



ICAR -CENTRAL AVIAN RESEARCH INSTITUTE
Izatnagar - 243 122, Bareilly U.P. (INDIA)



F.No.4-7/ST/2015-16

Date: 10.09.2015

TENDER - NOTICE

On behalf of Secretary, ICAR, the Director, ICAR-CARI, Izatnagar invites sealed tenders from the manufacturers authorized dealers of the scientific equipments etc. The tender form can be obtained from the office of Sr. Adm. Officer (Stores), ICAR-CARI, Izatnagar on any working day during office hours upto 09.10.2015. The last date of submission of tender is 12.10.2015 upto 02.00 PM with opening at 02:30 PM on 12.10.2015 and 11:00 AM on 13.10.2015. The detailed information of Tender Form alongwith terms & conditions and technical specifications can also be downloaded from our Institute's website www.icar.org.in/cari/index.html.

The competent authority of this Institute reserves the right to accept or reject any or all the tenders without assigning any reasons thereof.

Sr. Adm. Officer



ICAR -CENTRAL AVIAN RESEARCH INSTITUTE
Izatnagar - 243 122, Bareilly U.P. (INDIA)

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No.4-7/ST/2014-15

Date: 10.09.2015

INVITATION FOR BIDS (IFB)

On the behalf of Secretary, ICAR, the Director, ICAR-Central Avian Research Institute, Izatnagar invites sealed tenders under two bids system (for sl. no. 01-08)& single bid system (for sl. no. 09-15) from manufacturers Authorized dealers for the purchase of Scientific equipments as listed below.

Sl. No.	Name of the equipment	Qty.	F.O.R.	Earnest Money Deposit(EMD) in Rs.	Tender/Bid Type
1.	Table Top Hi-Speed cooling Centrifuge	01	F.O.R., CARI, Izatnagar	18,000.00	Two bid system
2.	Bio Safety Cabinet	01	F.O.R.,CARI, Izatnagar	18,000.00	Two bid system
3.	Elisa Reader with Accessories	01	F.O.R.,CARI, Izatnagar	15,000.00	Two bid system
4.	Retort Packing Machine	01	F.O.R.,CARI, Izatnagar	15,000.00	Two bid system
5.	Table top/Bench top Refrigerated Cooling Centrifuge	01	F.O.R.,CARI, Izatnagar	13,000.00	Two bid system
6.	Vertical Gel Electrophoresis Unit	01	F.O.R.,CARI, Izatnagar	5,000.00	Two bid system
7.	Analytical Weighing Balance	02	F.O.R.,CARI, Izatnagar	4,000.00	Two bid system
8.	Bench top Tissue Homogenizer (Digital)	01	F.O.R.,CARI, Izatnagar	4,000.00	Two bid system
9.	Electronics Balance	01	F.O.R.,CARI, Izatnagar	3,000.00	Single bid system
10.	Display Cabinet	01	F.O.R.,CARI, Izatnagar	3,000.00	Single bid system
11.	Ice Flacking Machine	01	F.O.R.,CARI, Izatnagar	3000.00	Single bid system
12.	Digital pH Meter	01	F.O.R.,CARI, Izatnagar	No EMD	Single bid system
13.	Cooking Range	01	F.O.R.,CARI, Izatnagar	No EMD	Single bid system
14.	Mini Plate Centrifuge	01	F.O.R.,CARI, Izatnagar	No EMD	Single bid system
15.	Refrigerator (Top Freezer)	01	F.O.R.,CARI, Izatnagar	No EMD	Single bid system

The tender form along with specification & terms & conditions etc. in respect of the above equipments may be obtained from the office of Sr. Adm. Officer (Stores), ICAR-CARI, Izatnagar for each equipment on any working day during office hours upto 09.10.2015.

The complete tender documents/form may also be downloaded from Institute's website www.icar.org.in/cari/index.html and submit their competitive quotations separately for each equipment in the prescribed format of tender form (Two bid tender form for sl. No.1-8 or Low value purchase form for sl. No.9-15) available on institute website. The sealed tender/envelope shall be addressed to the Senior Administrative Officer (Stores), ICAR-Central Avian Research Institute, Izatnagar – 243122, Bareilly.

The tender form should be submitted as per following schedule:-

Last date/time of submission of tender/quotation	-	12.10.2015 upto 02.00 p.m		
Date and time of opening of tender	-	Serial No.	Date	Time
		01- 07	12.10.2015	02:30 PM
		08- 15	13.10.2015	11:00 AM

Venue: Committee Room of Administrative Block,
CARI, Izatnagar, Bareilly

The vendors may send duly completed tender form as per instructions contained in the tender documents and terms & Conditions. Incomplete tenders or tenders received after due date & time notified above will not be accepted in any circumstance and liable to be rejected. Besides the other documents, the tender must be accompanied with Earned Money Deposit (EMD) in the shape of TDR/FDR obtained from any commercial bank having validity minimum 180 days in favour of ICAR unit-CARI, Izatnagar payable at CARI, Izatnagar, Bareilly (U.P) separately in respect of each equipment/goods.

The Director, ICAR-CARI, Izatnagar reserves the right to accept or reject any or all the tenders without assigning any reason thereof. The tender so received shall be opened as per schedule above in the presence of parties who wish to remain present.

(R. N. Mallik)
Sr. Adm. Officer (Stores)

TERMS AND CONDITIONS FOR SL. No. 1-8

1. Submit your tender in two parts, first part is commonly known as Technical Bid and second part is Financial Bid. The tender document, specifications contained in the technical bid and price bid to be placed in separate cover and sealed. Both the bids are to be put into bigger cover and superscribed "Tender Enquiry Number and Name of the Equipment etc. at top of the envelope.

(In the event of the above specified date being declared a holiday for the purchaser; the bids will be received up to the appointed time on the next working day).

First Part (Envelope) Containing the relevant technical Specification/leaflet including Bid security.

Second part (Envelope) should contain only the price quotations and other relevant documents.

In case technical bids are not found responsive, Price bid will not be opened and liable to be rejected.

2. The tender without the required amount of Bid security and late tenders will not be accepted in any circumstance and liable to be rejected.
3. Conditional and incomplete tenders shall not be entertained in any circumstances and liable to be rejected. The following are the important points, for which a tender may be declared unresponsive and to be ignored, during the initial scrutiny:-
 - (i) The tender is unsigned.
 - (ii) The tenderer is not eligible (Example: The tender enquiry condition says that the bidder has to be a registered SSI unit; but the tenderer is a say, Large Scale Unit)
 - (iii) The tender validity is shorter than the required period.
 - (iv) The tenderer has quoted for goods manufactured by a different firm without the required authority letter from the proposed manufacturer.
 - (v) Tenderer has not agreed to give the required performance security.
 - (vi) The goods quoted are sub-standard, not meeting the required specifications etc.
 - (vii) Against a schedule in the List of Requirement (incorporated in the tender enquiry, the tenderer has not quoted for the entire requirement as specified in that schedule. (Example: In a schedule, it has been stipulated that the tenderer will supply the equipment, install and commission it and also will train the purchaser's operators for operating the equipment. The tenderer has however, quoted only for supply of the equipment).
 - (viii) The tenderer has not agreed to some essential condition(s) incorporated in the tender enquiry. (Example: Some such important essential conditions are-terms of payment, liquidated damages clause, warranty clause, dispute resolution mechanism, applicable law and any other important condition having significant bearing on the cost/utility/performance of the required goods, etc.

4. Only original and standard product(s) of reputed firm(s)/make with company sealed pack will be accepted.
5. The Indian Agency Commission (if any) should be shown separately in the schedule of rates.
6. Installation to be done within 10 days from the date of issue of our letter for this purpose, failing which liquidation damage clause shall apply.
7. Guarantee/Warranty of the equipment minimum should be 12 month from the date of installation.
8. Charges of the annual maintenance contract for next 05 years after expiring of guarantee/warranty period must be mentioned.
9. The successful tenderers will have to deposit the Performance security @ 05% of the quoted price for the guarantee/ warranty period of the equipment/item within 21 days from the date of issue of Purchase Order, failing which the order will be treated as cancelled and the bid security deposited for the purpose will be forfeited.
10. The validity of tender offer should be at the minimum for 90 days from the date of opening of tender. The quantity/number of equipment/item may be increased or decreased as the case may be.
11. Payment will be made only after successful supply/installation of the equipment/item in the shape of demand draft/sight draft/RTGS only. Complete banking details must be enclosed with the tender documents.
12. Director, CARI reserves the right to accept or reject any one or all tender(s) without assigning any reason thereof and his decision will be final in this regard.
13. Proforma Invoice of Principal manufacturer, if any, must be attached alongwith tender.
14. Detailed specifications of the equipment/goods to be supplied, only one make/model be quoted and no alternative make/model will be considered.
15. Product Literature/Leaflets should be essentially attached with the tender document (technical bid).
16. Duly completed Questionnaires.
17. Certified copy of PAN/ITCC issued by Dept. of Income Tax.
18. Certified copy of Tin Number/CST registration/clearance certificate.
19. Illustrated Catalogues of the equipment to be submitted with the tender.

TERMS AND CONDITIONS FOR SL. No.9-15

1. Submit your tender along with the prescribed tender form (LVP) available on the Institute website. The sealed envelope shall be addressed to the Senior Administrative Officer (Stores), ICAR-Central Avian Research Institute, Izatnagar - 243122, Bareilly and superscribed "Tender Enquiry Number and Name of the Equipment/goods etc.at top of the envelope.
2. The tender without the required amount of Bid security and late tenders will not be accepted in any circumstance and liable to be rejected.
3. Conditional and incomplete tenders shall not be entertained in any circumstances and liable to be rejected. The following are the important points, for which a tender may be declared unresponsive and to be ignored, during the initial scrutiny:-
 - (i) The tender is unsigned.
 - (ii) The tenderer is not eligible (Example: The tender enquiry condition says that the bidder has to be a registered SSI unit; but the tenderer is a say, Large Scale Unit)
 - (iii) The tender validity is shorter than the required period.
 - (iv) The tenderer has quoted for goods manufactured by a different firm without the required authority letter from the proposed manufacturer.
 - (v) Tenderer has not agreed to give the required performance security.
 - (vi) The goods quoted are sub-standard, not meeting the required specifications etc.
 - (vii) Against a schedule in the List of Requirement (incorporated in the tender enquiry, the tenderer has not quoted for the entire requirement as specified in that schedule. (Example: In a schedule, it has been stipulated that the tenderer will supply the equipments, install and commission it and also will train the purchaser's operators for operating the equipment. The tenderer has however, quoted only for supply of the equipment).
 - (viii) The tenderer has not agreed to some essential condition(s) incorporated in the tender enquiry. (Example: Some such important essential conditions are-terms of payment, liquidated damages clause, warranty clause, dispute resolution mechanism, applicable law and any other important condition having significant bearing on the cost/utility/performance of the required goods, etc.
4. Only original and standard product(s) of reputed firm(s)/make with company sealed pack will be accepted.
5. The Indian Agency Commission (if any) should be shown separately in the schedule of rates.
6. Installation to be done within 10 days from the date of issue of our letter for this purpose, failing which liquidation damage clause shall apply.

7. Guarantee/Warranty of the equipment minimum should be 12 month from the date of installation.
8. Charges of the Annual maintenance for next 05 years after expiring of guarantee/ warranty period must be mentioned.
9. The successful tenderers will have to deposit the Performance security @ 05% of the quoted price for the guarantee/ warranty period of the equipment/item within 21 days from the date of issue of Purchase Order, failing which the order will be treated as cancelled and the bidsecurity deposited for the purpose will be forfeited.
10. The validity of tender offer should be at the minimum for 90 days from the date of opening of tender. The quantity/number of equipment/item may be increased or decreased as the case may be.
11. Payment will be made only after successful supply/installation of the equipment/item in the shape of demand draft/sight draft/RTGS only. Complete banking must be enclosed with the tender documents.
12. Director, CARI reserves the right to accept or reject any one or all tender(s) without assigning any reason thereof and his decision will be final in this regard.
13. Proforma Invoice of Principal manufacturer, if any, must be attached alongwith tender.
14. Detailed specifications of the equipment/goods to be supplied, only one make/model be quoted and no alternative make/model will be considered.
15. Product Literature/Leaflets should be essentially attached with the tender document.
16. Certified copy of PAN/ITCC issued by Dept. of Income Tax.
17. Certified copy of Tin Number/CST registration/clearance certificate.
18. Illustrated Catalogues of the equipment to be submitted with the tender.

Table Top Hi-Speed Cooling Centrifuge - 01 No.

Specification:

1. Microprocessor controlled multipurpose and universal automatic cooling centrifuge useful for molecular biology and other applications like fractionation of proteins, cells, viruses etc.
2. Temperature range:-20°C to +40°C with 1°C adjustable increment and accuracy of $\pm 2^\circ\text{C}$. Must maintain $\pm 4^\circ\text{C}$ temperature during maximum speed.
3. Stand still and pre cooling features.
4. Speed range:Up to 30,000 rpm with 1 rpm increment and ± 50 rpm accuracy. Selection of speed in both rpm and rcf modes.
5. Maximum acceleration/deceleration time: $\square 70$ sec with 10 acceleration and deceleration profiles.
6. Pre selection of time from 10sec to 50 min with 1 sec increment. Time setting withhold and memory flashing. Time range:9 hr 59m/continuous speed range.
7. Ambient temperature range: 15-40 °C.
8. Rotors: Fixed angle rotors (each 1nos.) swing bucket type to accommodate 0.25ml, 1.5ml/2.0ml tubes, 15ml and 50ml BD Falcon tubes conical centrifuge tubes and 85ml tubes also.
9. Fast, simple, and secure mechanism to mount/dismount the rotor onto the drive adapter, eliminating the need for a tool or to hand tighten. Automatic instant rotor identification and lock/self-locking system.
10. Uniform rotor lid must be provided to prevent spillage of contents during operation.
11. Active imbalance identification and cut-off.
12. Equipment comes with brushless maintenance free induction drive motor.
13. CFC/HCFC free and non-ozone depleting eco-friendly refrigerant system with 3-5 years non-prorated warranty.
14. Memory based programmed operation: at least 30 programmed operations possible.
15. Alarm signals indicating completion of run, errors during run, Lid open, Imbalance and other functions of the centrifuge.
16. Digital display of time, temperature and speed on Bright LCD Backlit display.
17. Dedicated soft foil keys/Controllable knobs to adjust time, temperature, speed, start and stop function, acceleration and deceleration key and function of the centrifuge.
18. Automatic motor driven auto interlock lid system and door must be opened only when power is on and rotor is off.
19. Plastic tachometer port may be provided on lid to check the speed of rotor.
20. Inside chamber: made of corrosive resistant and rust free stainless steel.
21. Optimized air flow directed back/side wards.
22. Eco shut off function (sleep mode) to save energy when continuously not in use for a period of time.

23. Optional: Quick key for short run & spin; Fast Temp' for achieving required temperature in shortest possible time; Over speed and abnormally high temperature detection; Analysis of time remaining and elapsed time; Function for detecting an occurrence of electrical abnormality in motor, inverter. Noise level: □70 decibels.
24. Power:200-240 VAC, 50Hz, 30A, single phase.
25. Company should provide user list with email and Phone numbers of orders placed in the last 2 years.
26. Must comply ISO, CE and IEC 1010 certifications.
27. Centrifuge must come with suitable servo voltage stabilizer.
28. At least 2 years complete warranty on both machine and rotor from the date of installation directly certified by the manufacturers. 2 maintenance service visits by engineers is a must.
29. All Rotors must be quoted in main offer along with the centrifuge.

Note: - Amount of Bid Security Rs.18,000.00 (Rupees Eighteen Thousand only) must be in the shape of FDR/TDR/Demand Draft having validity 180 days from the date of opening of tender in favour of ICAR unit-CARI, Izatnagar payable at CARI, Izatnagar, Bareilly (U.P).

Please specify the make and model for the equipment and also attach relevant document/literature (if available) illustrating detail specifications of the product.

Special instruction (if any) _____

BIO SAFETY CABINET 01 No.

Class II type A, open-front, ventilated bio safety cabinet in ergonomic design: **VERTICAL MODEL**

- 1) ULPA filtered, recirculate mass airflow within the work space.
- 2) Exhaust air from the cabinet is also filtered by ULPA filters.
- 3) Size: approx. 48" depth and 27.5 to 30.5" height. Base stand of 28" height required.
- 4) Air inflow: Approx. 1.45 m/s; Air down flow approx. 0.30 m/s.
- 5) Air flow volume: inflow ~350 m³/h; downflow; ~740 m³/h; exhaust 350 m³/h.
- 6) Down flow Exhaust filter: with efficiency of ~ 99% at 0.1 to 0.3 micron.
- 7) Low noise (59-65db). Low energy consumption and heat output.
- 8) Microprocessor controlled functions with LCD display.
- 9) Audible and visual alarms.
- 10) Florescent Light intensity approx. 1200 lux, One additional UV tube providing a wavelength of germicidal activity with enhanced life must be provided.
- 11) Cabinet work zone- stainless steel and side wall should be UV protected.
- 12) Removable one-piece work surface. Work area consisting of single piece of stainless-steel with large radius corners for easy cleaning.
- 13) Must come with lab chair of suitable height and quality for performing comfort operations in the cabinet.
- 14) Electric supply requirement: 220-240V.AC.50Hz.
- 15) Power sockets facility must be included inside the cabinet.
- 16) 5 KV stabilizer support should come along with cabinet.
- 17) Should have Ergonomic foot rest.
- 18) Should have support stand with caster wheels (made of Polyurethane) equipped with toe locks.
- 19) Complete 2 years manufacturer's warranty from date of installation.
- 20) Users list with illustrated catalogue to be provided.
- 21) NSF, CE and ISO certification no, 14644.1.

- *Optional requirements:** 1. Provision of supply and exhaust 99.99% efficient HEPA/ULPA filters.
2. LCD display indicator for filter life.
3. Facility of approx. 70% air recirculation.

Note: - Amount of Bid Security Rs.18,000.00 (Rupees Eighteen thousand only) must be in the shape of FDR/TDR/Demand Draft having validity 180 days from the date of opening of tender in favour of ICAR unit-CARI, Izatnagar payable at CARI, Izatnagar, Bareilly (U.P).

Please specify the make and model for the equipment and also attach relevant document/literature (if available) illustrating detail specifications of the product.

Special instruction (if any) _____

Retort Packaging Machine - 01 No.**Specification:**

The multi-optional retort (made of SS304) processing unit should be horizontal semi-automatic type with F_0 value monitor, capacity up to 6 kg per batch, steam, air and coolant water injection lines with nozzles/sprayers, etc. A dedicated coolant water tank with high pressure centrifugal pump for coolant water, steam generator, an interconnecting pipeline system, a control panel to regulate process parameters, MS supporting structures, dedicated compressor and air receiver, retortable grade impulse sealing machine, SS trolleys with SS perforated trays, SS steel work bench, about 5000 retort pouches, all the accessories required for successful running of the unit, certificate of calibration and inspection from the factory to be enclosed during delivery. Attach original manufacturer's product catalogue and specification sheet. Quote page no. on compliance sheet as well as on technical bid corresponding to the technical specifications. List of user with valid email ID and phone no. in India of the quoted model. Detailed original literature with all technical specifications, features and detailed drawings should be attached along with the offer. Installation and commissioning. FOR to CARI, Izatnagar and Minimum two years warranty from date of commissioning & 3 years post-warranty AMC to be quoted.

Note: - Amount of Bid Security Rs.15,000.00 (Rupees Fifteen thousand only) must be in the shape of FDR/TDR/Demand Draft having validity 180 days from the date of opening of tender in favour of ICAR unit-CARI, Izatnagar payable at CARI, Izatnagar, Bareilly (U.P).

Please specify the make and model for the equipment and also attach relevant document/literature (if available) illustrating detail specifications of the product.

Special instruction (if any) _____

ELISA READER WITH ACCESSORIES

- **01 No.**

1. ELISA Microplate reader
2. ELISA automatic microplate washer
3. Dedicated computer for operation with printer facility

ELISA READER WITH ACCESSORIES

ELISA Microplate Reader with washer:

1. Capable to read flat or U bottom microplates for 96 and 384 well microplate mode with Wavelength range 200-999nm with 1 nm increment. LCD Display with alphanumeric keys for defined operation.
2. Temperature range: 3°C to 45°C, with uniformity of +0.5 °C @ 37 °C well-to-well.
3. Mix samples thoroughly in microplate wells in orbital/double orbital shaking pattern with user programmable Automix feature.
4. Accuracy and reproducibility: < 2%
5. Ability to adjust for desired temperature in computer software; Detection modes: Equipped with high performance Deuterium/Tungsten/Xenon flash lamp with monochromatic based suitable for ELISA base, immunological and cell assay application in endpoint and kinetic (min. 9 sec) analysis mode.
6. Measurement speed: < 11 sec for 96 well plate.
7. Must provide with latest operating and data analysis software compatible with Microsoft windows 7 and 8 with feature of export file option to MS excel or word or note pad.
8. Software options include: Automatic calibration before each reading and eliminates background and noise while reading the plate; selectable plate formatting; automatic interpretation, duplicate well options. Software also capable for point to point curve fitting routines log and linear modes and statistical analyses (optional), error messages.
9. Microplate calibration/validation comprehensive tool set with software and micro plates.
10. Provided with USB port for external computer control.
11. Equipment must come with personal computer for operation (Core i-3, 2GB Ram with 500 GB hard disk drive capacity), UPS (for supply during power-cuts) and printer (Laser inkjet) facility.
12. Cuvette port and DNA, RNA and protein quantification with a dedicated microplate with UV absorption detection mode at 260 and 280 nm wave lengths (optional).
13. ISO and CE certification; Users list must be provided; operates at 220-240 volts, Less power consumption. At least 1 years warranty from date of installation.

ELISA MICROPLATE WASHER:

1. Compatible with flat and u bottom plates. Provided with at least 1 set of 2-3 wash bottles (2L), 1-2 rinse bottles (2L), 1-2 waste bottle (2-4L).
2. Wash volume: 50-2000µL (96-well plate), 20-300µL (384-well plate) with 1 µL increment.
3. Dispense volume: 50-500µL and above (96-well plate); 20-120µL (384-Well plate). Dispense precision/uniformity: < 5% across plate and accuracy < 5%.
4. Standalone wash and aspiration. Compatibility up to 6 wash cycles. Software programme must store at least 50 wash programmes. Auto alignment and auxiliary selection of desired wells.
5. Dispenser should come with 8 x 12/1x32/4x32 manifold channels or comparable, 2-8 port manifold (optional) Up to three reagent dispensers. Duration for each wash cycle : 55 sec or less.

Annexure -I

6. Low noise, fast and reliable plate washing with automatic rinse setting to prevent clogging. Gentle and complete aspiration with residual volume: <3 μ l.
7. Easily removable 8- or 12-way manifolds. Easily accessible manifold interior for cleaning and maintenance. Provided with aerosol protection cover.
8. Operates at 220-240 volts: ISO and CE Certification; Users list must be provided.
9. At least 1 years warranty from date of installation.

Note: - Amount of Bid Security Rs.15,000.00 (Rupees Fifteen thousand only) must be in the shape of FDR/TDR/Demand Draft having validity 180 days from the date of opening of tender in favour of ICAR unit-CARI, Izatnagar payable at CARI, Izatnagar, Bareilly (U.P).

Please specify the make and model for the equipment and also attach relevant document/literature (if available) illustrating detail specifications of the product.

Special instruction (if any) _____

Table Top/Benchtop Refrigerated Cooling Centrifuge - 01 No.

Specification:

1. Microprocessor controlled multipurpose and universal automatic cooling centrifuge useful for molecular biology and cell culture applications.
2. Temperature range:-10°C to +40°C with 1 °C adjustable increment and accuracy of $\pm 2^\circ\text{C}$. Must maintain $\pm 4^\circ\text{C}$ temperature during maximum speed.
3. Stand still and pre cooling features.
4. Speed range:200 to 15,000 rpm with 1 rpm increment and ± 20 rpm accuracy. Selection of speed in both rpm and rcf modes.
5. Acceleration/deceleration time: $\square 15$ sec.
6. Pre selection of time from 10sec to 50 min with 1 sec increment. Time setting with hold and memory flashing.
7. Rotors:Fixed angle rotor (1 nos.) to accommodate 24-30 nos. of 1.5ml/2.0ml tubes.
Fixed angle rotor(1nos.) to accommodate 6 nos. of 15 ml conical centrifuge tubes.
Fixed angle rotor (1 nos.) to accommodate 2-4nos. of 50ml BD Falcon tubes.
Fixed angle rotor (1nos.) to accommodate 8 nos. of 0.2ml 8 well PCR strips/PCR tubes.
8. Fast, simple, and secure mechanism to mount/dismount the rotor onto the drive adapter, eliminating the need for a tool or to hand tighten, Automatic instant rotor identification and lock/self-locking system.
9. Uniform rotor lid must be provided to prevent spillage of contents during operation.
10. Active imbalance identification and cut-off.
11. Equipment comes with brushless maintenance free induction drive motor.
12. CFC/HCFC free eco-friendly refrigerant system with 3-5 years non-prorated warranty.
13. Memory based programmed operation: at least 30 programmed operations possible.
14. Alarm signals indicating completion of run, errors during run, Lid open, Imbalance and other functions of the centrifuge.
15. Digital display of time, temperature and speed on Bright LCD Backlit display.
16. Dedicated soft foil keys/Controllable knobs to adjust time, temperature, speed, start and stop function, acceleration and deceleration key and function of the centrifuge.
17. Automatic motor driven auto interlock lid system and door must be opened only when power is on and rotor is off.
18. Plastic tachometer port may be provided on lid to check the speed or rotor.
19. Inside chamber: made of corrosive resistant and rust free stainless steel.
20. Optimized air flow directed back/side wards.
21. Eco shut off function (sleep mode) to save energy when continuously not in use for a period of time.
22. Optional:Quick key for short run & spin; Fast Tem' for achieving required temperature in shortest possible time; Over speed and abnormally high temperature detection; Function for detecting an occurrence of electrical abnormally in motor, inverter. Noise level: $\square 70$ decibles.

23. Power:200-240 VAC, 50 Hz, 30A single phase.
24. Company should provide user list with email and phone numbers of orders placed in the last 2 years.
25. Must comply ISO, CE and IEC 1010 certifications.
26. Centrifuge must come with suitable servo voltage stabilizer.
27. At least 2 years complete warranty on both machine and rotor from the date of installation directly certified by the manufacturers. 2 maintenance service visits by engineers is a must.
28. All Rotors should be quoted in main offer along with the centrifuge.

Note: - Amount of Bid Security Rs.13,000.00 (Rupees Thirteen Thousand only) must be in the shape of FDR/TDR/Demand Draft having validity 180 days from the date of opening of tender in favour of ICAR unit-CARI, Izatnagar payable at CARI, Izatnagar, Bareilly (U.P).

Please specify the make and model for the equipment and also attach relevant document/literature (if available) illustrating detail specifications of the product.

Special instruction (if any) _____

Vertical Gel Electrophoresis Unit (For Protein) - 01 No.**Specification:**

1. Gel Capacity: No of gels 1-2
2. Suitable for readymade pre cast gels and manually made gels.
3. Gel Casting: Hand cast gels Cast using the spacer plates
4. Comb Ridged combs 10&15 well or more
5. Stand Gel casting stand, no tapes or grease
6. Should include at least 5 sets of compatible glass plates (spacer plate and shorter plates) and 2 casting frames.
7. Should include all the accessories of SDS-PAGE gel including sample loading guide, electrode assembly, tank, lid with power cables.
8. Should be a modular system to support blotting and electro-elutions also in the same system.

Powerpack:

1. Output range:10-300 V and 4-400 mA, fully adjustable. Constant voltage and current type.
2. Operational voltage should be $220\pm 20V$.
3. Should have power of approx. 75W and time control of 001-999 minutes, fully adjustable.
4. Should have atleast 2 pairs of output jacks.
5. Full bright LED Display indicating voltage and time clearly.
6. Must accommodate minimum two electrophoresis units simultaneously.
7. Auto power up feature in the event of power failure.

Western blotting unit:

1. Gel size of upto 7.5X10cm
2. Capacity: to run at least 2 mini gels simultaneously
3. Modular system with dedicated buffer cooling unit and compatible with the mini-SDS-PAGE gel apparatus.
4. Color coded cassettes and electrodes to ensure proper orientation.
5. All the required accessories like buffer tank, electrode module, gel holder cassette, fiber pad and lid with power cables, brochure in original must come with the equipment.
6. Detailed users list with valid phone no. and email ID during last two years. Operational voltage must be $220\pm 20V$. ISO, CE and suitable certifications.

Note: - Amount of Bid Security Rs.5,000.00 (Rupees Five thousand only) must be in the shape of FDR/TDR/Demand Draft having validity 180 days from the date of opening of tender in favour of ICAR unit-CARI, Izatnagar payable at CARI, Izatnagar, Bareilly (U.P).

Please specify the make and model for the equipment and also attach relevant document/literature (if available) illustrating detail specifications of the product.

Special instruction (if any) _____

ELECTRONIC BALANCE - 01 No.

SPECIFICATIONS:

- Maximum weighing capacity 200-220 g and minimum readability 0.0001g
- Repeatability (std deviation) and linearity should be ± 0.1 mg and ± 0.2 mg respectively.
- Display update should be 0.1-0.4 seconds
- Operating temperature should be $+10^{\circ}\text{C}$ to $+ 40^{\circ}\text{C}$
- High contrast, LCD display with bright vacuum fluorescent
- Fully automated internal calibration with built in weight
- Dimensions of weighing pan 90 ± 5 mm.
- Power source 120 VAC AC adapter
- Built in standard RS-232 C interface
- Warranty 24 months
- FOR CARI, Izatnagar

Note: - Amount of Bid Security Rs.3,000.00 (Rupees Three Thousand only) must be in the shape of FDR/TDR/Demand Draft having validity 180 days from the date of opening of tender in favour of ICAR unit-CARI, Izatnagar payable at CARI, Izatnagar, Bareilly (U.P).

Please specify the make and model for above items and also attach relevant document/literature (if available) illustrating detail specifications of the product. Special instruction (if any) _____

DISPLAY CABINET

-

01 No.

SPECIFICATION

The vertical type display cabinet/storage cooler should have self-closing dual acrylic/glass door with clear product visibility, uniform cooling with forced air circulation system, body should be built with UV-protected metal sheets both the internally and exterior, capacity 750-800 lits, temperature range 2-8 °C, AC 230 V/50 Hz power supply, could work effectively at ambient temperature ($37\pm 2^{\circ}\text{C}$), contain at least 6-8 adjustable shelves, provision for locking, internal light with rear illumination, electromechanical temperature control, roller. Certificate of calibration and inspection from the factory to be enclosed during delivery. Attach original manufacturer's product catalogue and specification sheet. Quote page no. on compliance sheet as well as on technical bid corresponding to the technical specifications. List of user with valid email ID and phone no. in India of the quoted model. Detailed original literature with all technical specifications, features. FOR to CARI, Izatnagar and minimum one year warranty from date of installation to be quoted.

Note: - Amount of Bid Security Rs.3,000.00 (Rupees Three Thousand only) must be in the shape of FDR/TDR/Demand Draft having validity 180 days from the date of opening of tender in favour of ICAR unit-CARI, Izatnagar payable at CARI, Izatnagar, Bareilly (U.P).

Please specify the make and model for above items and also attach relevant document/literature (if available) illustrating detail specifications of the product. Special instruction (if any) _____

Ice Flaking Machine - 01 No.

1. Production capacity: 80 Kgs and above in 24 hrs.
2. Built in usable bin with storage bin capacity up to 18 kgs and above
3. Small size granular ice flakes.
4. Storage bin body made of highly insulated PUF material to prevent melting of ice flakes inside and high quality stainless steel portion from outside.
5. User friendly cabinet door for easy access to formed ice.
6. Equipped with automatic sensors for full bin capacity.
7. Automatic cut off function during power failure and absence of water supply.
8. Water level and temperature indicators.
9. Overload sensors for motor and refrigerant water flow control, fault warning display.
10. Auto start and stop functions.
11. Produce low noise
12. Eco-friendly refrigerant with fast and efficient refrigeration and effect.
13. Single phase input: 220-240 volts with low water and power consumption.
14. Equipped with sprayers to limit the lime deposit inside the cabinet.
15. ISO and CE Certification
16. Users list must be enclosed
17. Minimum accessories for day to day use

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Please specify the make and model for above items and also attach relevant document/literature (if available) illustrating detail specifications of the product. Special instruction (if any) _____

Cooking Range - 01 No.

Cooking range should consists of 4 gas burners with cast iron grid support, stainless steel body (exterior finish), auto ignition for burners, grill and oven, digital timer, enamel interior for easy cleaning, grill-gas, double glass oven door, 3 racks and 7 numbers of control. It should have lamp; thermostat; bottom, top turbo and grill heating elements; electricity supply 220-240V AC, 50-60Hz; gas separately with thermostat, deep tray, oven grid, adjustable feed, and digital timer for remainder. Capacity:50-60 Lit, Certificate of calibration and inspection from the factory to be enclosed during delivery. Attach original manufacturer's product catalogue and specification sheet. Quote page no. on compliance sheet as well as on technical bid corresponding to the technical specifications. List of user with valid email ID and phone no. in India of the quoted model. Detailed original literature with all technical specifications, features. FOR to CARI, Izatnagar and minimum one year warranty from date of installation to be quoted.

Please specify the make and model for above items and also attach relevant document/literature (if available) illustrating detail specifications of the product. Special instruction (if any) _____

Digital pH Meter: - 01 No.

1. The measurement of pH, mV and temperature should be possible.
2. Range of pH measurement should be -2.00 to +14.00 with accuracy of ± 0.005 .
3. For calibration, pre-programmed buffer sets should be supplied, automatic buffer recognition and display should be possible, maximum 3 point manual calibration, with selected buffers should be provided.
4. Should have dead stop function.
5. Range for mV should be -999.9 to +999.9. Accuracy for each mV measurement should be $\pm 0.3\text{mV}$.
6. Auto range function for mV.
7. Temperature measurement range should be from -5 to +50°C with $\pm 0.1^\circ\text{C}$.
8. Selection for °C and automatic switch over to manual temperature input when no temperature input is connected.
9. Two channel for pH, mV and temperature measurements.
10. Should have RS.232C output and supply data connector cable, including cover and stand, pH temperature combination electrode, calibration solutions.
11. Users list regarding supply during last two years.
12. ISO and CE Certifications.
13. Additional pH electrode must be included.

Please specify the make and model for above items and also attach relevant document/literature (if available) illustrating detail specifications of the product. Special instruction (if any) _____

MINI PLATE CENTRIFUGE - 01 No.

Specification:-

1. Suitable for skirted, non skirted and all PCR plate models.
2. Must accommodate at least two PCR plates.
3. Speed range: 2000-2500 rpm
4. Must spin down droplets of PCR reaction mixture efficiently in the plates.
5. Operates at 4-30°C and 220-240 volts.
6. ISO and CE certifications.
7. Must come with spare rotor for plates.

Please specify the make and model for above items and also attach relevant document/literature (if available) illustrating detail specifications of the product.

Special instruction (if any) _____

Refrigerator (Top Freezer) - **01 No.**

1. Double door with capacity of 320-380 lit.
2. Energy Star rating of four and above.
3. It should be water leak and frost free.
4. Adjustable humidity system.
5. Provided with servo stabilizer.
6. Minimum three toughened adjustable glass shelves with lids.
7. ISO and CE certification.
8. Door locking facility.
9. Operates at 220-240 volts and power cut resistance for power outages.
10. Resistant, durable and elegant handle.
11. HCFC/CFC free environmentally friendly coolants.
12. Warranty minimum two year for refrigerator and 5 for compressor.
13. Must come with dedicated stand.

Please specify the make and model for above items and also attach relevant document/literature (if available) illustrating detail specifications of the product. Special instruction (if any) _____

Analytical Weighing Balance - 01 No.

Specification:

1. Weigh between 0.1 mg to 220g with a readability of 0.0002.
2. With weighing and counting mode availability.
3. Built-in and external calibration.
4. Stabilization time less than 3 sec
5. Tare by subtraction to full capacity.
6. Pan size of about 90mm.
7. Hold function to lock the weight.
8. Operate on mains 115-230V, 50-60 Hz single phase and rechargeable.
9. The Scale should be as per BIS specifications with ISI Mark.
10. ISO GLP compliance.
11. Standard bi-directional RS-232 or USB interface.
12. Provision of indication when the sample weight reached the set point.
13. Operating temperature 0-50°C.
14. Provided with non-reactive pan, spatula, cleaner and cover for dust protection etc.
15. Users list regarding supply during last two years.

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Please specify the make and model for the equipment and also attach relevant document/literature (if available) illustrating detail specifications of the product.

Special instruction (if any) _____

Benchtop tissue homogenizer (Digital) - 01 No.

Specification:

1. An ISO and CE certified.
2. Rotor speed range from 2,000 to 30,000 rpm.
3. Working volume:0.1 to 200 ml.
4. Solid: Liquid ratio:1:5 to 1:10
5. Timer and time end alarm feature.
6. Over load and over heat protector.
7. Single phase power, AC:120-230 V, power consumption:160w max.
8. Operating temperature:+5 to +50° C and moisture above 80%.
9. Wide range of pH 2-12 under vacuum and wet samples.
- 10.Low noise producing:□76db.
- 11.Include dispersing tool, clam and stand plate. Dispersing tools:
 - a. Easily interchangeable.
 - b.Autoclavable.
 - c.Rotor tip 3,5 and 10mm
 - d.Power supply adapter.
- 12.Warranty: 3 years comprehensive and 2 years non-comprehensive.
- 13.Rotorshaw should be soft start.

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Please specify the make and model for the equipment and also attach relevant document/literature (if available) illustrating detail specifications of the product.

Special instruction (if any) _____