year)
 - Liquid contract parts: Glass & PTFE
 - **For Water bath:**
 - Temperature control range: Ambient to 210°C or higher
 - Accuracy: ± 1°C
 - Bath Features: Inner Teflon coating and outer heat resistant cover
 - Bath Capacity: should be between 4-5 L
 - Bath diameter: 250-300 mm
 - Vapor temperature sensor
 - Temp. controller: microprocessor based PID control
 - Safety features: overheating protector, auto cut off at 5°C secondary over temperature cut off 250°C
 - **For vacuum pump:**
 - Two stage oil free diaphragm pump made from chemically resistant material
 - Suction capacity in m³/hour: 2.0 m³/hour or better
 - Vacuum pump should have ultimate vacuum of 7m bar or better
 - Power input in watt: 180
 - Supply voltage (V/Hz): 230/50

Item No. 41: Stereo Zoom Microscope (EFC)

Technical Specifications

- Mention warranty / AMC rates for a total period of 2 years
 1. Zoom body 10:1 zoom microscope body with aperture diaphragm
 2. Focusing unit Fine and coarse focusing unit
 3. Trinocular Tube 30 degree trinocular tube,
 4. New SDF objectives provide highest N.A with 900 lp/mm resolution
 5. Eyepiece Wide field eyepiece 10X, focusable
 6. Objective: Distortion free plan apochromat parafoval objective 1X (W.D.60mm), N.A 0.15
 7. Transmitted Stand Thin type LED transmitted illuminator,
 8. Illumination mode and contrast adjustment between bright field, oblique & dark field illuminations. Life of the lamp minimum 10,000 Hrs. desirable.
 9. Power Cord, AC adapter, Black and white reversible stage plate with ESD capability on black surface.
 10. Reflected cold Light Illumination:
 11. Minimum 12 V 100 W Light source for light guide. Interlock dual light guide preferable for high contrast images.
 12. Microscope will be upgradable in drawing attachment & fluorescence attachment etc

PHOTOGRAPHY ATTACHMENT:

- I. 2.83 Million Pixels colour CCD camera with fps of 25 in 1920X1440.Camera should be USB inter phase. Exposure time should be in both option manual (1/20000 to 8 S) and Auto (1/20000 to 2 sec).
- II. Camera should come with the image capture and analysis software.
- III. Vendor should provide with the minimum of 1 year warranty from the date of installation.

KAKINADA CENTRE

Item No. 42: Fully automatic Orbital shaker

Technical specifications

- Fully automatic digital orbital shaker with speed range of 15 to 500 rpm \pm 1rpm.
- Should have temperature range of 15°C below ambient to 60°C.
- Should have PID (Proportional Integral Derivative) temperature Controller.
- It should have digital LED display with temperature, speed and timer options.
- Should have universal platform with six different clamp options with maximum capacity up to 2000 ml flask
- Horizontal mixer.
- Mention warranty period / AMC rates for a total period of two years.

TSP

Item No. 43: Field Oxygen and pH meter

Technical specifications

- Galvanic probe design for immediate DO measurements in mg/l (ppm) or % saturation
- Powerful pH Mode:- 2.00 to +16.00pH range, \pm 0.01pH, 5-point auto calibration
- ATC from 0o to 50oC for DO and pH
- Display probe diagnostics, slope, offset and mV values
- Data memory for 50 readings with temperature and date/time stamp
- IP 67 waterproof construction, floatable, washable to maintain reliable operation
- Hold function, ready indicator, and auto shutoff
- Mention warranty period / AMC rates for a total period of two years.

ROHTAK CENTRE

Item No. 44: Electrophoresis Unit

Technical specifications

Sr. No.	Technical specification	Requirements
1.0	Application: Electrophoresis is a technique used for the separation of deoxyribonucleic acid, ribonucleic acid, or protein molecules using an electric current applied to a gel matrix. It is usually performed for analytical purposes, and will be used as a preparative technique prior to use of other methods such as PCR, DNA sequencing etc.	
2.0	Instrument Composition	
2.1	Horizontal Electrophoresis Unit for DNA	Two numbers
2.2	Vertical Electrophoresis Unit for Protein	Two numbers
2.3	Power Pack supply	Two numbers
3.0	Specifications for Horizontal Electrophoresis Unit for DNA	
3.1	Main Unit	Single mould buffer tank with separate lid
3.2	Gel tray	UV Transparent
3.3	Gel Size	~7 X 10 cm with provision for fitting 2 combs
3.4	Gel Caster	Adjustable for multiple gels

3.5	Hand casting	Multiple options for hand casting gels of different sizes
3.6	Combs	~12 well comb (set of 2)
3.7	Safety certificate	IEC 1010 (EN 61010) Electrical safety certification.
4.0	Specifications for Vertical Electrophoresis Unit for Protein	
4.1	Complete unit with lower and upper tanks having platinum electrodes and gel casting arrangement, clamps and leads	
4.2	Gel Capacity	No of gels 2
4.3	Glass plate size	~10 x 10 cm with comb for ~ 12 wells.
4.4	Spacers	1 mm and 1.5 mm spacer and comb sets
5.0	Specifications for Power Pack	
5.1	Volts	0-300 V
5.2	Current	0- 400mA
5.3	Power	75 W or more
5.4	Type of out put	Constant current, Constant Voltage options
5.5	Timer	1- 20 hrs
5.7	Power settings	Programmable
5.8	No of out put	Compatible with both electrophoresis

- Mention warranty period / AMC rates for a total period of two years.

Item No. 45: Autoclave Vertical

Technical specifications

Sr. No.	Technical specification	Requirements
1.0	Technical:	Fully automatic vertical autoclave, suitable for sterilization under working steam pressure up to 15 PSI or more and temperature of 121° C or more.
2.0	Design:	Unit made of SS 304 chamber, approx inner dimensions 16" to 25" (diameter x depth). Lid made of heavy gauge lid, die pressed S.S.304 with pressure gauge, steam release valve & necessary Safety valves, with foot lifting arrangement to open lid, programmable, with all functional accessories.
3.0	Capacity:	70 to 80 Litre
4.0	Display:	Time and temperature LCD display Alarm: Low water level alarm and cut off / Sensor open alarm
5.0	Accessories:	Perforated carriers made up of SS 304 (3-4 Nos.)
6.0	Power Supply:	220/230 volts AC-50 Hz or Suitable power supply

Item No. 46: Electronic Balance

Technical specifications

Sr. No.	Technical specification	Requirements
1.0	Technical:	Single pan Analytical Balance with highest accuracy for weighing processes; readouts to have at least four decimal places. Equipped with a draft shield chamber to eliminate interfering ambient effects.
2.0	Weighing Range:	0.015 mg up to 60 gms. and 0.025mg above 60 gms
3.0	Readability:	0.1 mg or better
4.0	Calibration:	External

5.0	Display:	LCD Display
6.0	Verification interval:	0.001 g
7.0	Pan Size:	80 - 100 mm
8.0	Power Supply:	210-240V/50-60 Hz

Item No. 47: pH and Conductivity meter

Technical specifications

Sr. No.	Technical specification	Requirements
1.0	Display Range	0.00 to 14.00 pH
2.0	Resolution / Accuracy	±0.005 pH
3.0	Calibration	5 point calibration
4.0	mV Range	999.9 . +999.9 mV; -1,999 ... +1,999 mV
5.0	Resolution / Accuracy	- 0.1 mV / ±0.3 mV (± 999.9 mV); 1 mV/ ±1 mV (beyond ± 999.9 mV)
6.0	Conductivity	0.0 µS/cm ... 500 mS/cm in 5 measuring ranges or AutoRange additionally for K = 0.1 cm ⁻¹ : 0.00 µS/cm ... 19.99 µS/cm K = 0.01 cm ⁻¹ : 0.000 µS/cm . 1.999 µS/cm
7.0	Specific resistance	0.000 ... 1999 MΩcm
8.0	Cell constants	Theoretically 1.0 (Provide NIST traceable certificate)
9.0	Salinity Range	0.0 to 70.0 (according to IOT)
10.0	Temperature Range	: - 5°C to 105°C
11.0	Resolution / Accuracy	0.1°C/± 0.1°C
12.0	Temp. Compensation	Automatic
13.0	Reference Temperature	Selectable between 20 & 25°C
14.0	Data Output	Via display and USB Port
15.0	Power Supply	Mains 230 ± 10 volts, 50 Hz, AC power and 4 x 1.5 Volt Rechargeable AA batteries
16.0	Protection Type	IP67, IP 67
17.0	Warranty	3 years on instrument & 1 year on electrodes.
18.0	Internal Diagnostics / Self Test Facility	Yes
19.0	Splash Proof Housing	Yes
20.0	Display	LCD , also display condition of Electrode
21.0	Simultaneous Temperature & pH Display	Yes
22.0	Membrane Keyboard with pressure defined points	Yes
23.0	Memory Data Sets 800 GLP Supports Functions	Yes
24.0	Calibration Protocol	Yes
25.0	USB Port	Yes (To attach normal printer & PC)
26.0	Limit Value Settings	Yes
27.0	Printer Option	Yes (Thermal Printer not accepted)
28.0	Sensor Validation	Yes
pH Electrode Specifications		
1.0	Measuring Range	0.....14pH

2.0	Operating range (Deg C)	0...80
3.0	Reference Electrolyte	Gel with one year replacement warranty
4.0	Membrane Shape	Cylindrical
5.0	Membrane resistance at 25 Deg C	< 1Gohm
6.0	Diaphragm	Ceramics /Glass
7.0	Shaft Material	Noryl / Epoxy
8.0	Temperature Sensor	built in NTC
Conductivity Electrode Specifications		
1.0	Electrode Material	Graphite
2.0	Shaft Material	Epoxy
3.0	Cell Constant	K = 0.475 /cm
4.0	Measuring Range	1 uS/cm to 2S/cm
5.0	Temperature Range	0 100 Deg C
6.0	Min./Max. Immersion Depth	36/120 mm

Item No. 48: Student microscope

Technical specifications

Compound Microscope – 1 No

- Body: Binocular, sturdy, stable base body with focus adjustment controls.
- Eye piece: Paired, high quality, (the image of the object as seen through the binocular eyepiece should be well defined centrally in at least 2/3 field of view), achromatic, wide field, 10x with inbuilt pointer. The eyepiece should be aplanatic and have a minimum field number of 18 Diopter adjustment must be present on one/ both eye pieces or on the eye piece tube.
- Optical system should be infinity corrected.
- System complete with illumination system is required.
- Objective: Three objectives 10x, 40x, 100x. 10x and 40x objectives should have numerical apertures of 0.25 and 0.65 respectively and should be of spring loaded type or otherwise. 100x should have numerical aperture of 1.25 and should be of oil immersion and spring loaded type. Suitable prominent marking should be provided on 100x for easy identification. Unbreakable containers to be provided for storing the objectives. All objectives should be wide field, achromatic and parafocal.
- Making for the Objectives :Each objective should be engraved with the following information's :-
 - Name of the manufacturer
 - Magnification and numerical aperture, for example, 10x/0.25
 - 100x objective should be engraved with the word 'Oil' in changing from one objective to another or reintroducing the same objective by rotation of the nosepiece, the object at the center of the field should not appear displaced by more than 0.02 mm in the object plane in any direction.
- Nose piece: Revolving nose piece to accommodate a minimum of three objectives with click stops. It should be provided with ribbed grip for easy rotation mounted on a precision ball bearing mechanism for smooth and accurate alignment. Extra ports if any should be fitted with dust proof metallic/ebonite caps.
- Stage uniformly horizontal, mechanical stage having dimensions of length 140 mm (+/- 20mm) with fine vernier graduations (minimum reading accuracy of 0.1 mm). The stage should be provided with spring loaded slide holder for exact positioning of specimen/ slide. It should be designed with convenient sub-stage vertical coaxial adjustment for slide manipulation. The stage should have ball-bearing arrangement to allow smooth travel in transverse directions i.e. 80 mm (+/-5mm) and front to back direction, 50mm (+/- 5mm).

- Sub-stage condenser: Abbe-type condenser, numerical aperture (N.A.) 1.25 focusable with rack and pinion arrangement incorporating an spherical lens and an iris-diaphragm. The condenser should have a filter holder and removable/ swing in/ out blue filter (suitable for bright field Microscopy).
- Sub-stage illuminator:
 - The system should have a build-in variable light source (Illuminator). This light source should have a 20 W, 6 V Halogen lamp. The circuitry for the light source should include a constant voltage supply.
 - The system should be provided with a step down transformer and an on-off switch and intensity control. The lamp should be provided with a lamp socket which has the facility for easy replacement of the bulb,
- Power supply: Voltage 220 V AC, 50Hz. should have one on-off power switch, 3 core power cord with a 3 point male plug.
- The system should have an inbuilt protective/safety device to withstand fluctuations of voltage from 140 V to 280 V.
- A plano-concave mirror in fork mounting should be supplied which would be attachable to the base for field use when power is not available.
- The fuse for the halogen lamp should be easily accessible to the operator
- The Illuminator should have a build-in field diaphragm for Kohler illumination.
- Eye piece tubes: Binocular eye piece tubes, inclined at 45 degrees, rotatable through an angle of 360 degrees, having inter-pupillary distance range of 54-74 mm or wider, covering the above mentioned range.
- Focusing knob: Co-axial coarse and fine focusing knobs capable of smooth fine focusing movement over the full range of coarse travel. The fine focusing movement should have sensitivity of two microns or less (finer) over the entire coarse focusing stop safety arrangement should be provided.
- General:
 - All optical parts including objectives, eye pieces and prisms should have anti-reflective coating which also gives anti-fungal property.
 - All metallic parts should be corrosion-proof, acid proof and stain-proof.
 - Working manual should be provided with each microscope.
 - A bottle of at least 25 ml immersion oil, a roll of lens tissue paper and lens cleaning solution (100 ml) should be provided with each microscope.
 - One anti static cleaning brush should be provided with each Microscope for cleaning purpose.
- Microscope should be supplied with all spare parts including Fuses.
- All consumables required for installation and standardization of system and microscope cover to be given free of cost.
- The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%.
- Should be FDA or CE or ISI approved product.
- Three years warranty, 5 yrs comprehensive AMC should be available with service centers in close proximity.
- User/Technical/Maintenance manuals to be supplied.
- Certificate of calibration and inspection from factory.
- List of important spare parts and accessories with their part number and costing.

FOLLOWING ITEMS TO BE QUOTED UNDER TWO-BID SYSTEM

DIVISION: AQUACULTURE

Item No. 49: Cooling Centrifuge (EFC)

Technical specifications (Two-BID)

- Max Speed: 15,000 rpm / 25,000 g or more
- Temperature range: -10°C to ambient, CFC free refrigeration
- Sample temperature: < 4 °C at maximum speed
- Centrifugation volume/Rotor: 1.5 mlx24, 50 mlx8 or 85 ml x6 capacity, fixed angle rotor (rotor included) with adapters for 15 ml tubes. Swinging bucket rotor for 4 x 200 mL OR 4 x 400 mL capacity
- Rotor identification: Automatic, should have imbalance detection system
- Display: Should display speed, RCF, time and temperature
- Programs: Minimum 25 user defined programs
- Pulse/short run: Required
- Lid: Auto opening at the end of centrifugation
- Centrifugation chamber: Stainless steel, corrosion resistant
- Maximum timer range: 99 h 59 min, continuous
- Certifications: CE marked, biosafety certified, requirements of IEC 1010-2-020 safety
- Acceleration / Deceleration Rates: 9/10
- Changing of rotors: Should have provision to install and remove rotor without any external tool with push of a button for quick and easy change of rotors
- Stabilizer: Appropriate stabilizer should be included in the quote
- Mention warranty / AMC for a total period of 3 years.

Item No. 50: Microscope with phase contrast and digital photo (EFC)

Technical specifications (Two-BID)

- Rugged and sturdy stand with modular design for future up gradation to various techniques.
- Built-in electronic power supply unit for mains connection 100-240V, 50-60Hz and with 12V/100 watt power output.
- Co-axial coarse and fine focus knobs ergonomically positioned either side of the microscope stand for convenient operation with adjustable focus stop.
- Power ON/OFF switch and illumination regulation control knobs to be located close to the focus knobs for ease of operation.
- Microscope should have powerful transmitted light illumination with 12V/100 watt halogen lamp.
- Microscope should have a Sextuple (6x) position revolving nose piece with provision for DIC sliders.
- Binocular tube with eyepieces and with inter-pupillary distance adjustment range 55-75mm.
- The microscope stand should have provision to attach a camera without replacement of the Binocular tube. (Side port needed)
- Microscope should have a hard coat anodized specimen stage with 230x230mm size to accommodate various specimen holders. It should have a provision to attach an object guide with long coaxial X-Y drive knobs and holders for various specimen containers like petridishes, slides, multi-well plates etc. It should have a provision and possibility to upgrade with motorized scanning stage for advanced applications.

- Infinity corrected high contrast long working distance Semi Apochromatic objectives suitable for Fluorescence & PHASE with magnifications 4x/5x / N.A. 0.13, 10x/ N.A. 0.30 (Phase), 20x/ NA N.A. 0.50 (Phase), 40x / N.A. 0.75 and 60/63x N.A. 0.70 Objectives.
- Pair of wide field 10x eyepieces with FOV of 22mm or more and with rubber eyecups suitable for spectacle wearers and should have a provision to insert measuring graticules.
- Fluorescence: Bright 130 W mercury illuminator with light guide and facility of prealignment of lamp so that it maintains highest intensity after time passage and filters suitable for GFP, RFP and DAPI with additional slots for future up gradation. Six positions Fluorescence turret.
- Scientific Digital Camera
 - High-resolution color imaging
 - Camera with the 5.9 megapixel CMOS image sensor.
 - High sensitivity, low noise capture clear fluorescence images with high sensitivities and low noise.
 - Number of pixels : 2880x2048 pixel 5.9 megapixels
 - Image sensor size : 1/1.8 inch (6.912x4.915mm)
 - Live display mode “All pixels” mode (2880x2048 pixel) : 15fps
 - “2 Vertical and 2 horizontal pixels average” mode (1440x1024 pixel) : 30fps
 - Exposure time 100μsec to 30 sec
 - Exposure control One-push auto exposure, continuous auto exposure, manual exposure.
 - High-speed live display. Higher frame rate is achieved for its high-speed data readout achieved with the CMOS image sensor and USB3.0 connection to the PC
- Image Analysis Software
- Dedicated Image Analysis Software with features like Live image capture, Multidimensional Image Capturing up to 4D, Time Lapse Image Capturing (T), Z Series Image Capturing (Z), Multichannel Image Capturing (λ), Multipoint Image Capturing (MP), AVI Live Stream Capture, Auto and Manual Measurement, Intensity Line Profile, Intensity Surface Plot, Report Generator, Macro writing & Volume View
- The Microscope, Digital Camera and Image Analysis Software should be from same manufacturer.

DIVISION: AEHM

Item No. 51: Real Time PCR (EFC)

Technical specifications (Two-BID)

- The system should have four-color detection system to perform variety of applications, including gene expression analysis, pathogen quantization, SNP genotyping, isothermal, and plus/minus assays that utilize internal positive controls and dissociation curve analysis. Provision of absolute and relative quantification etc.
- Should have a Peltier based 96 well thermal cycler with temperature range of 4°C to 100°C.
- Reaction volume, preferably in between 10-50μL.
- Compatibility to Standard 96 well plates, 8 well strips, or individual PCR tubes. Data collected in all 4 or 5 filters for all wells regardless of plate setup. Plate setup may be altered after run completes.
- Each well should receive the same amount of excitation light
- Each well should receive excitation light for the same length of time
- System should be capable for detection of at least 4-5 dyes

- Provision to segregate multiple dyes Using software, Provision to add new dyes without any hardware change. Instrument should have universal thermal cycling conditions.
- The excitation by Tungsten Halogen/Xenon source and measurement by CCD camera or LED based Excitation.
- Sample Ramp Rate +/-1.1°C/sec Peak Block, Ramp Rate 1.6°C/sec, Average ramp rate cooling 2.2°C, Programmable temperature range 4-100°C Temperature accuracy ±0.2°C of programmed target temperature,
- Licensed full version software for primer and probe design must be included with manufacturer only, no third party software should be included.
- A Branded Work Station- Laptop with dual core Processor, (hp/Dell) 2GB RAM, 250 GB HDD, DVD R/W Drive, with 17" TFT , Windows XP Pro, compatible for running Gene expression software
- Online UPS (5 KVA) of reputed brand.
- **Service:** Custom designed primer probes for absolute quantification, gene expression assays and genotyping assays
- **License:** The quote system must have full license for PCR process. A copy of the license must be attached to the offer.
- **Mention warranty / AMC rates for a total period of 2 years**

DIVISION: PHT

Item No. 52: Accelerated Freeze Dryer (EFC)

Technical specifications (Two-BID)

- Digital read-out of temperature
- Ultimate temperature at 20°C room temperature: -55°C± 2°C
- Power requirements: 230-240/50-60 V/Hz
- Power consumption: 300 to 310 W
- Insulation: 90 to 100 mm
- Condenser capacity : 3 kg
- Condenser capacity per 24 hours: 2,5 kg
- Total volume of Condenser: 4 L
- Weight net: 40-50 kg
- Cabinet dimensions (DxWxH): 500x400x520 mm
- Cabinet material: Polyester coated steel
- Condenser material: Stainless steel AISI 316
- Cooling media: R 507
- Vacuum Valve: Man.
- DRAINTAP
- Mention warranty / AMC for a total period of 2 years.

ROHTAK CENTRE

Item No. 53: Fluorescent Microscope including camera, Image analyzer (EFC)

Technical specifications (Two-BID)

No.	Specification	Requirement
1.0	APPLICATION	The Fluorescent Microscope are used for studies of structure details and physiological process in fish and microbes etc., it is capable of imaging the distribution of a single molecular species based solely on the properties of fluorescence emission.
2.0	Power Supply	12 V with stabilized
2.1	Fluorescence	Bright filed, face contrast, dark field
2.2	Microscope	Bright field, harmonic component system(HCS) optics to ensures highest colour correction level in the complete optic of microscope.
2.3	Panchromatic objective	4X, 10X, 20X,40X,100X for bright field , dark field phase contrast, fluorescence application, Automatic motorised 6 position objective turret with additional toggle module for any two numbers combinations.
2.4	Trinocular pol tube	Trinocular pol tube
2.5	Stage	Ceramic coated ultra-hard stage.
2.6	Height	Adjustable focus knobs
2.7	Focusing	Three gear focusing mechanism
2.8	Condenser	Automated motorized
2.9	Image sharpness	Integrated thermal compensation for focal drift stabilige stage height during long time observation
2.10	Filter	DLF filter, gray filter, blue filter, complete filter range covering entire wavelength fluorescence application or LED fluorescence with three LED for complete spectrum including all filter ranges
2.11	Bulb	Spare bulb for microscope 3 numbers.
2.12	Cubes	Fluorescence attachment with zero pixel shift along with 5 filter fluorescence cube holder to have 5 filter on the stand
2.13	Mercury or Halogen lamp	100 watt for fluorescence applications
3.0	DIGITAL COLOUR CAMERA FOR MICROSCOPE(preferably model)	
3.1	Digital Camera for fluorescence study	
3.2	Digital Camera for fast colour, real-time live imaging	
3.3	Full view of live image on the monitor	
3.4	Pixel size	Digital Camera with not less than 7 Megapixel. High Resolution
3.5	Integration time	0.1m sec to 2 sec or better or preferably model
3.6	Speed	25 frames / sec with 1024x768 or preferably model
3.7	Shading correction can be applied to live and captured image	
3.8	Necessary software, hardware(Computer and other accessories) and interfaces should be supplied to hook microscope and along with storage software and measurement	
3.9	Microscope, camera and software should be from one manufacturing source for better compatibility	
4.0	Mention warranty and AMC rates for a total period of 2 years.	

Item No. 54: Ice Flaking Machine (EFC)Technical specifications (Two-BID)

- Dimensions 400 X 600 X 600 approx
- Production >50kg per day
- Storage capacity > 15 kg
- Air cooled condensing unit
- Max electrical consumption 550W
- Eco friendly refrigerant
- The equipment should be BIS/EU/USFDA certified

Accessories to be included:

- Polypropylene ice bucket - 3liter capacity – 2 Nos
- Scoop for handling ice flakes – 2 Nos

Ambient conditions for operation:

1. The unit should be capable of withstanding continuous storage and operation at ambient temperatures of 0°-50°C and relative humidity of 15-90% Power

Requirements:

1. Suitable for input power of 220-240V AC, 50 Hz, fitted with suitable plug for Indian conditions
2. Resettable overcurrent breaker

Warranty:

1. Mention warranty / AMC for a total period of 3 years.

Item No. 55: Refrigerated Centrifuge (EFC)Technical specifications (Two-BID)

- Temp. range -10-40°C
- Fast cool standby cooling/heating mode min 6h
- Automatic temp.
- Must maintain 4°C at Max speed
- Max speed approx 175000 rpm, rct 30, 000 g adjustable
- Accelerated time to max speed less than 15s for all rotors.
- Run time can be up to 90 min continuously
- Noise less than 60db
- Rotors: Fixed angel rotor for 1.5/2.0ml micro test tubes, Swing out rotor for 15 ml tubes/blood collection tubes, Three year warranty and on site repair service.
- Technical features should be supported by original literature list of user.

DIVISION: FNBP

Item No. 56: Fluorescence Spectrophotometer (EFC)

Technical specifications (Two-BID)

Source	Xenon lamp, 2000-hour service life
Samples	Liquids
Monochromator	Excitation 200 – 750 nm with zero order selectable. Emission: 200-750nm
Wavelength Accuracy	+/- 2.0 nm
Wavelength Reproducibility	+/- 2.0 nm
Spectral band pass	The excitation and emission slits should be 2.5-15 nm and 2.5 –20 nm respectively with 0.1 nm increments
Scanning Speed	10 – 1500 nm per minute
Software operating system	Windows environment. The excitation and the emission wavelength can be displayed in real time. Spectral and time drive data should be displayed in real time. Routine data analyzer
Cuvette holder	For quartz cuvettes of 0.5 ml, 1 ml, 3 ml
Quartz cuvettes of capacity	0.5 ml, 1 ml, 3 ml (2 each) to be included.
Optional	Cell Holder Unit for solids, or powders Ultra Micro Cell Holder Unit
Mention warranty / AMC for a total period of two years	

Item No. 57: Real time PCR machine (EFC)

Technical specifications (Two-BID)

- System should have block of 96 well to run using typical PCR tube, Strips and plates
- Instrument should be an open system with respect to reagents and other consumables (PCR tubes/strips/plates)
- It should be a peltier based thermal system with a preferable temperature range of 4-99 oC with uniform ranging of 6oC with an accuracy of 2oC
- System should preferably support reaction volume of 10-100ul
- Instrument should provide High Resolution, less Interference between channels
- Instruments preferably should have easily-changeable optics cartridges for genotyping via high resolution malt, gene-expression analysis and variety of complex research applications
- The Instrument should set up accommodate detection and visualization of maximum up to six flourophores and unique module design for easy expansion if additional flourophores are needed
- Should have an onboard diagnostic system which is capable for a quick pre-tested a comprehensive test. The onboard diagnostics can pinpoint potential problem points before they become serious
- Easy-to-use software builds off familiar Intuitive interface and enables researchers to confidently set up, view and analyze data from any assay should be provided, Running of the software should be possible on at least two or more computers in offline mode

- At least 5 channel multiplexing should be possible and should have a dynamic range of 9 orders of magnitude
- It should be touch screen system, so that no additional PC or laptop is needed. It should have at least 2 USB ports and storage of 5GB or more
- System should be capable of eliminating optical variation with uniform excitation intensity and emission measurement from well to well, across the entire plate
- Excitation should be using next generation high power broad spectrum LEDs and detection should be through PMT/Photodiode/CCD camera
- Optics preferably contained in modular cartridges, for no cross talk and improved data resolution is desired. Scan time for all channels is 2 seconds or less irrespective of plex number/optical channels is preferred
- System should have an excitation range: at least 450-640 nm and emission range: at least 500-720 nm
- System should be capable of detecting various dyes such as FAM/SyBr green, TAMRA, ROX, Cy-5, Cy-3, VIC, HEX, TET, CAL, FlorGold 540 etc
- System should have the capability of auto calibration
- System should be able to perform Taqman assays
- Mention warranty / AMC rates for a total period of 2 years

Item No. 58: Blood Gas Analyzer (EFC)

Technical specifications (Two-BID)

- The system should essentially measure pH, PCO₂ and PO₂, and preferably serum electrolytes like Na⁺, K⁺, Cl⁻
- It should essentially support lower sample volumes (less than 100 ul)
- System should use easy user interface systems like numeric keypad, graphic / LCD display, and/or inbuilt printer and RS 232 port.
- It should be able to operate without the help of any additional laptops and PCs.
- It should be able to analyse whole blood and should have syringe and capillary sampling
- Should have input parameters of patient Temperature, Hemoglobin FIO₂, patient ID etc.
- Should have a sample temperature control of 37 degree centigrade.
- Analysis time should not be more than 180 seconds.
- System should be based on liquid / gas calibration technology.
- System should not be a cartridge based system i.e. electrodes should not be in the cartridge system.
- System should be supplied complete with all standard accessories, electrodes & start up kits.
- Onboard life of reagents should not be less than one month.
- Should have an automatic calibration for all the measured parameters without the use of gas cylinder.
- Power input: 220 VAC + 10%, 50 Hz and a suitable one hr. back up UPS should be supplied along with analyzer. There should be storage facility of data in case of power failure.
- Maintenance free electrode and the unit should be upgradeability for auto quality control.
- Mention warranty / AMC rates for a total period of 3 years

Item No. 59: Nanodrop Spectrophotometer (EFC)

Technical Specifications

- **Minimum Sample Volume: 0.5ul**
- Should be ideal for performing DNA, RNA, Oligo, Protein Quantification & purity measurements
- **Detection Limit: 1ng/ul**
- DNA Maximum Conc: 12000ng/ul
- **Fixed path length: 0.5mm**
- Path length Accuracy: +/-5um
- Display: 5.7" colour display with capacitive touch panel

- Light Source: Pulsed Xenon lamp with 3 year warranty
- Wavelength Range: 190nm-1100nm
- Wavelength Accuracy: ± 2 nm
- Wavelength Reproducibility: ± 1 nm
- Spectral Bandwidth 5nm
- Stray Light: $<0.5\%$ T at 220nm and 340nm Using NaNo₂
- Mention warranty / AMC rates for a total period of 2 years

Item No. 60: Bomb Calorimeter (EFC)

Technical specifications (Two-BID)

- Microprocessor based isoperibol bomb calorimeter for rapid determination of gross calorific value of food/ feed ingredients/samples
- The equipment should be compact, integrated and bench-top model with LCD display and compatible online UPS (Uninterrupted Power supply) backup support for one hour
- The calorimeter should have adequate memory storage facility (Approx. 1000 tests) and should be easy to operate
- Bomb & bucket: Removable type
- Repeatability/ Reproducibility: As Per BIS 1350 (Part -2), 1970, ASTM D-5865/04 & other International Standards
- Oxygen Combustion Vessel (Bomb): Thick walled acid resistant having internal volume 250 to 350 ml made of high strength with proper insulation arrangement and capable of withstanding high pressure
- Measuring range: 1000 to 8,000 calor more per unit sample.
- Temperature Measurement: with inbuilt high precision electronic thermometer
- Temperature Measuring Resolution: 0.0001°C
- Operator time per test: 6-8 minutes or less.
- Range of Sample weight for energy estimation: 0.5 g – 1.5 g
- Measurement Precision-0.1% RSD
- Equipment Resolution-0.0001 Cal/g
- Corrections-Operator selected option for correcting for Acid, Nitrogen, and Fuse wire, Sulphur, Moisture, Ash and Hydrogen
- Gas filling arrangement-Suitable gas filling arrangements with regulator and gauges for line/vessel pressure and all necessary attachments.
- Pellet press/device and other accessories required to run the instrument
- Bomb has approval with PED (pressure equipment Directive)
- Safe life of bomb vessel should be minimum 4000 test continuously
- Additional software if any required being included for PC operation
- Sample Crucible: Metal crucibles with Ni-Cr Alloy. Minimum for 5000 test sample crucible should supply with main instrument. Power requirement: 230 VAC +/- 10 %, 50/60 HZ as per Indian condition.
- Inbuilt USB interface/Ethernet port for Balance, Printer and computer
- Analysis kit including fuse wire, standards, rings etc. required for 1000 analysis should be provided with the basic system.
- Up gradation: Calorimeter should have a facility to upgrade with different types of bombs by simply plug in without changing the main calorimeter configuration.
- Manufacturer should have international and or national approval for manufacturing pressure vessels. Pressure vessels must be tested as per ASTM or any international/national standards. Manufacturer should have CE certification
- Mention warranty period / AMC rates for a total period of 3 years.

IVISION: FEES

Item No. 61 - 66 Professional Communication Studio / Lab

61. Digital Audio Workstation & Studio Monitors: 1 unit each

Avid Pro Tools-Quartet Bundled Digital Audio Workstation (DAW) & Audio Interface OR Equivalent: 1 No.

Technical Specifications

- Avid Pro Tools software with perpetual license and Apogee hardware (Quartet by Apogee 12x8 audio interface) with choice of two additional premium Avid plug-ins in a recording system for PC
- 12x8 + MIDI USB interface with premium AD/DA conversion supporting 24-bit/192 kHz resn.
- EUCON-enabled Pro Tools IO control software for expanded hardware control
- Includes the full version of Avid Pro Tools recording software
- Includes Audio Interface, software, I/O breakout cable, iLok 2 USB key, USB cable, power supply, and quick start guide
- Compatible with Pro Tools, Pro Tools IO Control, and any other DAW software that supports ASIO, Core Audio, WDM, MME, or multi-client drivers

Studio Monitors: Yamaha HS8 and Yamaha HS8S make OR Equivalent: 1 No. each

Yamaha HS8 OR Equivalent Specifications

- 2-way bass-reflex bi-amplified nearfield studio monitor with 8" cone woofer and 1" dome tweeter
- 38Hz - 30kHz frequency response
- 75W LF plus 45W HF bi-amp system for high-performance 120W power amplification
- ROOM CONTROL and HIGH TRIM response controls
- XLR and TRS phone jack inputs accept balanced or unbalanced signals

Yamaha HS8S or Equivalent Specifications

- 8" bass-reflex powered subwoofer delivers low frequencies down to 22Hz
- 22Hz - 150Hz frequency response
- High-power 150W amplifier exclusively designed for low frequencies
- LOW CUT switch, LOW CUT control (80-120Hz) HIGH CUT control (80-120 Hz)
- PHASE switch allow users to set up a subwoofer system with simple connections and no additional equipment
- XLR and TRS phone for inputs and XLR for outputs

62. Digital Video Camera (broadcast type) and related accessories - 1 No.

Sony 4K Camcorder (Model FDR-AX1E/B) or Equivalent

Technical Specs: 4K / 60p (50p) recording; XAVC S consumer-use 4K/HD recording format; High-quality 50Mbps HD recording; High-speed reading/writing on XQD media card; Professional-class audio

XLR terminal; Excellent manual operation and image-quality adjustment functions; Image Sensor: 1/2.3 type back-illuminated "Exmor R" CMOS Sensor; Lens / Filter Diameter: G Lens / 72mm; Optical / Digital Zoom:20x; HDMI Terminal, External Mic. Input: XLR; Accessories: AC adaptor, Rechargeable Battery Pack, Remote Commander with Battery, AV Cable, HDMI Cable, USB Cable, Power Cord, Lens Hood, Lens Cap.

63. Digital Handheld Video Cameras: 2 Nos.

Sony 4K Digital video Camera (Model FDR-AX100E/B) OR Equivalent

Technical Specs: 4K XAVC S Format; 1.0-type (13.2mm x 8.8mm) back-illuminated Exmor R CMOS sensor; BIONZ X image processor; ZEISS Vario-Sonnar T / 62mm; Manual Function; XAVCS Format; 20.0MP Still Image; 12x/160x Optical / Digital Zoom; Built-in zoom microphone; 20.0 megapixels 16:9 (5968x3352) resolution; Image Stabilisation: Optical Steady Shot image stabilization w/ Active mode (Wide to Tele); HDMI Terminal, USB Terminal, Wireless LAN (built-in), NFC; Accessories: AC adaptor, Rechargeable Battery Pack, Remote Commander with Battery, HDMI Micro Cable, USB Cable, Power Cord, Lens Hood, Lens Cap.

64. Digital Podium: Specktron SDP700 make or Equivalent – 1 No.

Standard features: Digital podium with full featured control panel, 19" finger touch LED monitor, ergonomic stylus with laser printer, motorised system for monitor, fiber top with centralized locking system, cold rolled steel cabinet with 9U rack and centralized lock, both side access doors, castor wheels with quick lock pad, full-fledged sound system, gooseneck mic, W/L handheld mics 2) with rack mountable receiver, full featured professional amplified with independent controls, internal speakers, space to keep PC, laptop, visualizer.; minimum 1 year comprehensive warranty.

65. Multimedia Short-throw Interactive Projection System: Epson EB-536Wi or Equivalent – 1 No.

Standard features: Short throw type, interactive, WiFi inbuilt, XGA resolution, White brightness – 3400 ANSI lumens, Colour brightness – 3400 ANSI lumens, Contrast ration – 16000:1, Lamp life – 5000 hours; minimum 1 year comprehensive warranty.

66. Professional Studio Lights / Lighting Solution

A professional audio-visual studio is proposed to be set up at CIFE, Mumbai for Campus, Mumbai for making professional quality still photography and videography.

Lighting solution consisting of following items would be required for the same. The vendors are encouraged to quote keeping the following specifications as ONLY INDICATIVE.

- Overhead Lighting System; ii) Chain Pulley iii) Motorised Background System; iv) Studio Flash Lights; v) Backdrops Fabric both plain and printed; vi) Boomer (6 Ft); **vii) Separate Bags for Cameras, light, kits and tripod;** viii) **Continuous White Lite;** ix) Inverter with

POWERBACK-2500X; x) LED-Light Rain; xi) Heavy Duty Stand-16-ACS; xii) Reflectors (Background/Foldable/Tilt); xiii) Softing Solution Soft Boxes; xiv) Radio Trigger (16 Channels); xv) Video lights;

Item No. 67. High performance liquid chromatography

Technical specifications

1. Solvent Delivery System

It should be a Low-Pressure, Quaternary System using intelligent pump

It should have a flow rate resolution of 3nl/min

The flow rate should be set between 0.0001 to 10 ml/min from micro to semi-preparative flow rates without any hardware changes

Flow rate accuracy should be $\pm 1\%$ or ± 0.5 ul/min of set value whichever is larger

Flow rate precision should be less than $\pm 0.1\%$ RSD

Pressure setting range should be 1-40 MPa

It should employ active check valves that allow stable delivery of even non-polar organic solvents such as hexane

It should be capable of standalone operation

It should have upto 20 storage files

It must have a leak sensor as safety feature

It should have functions for maintenance and validation which are accessible by a dedicated operation button.

2. UV-Vis Detector

Simultaneous Dual Wavelength measurement.

Wavelength range 190 nm - 700 nm

The flow cell must be temperature controlled from 9°C to 50°C

Wavelength accuracy ± 1 nm

Light Source D2, W,

Drift Less than 1×10^{-4} AU/Hour

Noise Level $\pm 0.5 \times 10^{-5}$ AU

Linearity of 2.5AU (ASTM method)

It should have automatic wavelength accuracy check at 4 wavelengths (UV & Vis) & wavelength correction

Analytical cell and micro cell to be standard

Stray light correction function has been enhanced and linearity has been improved a point where it satisfies the ASTM Standards.

Auto Zero Adjustment and baseline check functions.

3. Manual Injector

1) It should have Loop of 20ul with mounting plate.

4. System Controller

It should function as a communication bus module with data buffering capability

It should acquire upto 24 hours for one analysis, at 500ms sampling rate

It must be controllable from a web-based interface via a network. It allows the system to be controlled, monitored and maintained via latest browsers

It must be compatible with wireless networking

It must come with Expert function in that if pressure falls below specified value, the expert function will automatically purge the mobile phase

It should store up to 20 analysis files with a total upto 400 steps of time programs

5. Data Management System

a) Software

Operation of the system should be very easy and intuitive via a state-of-the-art 32 bit Win XP based software

It should be Client/Server based

It should be capable of control of up to 4 HPLC systems and data acquisition of upto 8 channels (2 detectors for each system). The monitoring of all the four HPLC systems simultaneously should be possible

It should cover full one-point digital instrument control, qualitative and quantitative processing, report creation and self-diagnosis

Sample schedule wizard function should be standard

There should be an on-line help function context sensitive

The reporting format should be flexible and easy to use in any desired format

The data can be converted to other formats. Spread Sheet software and word-processing software can be readily employed to provide data in tables or graphs through industry standard protocols

The software should allow automatic execution of system checks, auto-purge and baseline checks

Software must have its own log files for complete audit trails

An audio-visual multi-media CD-ROM for Maintenance and Troubleshooting must be provided

System suitability, System security as well as System check functions must be provided which comply with Good Laboratory Practice (GLP) and Regulatory Conformity.

6. Allows Post Column Derivatisation for analysis. Reaction pump up to 3 post column reagent mixing may be quoted as optional

6. Mention Warranty and AMC rates for a total period of 3 years.