



**ICAR-NATIONAL RESEARCH CENTRE ON PIG**  
(INDIAN COUNCIL OF AGRICULTURAL RESEARCH)  
RANI, GUWAHATI, ASSAM-781131



Phone No.0361 2847195

**F.No.229/NRCP/2016-17/Equip**

**Date: 09.01.2017**

# ***TENDER DOCUMENT FOR SCIENTIFIC EQUIPMENTS UNDER***

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**INDIAN COUNCIL OF AGRICULTURAL RESEARCH**  
**RANI, GUWAHATI-781131(ASSAM)**  
**Phone/Fax-0361-2847195/2847221**



**F.No.229/NRCP/2016-17/Equip**

**Date: 09.01.2017**

**TENDER NOTICE**

The Director, ICAR-NRC on Pig, Rani, Guwahati, Assam invites Open Tenders for the purchase of following Scientific Equipments from Reputed Manufactures/Authorized Agents.

SI. NO.	Name of the Equipments	Equipment Purchased Under	EMD (Refundable) in Rs.	Tender Fees (Non Refundable) in Rs.
1.	Sperm Motility Analyzer	NEC Project	70000.00	500.00
2.	Automatic sperm concentration counter	NEC Project	16000.00	500.00
3.	Steel single water distillation plant	NEC Project	2500.00	500.00
4.	Liquid Nitrogen Containers (10)	NEC Project	30000.00	500.00
5.	BOD Incubator (02)	NEC Project	5000.00	500.00
6.	Digital SLR Camera	NEC Project	3000.00	500.00
7.	Video Camera	NEC Project	8000.00	500.00
8.	Color Photocopier cum Printer	NEC Project	8000.00	500.00
9.	Computer Workstation	NEC Project	4000.00	500.00
10.	Portable LCD Projector with accessories	NEC Project	2500.00	500.00
11.	Portable Public Address System With Dual Microphone and USB	NEC Project	1000.00	500.00
12.	Infrared Thermal Camera	ITRA Project	50000.00	500.00
13.	Laptops with accessories (02 units)	ITRA Project	2000.00	500.00
14.	Bar code reader, printer with accessories	ITRA Project	500.00	500.00
15.	Modified Atmosphere Packaging System	Institutional Fund	30000.00	500.00
16.	Retort Processing Unit	ABI Project	20000.00	500.00
17.	Programmable freezer	NMSHE Project	8000.00	500.00
18.	Blood analyzer	NMSHE Project	12000.00	500.00
19.	Retina Camera with accessories	ITRA Project	13000.00	500.00
20.	Iris Camera with accessories	ITRA Project	3000.00	500.00
21.	Digital SLR camera	ITRA Project	1500.00	500.00
22.	Feed Mixer and Grinder	AICRP Project	6000.00	500.00

Interested bidders may download tender documents from cpp portal i.e <http://www.eprocure.gov.in> & from our website: <http://www.nrmp.in>. Each Items will be evaluated separately hence the firms should submit tenders against each item separately along with Tender Fees of Rs. 500.00 (Non Refundable) and EMD (Refundable) as mentioned above in the prescribed format as per the terms & conditions of the tender on or before **11.30 AM, 30.01.2017. Technical bids will be opened on 11.40 AM, 30.01.2017.**

**Sd/-**  
**DIRECTOR**  
**ICAR-NRC on Pig, Guwahati.**

### **DETAILS OF EMD & TENDER FEES.**

<b>Sl. NO.</b>	<b>Name of the Equipments</b>	<b>Equipment Purchased Under</b>	<b>EMD (Refundable) in Rs.</b>	<b>Tender Fees (Non Refundable) in Rs.</b>
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**Sd/-  
DIRECTOR  
ICAR-NRC on Pig, Guwahati**

## **GUIDELINES FOR BIDDERS & ESSENTIAL TERMS & CONDITIONS**

**TENDER FEE & EARNEST MONEY DEPOSIT (EMD):** Tender must be accompanied with Tender Fee of Rs. 500.00 (Non-Refundable), EMD/ Bid Security (Refundable) Separately for each item, in the shape of Demand Draft drawn in favour of The, Director, ICAR-NRC on Pig, ICAR. **Tenders received without the required Tender Fees & EMD will be rejected** without any communication to Bidder. **If Bidders are exempted from the payment of EMD/Tender Fees, they are required to submit the detail information and necessary documents of exemption without which their bids/tenders will be rejected.** The Bidder should write the Name of the Firm & the Name of the Equipment against which the E.M.D is being submitted clearly at the Back side of the Draft.

**EVALUATION:** Tender for each items are evaluated separately. Bidders are required to prepare tender for each items individually and also submit tender fees and EMD against the each items. Tenders are to be prepared in two bid system i.e Technical and Financial for each item separately. Technical bids will be opened first and after technical evaluations, the firms which are technically qualified will be invited in the opening day of financial bids.

**DOCUMENTS REQUIRED:** Latest Sales Tax Clearance certificate along with client list must be attached with Tender.

**AUTHORISATION LETTER:** If the bidder is quoting on behalf of Manufacturer, **valid Authorization letter from the principal must be enclosed, clearly mentioning the duration of Authorization of the firm.**

**ACCEPTANCE OF TENDER:** The sealed tenders filled in all respect with signatures in all pages must be sent only by **Registered/ Speed Post or Person** to reach **within 11.30 A.M on or before 30.01.2017.** Incomplete Tenders and Tenders received after specified time will not be accepted. NRC on Pig, ICAR is not responsible for any type of delay in arrival of Tender. Once Tender is accepted, it cannot be allowed for withdrawal. The decision of quantity of order shall be subject to approval of The Director; ICAR-NRC on Pig, ICAR and his decision is final and binding.

**VALIDITY:** Rates quoted must be valid upto the contract period.

**SHOULD NOT QUOTE ANY ALTERNATIVE OFFER:** Bidder should quote the best suitable model which matches the advertised specification of the Equipment. **No alternative/ option should be quoted.**

**OPENING OF TENDER:** Tenders (**Technical Bids Only**) will be opened by the committee at **11.40 A.M** onwards on **30.01.2017** at NRC on Pig, ICAR, Committee Hall, Rani, Guwahati, Assam in presence of interested Bidders/ their authorized representatives. **Financial Bids of Technically Qualified Firms is expected to be opened on 04.02.2017 (11.00 A.M).** In case of any change in date, notification of the same will be issued in the Institute website.

**FALSE INFORMATION:** The technical specification furnished by the bidder must be simple, clear and as per the actual specification of the equipment. If, the bidder furnished any false information/ any information/assurance in their quotation for which the firm fails to provide such service or material at the time of supply as per their quote, the EMD of such bidder will be forfeited and any other appropriate action may be taken against such firm as desired by the Director, NRC on Pig, Guwahati.

Sd/-  
DIRECTOR, ICAR-NRC on Pig, Guwahati.

## **TERMS & CONDITIONS.**

1. The Quotation(s) should be sealed and Superscripted on cover "Quotation for Equipment (Name).....and addressed to the undersigned.
2. The rates Quoted (in Indian Rupees) should be F.O.R. NRC on Pig, ICAR, Rani, Guwahati-781131 excluding VAT/Taxes. For imported items/quotes, the rates should be quoted on F.O.B. & C.I.F. basis. **Taxes, if any should mentioned separately.**
3. **The firm is responsible/liable to pay all the local taxes and also to arrange Road Permit Certificate. Documents, if required for such purpose may be provided on request.**
4. Indian Agents quoting behalf of their foreign principals should provide necessary authorization letters from their principal along with quotation.
5. The terms & conditions, period of warranty, A.M.C and time required for supply/installation should be mentioned clearly.
6. In the event of material supplied not in conformity with the same standard and specification furnished in the quotation, the items/material supplied is liable to be rejected and returned to the supplier at their cost.
7. (A) **Payment for goods quoted in Indian Rupees:** 100% payment will be made after satisfactory supply and instillation of items ordered subject to submission of 10% of total value of consignment towards performance security money.  
 (B) **Payment for goods supplied from abroad:** 100% of FOB Value of Orders will be made in the shape of Foreign Demand Draft/ Letter of Credit after satisfactory supply and installation of items ordered subject to submission of 10% of total value of consignment as Performance Security Money. Indian Agency commission should be quoted separately and will be paid in Indian Rupees to the bidder's agent against the submission of claim. If the firm claimed Indian Agency Commission, the same must be mentioned in the financial bids.
8. **In case of imported goods.**  
 (A) The Institute will issue DSIR certificate on request, for Custom Duty Exemption. However Custom clearance charges, if any will be borne by the firm/Indian agent on behalf of the institute, for which necessary documents will be produced & consignment should be forwarded to the Institute NRC on Pig, Rani, Guwahati, immediately after custom clearance. The Agency should quote the rates and mentioned clearly % of Custom Duty if applicable in the Price Bid.  
 Further, the custom clearance charges as per GOI norms will be reimbursed by the institute on production of relevant Documents in original subject to maximum as quoted by the Agency in the Financial Bid.  
 (B) Air Freight, Insurance Charges, custom clearance charges, transportation charges etc up to F.O.R Rani, Guwahati will be borne by firm/Indian Agent on behalf of this Institute & amount of which will be reimbursed in Indian currency, by the Institute on production of relevant documents in original subject to maximum as quoted by the Agency in the Financial Bid. The Agency should quote the amount charged for the purpose in their Financial Bid.

**(C). ICAR-NRC on Pig, Guwahati will not be responsible/liable for the payment of demurrage charges.**

9. The Director NRC on Pig, ICAR, Rani, Guwahati does not bind himself to accept the lowest quotation or any other quotation and reserves the right to cancel any quotation or all quotations without any notice. The decision of the Director, NRC on Pig, Rani, Guwahati is final.

10. **The Institute has adopted two bid systems therefore “Technical Bid” & “Financial Bid” should be kept separately in two different sealed envelopes. Superscripted thereon TECHNICAL BID and FINANCIAL BID within a larger sealed packed/envelope. The larger outer cover should indicate Tender Number, Name of the Equipment, SI.No. and opening date on the top of right hand corner.**

11. **The quoted specification should be prepared after taking into consideration the advertised specification and the terms & conditions of the Tender strictly.**

12. **Financial Bid & Technical Bid (Page No. 08&09 ) must be prepared in the prescribed format (As enclosed) without which tender is liable to be cancel. The Bidder must also furnish the specific answers as per the Questionnaire (Page No. 10-11) as enclosed along with the Tender Document.**

**Sd/-  
DIRECTOR, ICAR-NRC on Pig, Guwahati.**

## PREPERATION OF TECHNICAL BID

**Technical Bid should be prepared in the following format:**

<b>SL. No</b>	<b>Name of the Equipment</b>	<b>Advertised Specification</b>	<b>*Quoted Specification</b>	<b>Whether Quoted Specification Matches with the Advertised Specification</b>	<b>Difference between Advertised specifications with Quoted Specification</b>	<b>Any Advantage/ Disadvantage</b>

***\* Technical Specifications of the offered Instrument must be supported with the original detailed technical brochures.***

**Note:** Bidder should also enclose all the technical brochures which provide sufficient information for the quoted specifications.



## PREPERATION OF FINANCIAL BID

Financial Bid should be prepared in the following format:

### A. For Goods Manufactured in India.

SL. No.	Description of Goods.	Quantity	Ex-factory price	Excise Duty if any	Inland Transportation	Insurance Charges	Sales Tax/VAT	Total Amount (Rs.)

Total Bid Price

Rupees.....

.....

### B. FOR Goods Manufactured Outside India.

SL. No.	Description of Goods.	Qty.	*Net F.O.B Price (Inclusive of F.O.B Charges) in foreign Currency	Custom Duty (In Indian Rupees)  Please Mention the Rates in % (Percentage)	Freight, Transportation, Insurance Charges and custom clearance charges upto ICAR-NRC on Pig, Guwahati ( In INR)	Agency Commission (In Indian Currency)	Any other charges	Total Cost upto NRC on Pig, ICAR, Rani, Guwahati

**Note:**

- The amount will be calculated by ICAR-NRC on Pig, Guwahati in INR by conversion of Exchange rate as applicable on the date of opening of Financial Bids.
- No extra cost towards packing, forwarding, documentary etc charges will be paid by this Institute.

Signature of the Bidder  
Name & Address

## QUESTIONNAIRE

BIDDERS SHOULD FURNISH SPECIFIC ANSWERS TO ALL THE QUESTIONS GIVEN BELOW. IN CASE A QUESTION DOES NOT APPLY TO A BIDDER, THE SAME MAY PLEASE NOTE THAT IF THE ANSWERS SO FURNISHED ARE NOT CLEAR AND/OR ARE EVASIVE, THE BID WILL BE LIABLE TO BE IGNORED.

1. Bid No..... date for bid opening on .....
2. Offer is open for acceptance:
3. Brand of goods offered :
4. Name & address of manufacturer:
5. Station of Manufacturer:
6. What is your permanent Income Tax A/C/ N. (PAN No.)
7. Confirm whether you have attached your Latest/current ITCC or certified photocopy thereof.
8. Status :
  - a) Are you currently registered with the Directorate General of supplies & Disposals (DGS&D) for the items(s) quoted? If so, Indicate the date up to which you are registered and whether there is any monetary limit on your registration.
  - b) Are you a small scale unit currently registered with the National Small Industries Corporation (NSIC) under Single Point Registration Scheme for the Items (s) quoted? If so, indicate the date up to which you are registered and whether there is any monetary limit on your registration.
  - c) If you are not registered either with NSIC or DGS&D, please state whether you are

currently registered with Directorate of industries of the State Government concerned. If so, indicate the date up to which you are registered and whether there is any monetary limit on your registration.

- d) Are you registered under the Indian Companies Act. 1956 or any other Act? Please attach certified copy (copies) of the Relevant registration certificate (s) in Confirmation to your above answer(s).

9. Please indicate :-

10. Whether you are :

- i) Manufacture of the goods quoted; or
- ii) Manufacture's authorized agent for those goods.

11. State whether business dealings with you have been currently banned by any Ministry/Deptt. Of Central Govt. or any State Govt.

12. Details of E.M.D & Tender Fee Submitted against Bid

Signature of Witness

Signature of Bidder

Name & address of Witness

Full name, designation & Address of the person signing above For and on behalf of M/s.

## TENDER SPECIFICATION

SI No	Name of the equipment and technical specification	Quantity
1.	<p><b>Sperm Motility Analyzer: 1</b> Close system to analyse different characteristic motility parameters, DNA fragmentation, sperm concentration etc. with inbuilt microprocessor unit and compatible to examine motility in Mackler counting chamber. Compact, built in one, smoother, faster integrated stage featuring acceleration and deceleration.</p> <ol style="list-style-type: none"> <li>1. Enhanced processing power supplied by the latest generation of Intel technology               <ol style="list-style-type: none"> <li>a. A rearrangement of user controls and the addition of inputs on the front panel</li> <li>b. On / Off switch added to the front panel</li> <li>c. Stage LOAD button separated from the JOG buttons to avoid inadvertent stage loading/unloading.</li> <li>d. Four high speed USB 2.0 ports for easy data transfer and connection to external devices</li> <li>e. Compatible DVD burner/player - save up to 25 GB of data to Disc</li> </ol> </li> <li>2. Ruggedized Medical wide range AC/DC power supply</li> <li>3. High definition 23" wide LCD/LED screen monitor</li> <li>4. Wireless keyboard and mouse</li> <li>5. 1 Terabyte 6.0 GB/sec 7200 RPM hard drive</li> <li>6. Dual Gigabit Ethernet ports</li> <li>7. Dual digital monitor DVI connections plus display port connection</li> <li>8. RAID drive option allows dual mirrored drive for reliability</li> <li>9. Latest Windows version</li> <li>10. integrated optical system</li> <li>11. Automatic Storage of Digital Images</li> <li>12. Accurate Total Sperm Counts in Homogenized Media</li> <li>13. 21CFR11 Compliance and GLP Validation</li> <li>14. Compatible to Leja slides and Makler's counting chamber for loading</li> <li>15. Minimum 10 year software validity</li> <li>16. Chamber -Pre-calibrated counting chambers</li> <li>17. Adjustable micropipettes</li> <li>18. Automated morphology</li> <li>19. Interactive illumination check</li> <li>20. Pig specific setup with provision for other domestic livestock species</li> <li>21. Parameters: Automated morphology, Concentration</li> <li>22. Graphical user interface</li> <li>23. Intuitive navigation</li> <li>24. Superior image quality.</li> <li>25. Unlimited storage of predefined analysis setups</li> <li>26. Built-in database with customizable reports</li> <li>27. ASCII data export</li> <li>28. Faster analysis with multiple image capture provision</li> <li>29. Minimum 30 images per field</li> <li>30. <b>Parameters:</b> Sperm Counts, concentration and percentages, major sperm biometry, Total, static, motile, progressive sperms and other kinetometric parameters. DAP, DSL, DCL, VAP, VSL, VCL, ALH, STR, LIN, BCF, WOB etc. Major subpopulation of distal droplets, Proximal</li> </ol>	01

	<p>droplets, Distal Midpiece reflex, Coiled tail and Bent tail</p> <p><b>Warranty:</b> Two years comprehensive warranty and one year non-comprehensive warranty, free of cost for the equipment and accessories.</p> <p><b>AMC:</b> The firm shall separately quote for Annual Maintenance Contract (Comprehensive/ Non-comprehensive) <b>for three years after completion of the warranty period.</b> Shall clearly indicate the number of visits/ year, time for attending breakdown calls, coverage etc.</p>	
2.	<p><b>Automatic sperm concentration counter</b></p> <p>Automated system for estimating sperm concentration and motility parameters. Inbuilt camera for rapid analysis and assessment of samples and storage of results. Suitable software for running of the unit. UPS for power back up to 1 hour.</p> <ol style="list-style-type: none"> <li>1. Veterinary sperm densitometer count analyzer ; fast speed, a sound quantification, a high accuracy and an abundant detection parameter data</li> <li>2. Speed Range: 0-180 um/s</li> <li>3. Particle Diameter Resolution: 0-150 um/s</li> <li>4. Main Unit</li> <li>5. Branded PC from reputed brands and compatible LCD/LED Monitor</li> <li>6. Printer; Color Laser printer 1 set</li> <li>7. English Analyzer software with life time or 20 year warranty</li> <li>8. The analysis time: 1-5 seconds</li> <li>9. Can filter out all kinds of impurities which are different from sperm to ensure the accuracy of test</li> <li>10. All the data and dynamic and static images of sperm examination for patients are digitally stored. It can used for variedly querying, modifying, adding up, and printing inspection reports, and also be shared to within the networking freely</li> <li>11. CCD camera 1 set with necessary attachments</li> <li>12. Medical ABS Trolley 1 set</li> <li>13. Sperm thermostat 2 set</li> <li>14. Sperm analysis slide or tube 10set</li> <li>15. Boar photometer with dilutor and printer</li> <li>16. Direct absorbance or concentration reading and calculation</li> <li>17. Calculate volume of media to be added and number of doses</li> <li>18. Simultaneous display of conc. and absorbance</li> <li>19. Real time display of absorbance</li> <li>20. <b>Accessories:</b> Micropipettes (0.5 to 5 ml); Clear tips (2 types); Adjustable micropipette; Filters for micropipettes; Micropipette racks; Semen sampling thin tube; Paper roll for photometers; Cuvette for photometers (Quartz)</li> <li>21. Warranty: The firm shall provide 2 years comprehensive warranty and two years non-comprehensive warranty.</li> </ol>	01
3.	<p><b>Steel single water distillation plant</b></p> <ol style="list-style-type: none"> <li>1. Unit for production of pyrogen free distilled water of high purity for laboratory work.</li> <li>2. Steel Metal : All contact parts are made of stainless steel mounted on a sturdy MS tubular stand.</li> <li>3. Table and automatic model</li> <li>4. Suitable heating element (eg. Glass coated) to prevent scaling of the element shall be offered.</li> </ol>	02

	<ol style="list-style-type: none"> <li>5. Water distillers should produce highly treated and disinfected <i>water for laboratory usage</i>.</li> <li>6. Capacity/Hr : 10 ltr. to 12 ltr</li> <li>7. Output Load : 6 KW to 10.0 KW.</li> <li>8. Power Requirements: To work on 220/230Volts, 50 Hz single phase AC supply.</li> <li>9. A free standing unit capable of producing pyrogen free distilled water as per IP/BP standards</li> <li>10. Control Panel Fitted With ON/OFF Switch</li> <li>11. Safety Feature Low Water Cut-Off Probe, Mains/Heating Indicators</li> <li>12. Warranty: Two years comprehensive warranty.</li> </ol>	
4.	<p><b>Liquid Nitrogen Containers (10)</b></p> <ol style="list-style-type: none"> <li>1. For storing of liquid nitrogen, Configuration - Vertical; Inner vessel material – Stainless steel; Design pressure – about 7 kg/ cm<sup>2</sup>; Insulation – Vacuum and multilayer super insulation; Outer vessel – Carbon steel; Operating pressure – Vacuum; Capacities: (1) 20 lit (4 Nos); 25 lit (3 Nos.); 35 lit (3 nos.). Unit price of each capacity container to be quoted separately.</li> <li>2. Two storage solutions: Storage in canisters, cryoplastic boxes, vial-holder bars and racks</li> <li>3. Temperature indicator to continuously display temperature under the lid of the container and alarm with adjustable trip point.</li> <li>4. 2<sup>nd</sup> temperature indicator for continuously displays the temperature of stored products and Alarm with adjustable trip point.</li> <li>5. Monitoring conservation-Level indicator Indicates the level of the liquid in the container alarm with adjustable trip point.</li> <li>6. Automatic filling system for connected to a source of liquid nitrogen.</li> <li>7. Integral upper and lower alarms.</li> <li>8. Manual filling button to flush the cloud of gas.</li> <li>9. Interface box for sending by wire all information provided by indicators for remote monitoring and alarm signals.</li> <li>10. Ability to perform remote operations on the container</li> <li>11. Automatic degassing system to prevent warm gas from entering the container during automatic filling.</li> <li>12. THERMORY temperature to enables the conservation temperature of samples traceability system to be recorded and processed.</li> <li>13. COOLBASE User-friendly database program for easy, program sure, efficient management of products stored in one or more containers.</li> <li>14. Built in aluminium with super-insulation and resin neck to combine thermal efficiency, lightness and strength.</li> <li>15. Polyurethane paintwork</li> <li>16. Extremely strict internal quality assurance rules (ISO 9001 version 2000).</li> <li>17. Roller bases</li> <li>18. Protective casings</li> <li>19. Canister lids (standard on the plastic canister range)</li> <li>20. Level rods (standard on the entire range)</li> <li>21. Lifters</li> <li>22. Depending capacities; Diameter of neck (mm), Weight empty (kg), Weight full (kg), External diameter (mm), Total height (mm), Daily</li> </ol>	10

	<p>evaporation (l/D), Static holding time (d), Dynamic holding time (d), Number of canisters (stainless steel), Diameter of canisters (mm), Height of canisters (mm), Number of levels of goblets and Total capacity 0,25ml straw should within best range.</p> <p>23. Level control indicator with alarm  24. Digital temperature indicator with alarm  25. Tipping stand and Tipping handle  26. Hand-rail  27. Dispensing system with Pumps to evacuate nitrogen  28. Flexible hose  29. Anti-splash nozzle  30. Warranty: Two years comprehensive warranty.</p>	
5.	<p><b>BOD Incubator</b></p> <p>Digital temperature display, temperature controlled using thermostat, temp. controllability <math>\pm 0.2^{\circ}\text{C}</math>, uniformity <math>\pm 0.5^{\circ}\text{C}</math> at <math>37^{\circ}\text{C}</math>, safety thermostat for higher and lower temperature cut off, cabinet made of double wall, outer chamber coated MS steel, inner chamber SS or Aluminium, Capacity: about 450 lit, inside air circulation system for uniform temperature, removable SS/Aluminium perforated trays (Minimum 3 nos.), fabricated inner chamber with ribs to adjust the height of shelves.</p> <p>Temperature Range 5 to <math>60^{\circ}\text{C}</math>  Temperature Accuracy <math>+ / - 0.5^{\circ}\text{C}</math>  Temperature Uniformity <math>+ / - 0.5^{\circ}\text{C}</math>  Power 220 Volt</p> <p>Temperature Control Microprocessor Control  Power Failure Alarm Presence  Cabinet M.S. Steel Powder Coated  Inner Chamber: High quality 304 Stainless Steel  Insulation Polyurethane Foam or mineral wool insulation  With Inner Glass Door  Cooling Refrigerant CFC Free  Heating System U Shaped S. S. Nichrome Wire  Air Heater Air Circulation Fan or Blower  Door Lock 1  Interior Light Yes  Display LED / LCD  Safety thermostat for over temperature protection  CFC free cooling systems (branded) Complete IQ, OQ and PQ documentation  Fully Adjustable Shelves Caster wheels for easy mobility  Audio visual alarm alerts Full length inner glass door and metal door with gasket and lock on the outside, U shaped tubular heater, High temperature cut off settable thermostate safety device, complete driven operations through a single controller with 2- line LED/LCD display, ethernet based print facility.</p> <p>Optional -Humidity system  - Light system by interior illumination w/ 3 fluorescent tubes  - Timer 0-24 hours for regulating cycle's illumination condition  - Arrangement for incubation of CO<sub>2</sub> Air Mixture  - Combined Electronic Digital Temperature &amp; humidity controller  - Compatible Automatic Voltage Stabilizer of 3 KVA  Warranty: Two years comprehensive warranty</p>	01

6.	<p><b>Digital SLR Camera</b>  Megapixel: <math>\geq 20</math>; Sensor: CMOS with precision 11-point Auto Focus system. Optical zoom, LCD Screen, Built-in WiFi to connect to wireless networks allowing transfer of data to PCs and print photos with wireless printers. GPS support ISO 100-25600. Eye-level viewfinder with coverage for vertical/horizontal view - approximately 97 percent and magnification of approximately 0.71X, Provision for tagging images with GPS coordinates, recall locations and route travelled. Digital SLR Body, about 24-105 mm IS Lens Kit, Wide coverage range, Rechargeable battery, AC Adapter Kit, USB Cable, Tripod stand, Carrying case, Lens Cap. Minimum one year warranty.</p>	01
7.	<p><b>Video Camera</b>  Record: 4K 3840 x 2160p, Video: at minimum 60 frames per second; 1/2.3" Exmor R 8.3MP CMOS Image Sensor, 20x Optical Zoom, Built-In Microphone &amp; Dual Pro XLR Jacks, Dual XQD Card Slots for 4K Recording, XAVC-S Format for 150 Mbps 4K Recording, Neutral Density Filters: At least three, Paint Functions: At least five, Independent Zoom, Focus &amp; Iris Rings Assignable Buttons: At least 7, Output: HDMI. Tripod stand, Carrying case, Lens Cap. Rechargeable battery, Minimum one year warranty.</p>	01
8.	<p><b>Color Photocopier cum Printer</b>  Colour Laser Multifunctional Device (Reader / Printer Desktop)  Maximum Original Size A3  Paper Sizes: A4, B5, A5, A3, B4, A4R, B5R, A5R, FLS, F4A and Envelopes  Resolution Scan: minimum 600 x 600dpi  Copy: minimum 600 x 600dpi  Print: minimum 1200 x 1200dpi  Copy / Print Speed A4: minimum 20/20ppm  A3: minimum 15/15ppm  Multiple Copies / Prints 1 to 999 copies  Automatic both side printing &amp; copying provision  Magnification Copy Ratio: 25 - 400%  CPU minimum 1.66GHz  Memory minimum 2GB RAM  Hard Disk Drive minimum 250 GB  Interface Network: Ethernet 10Base-T / 100Base-TX / 1000Base-T (RJ-45)  Others: USB 2.0 x 2 (Host), USB 2.0 (Device)  Power Supply 220-240V AC, 50 / 60Hz, 4.0A  Power Consumption Max.: 1.5kW or less  Toner Yield  (A4, 5% coverage) Black: 36,000  Yellow / Magenta / Cyan: 19,000  Drum Yield Black: 69,000  Colour - Y,M,C: 54,000  Resolution 1200 x 1200dpi  Minimum one year warranty.</p>	01
9.	<p><b>Computer Workstation</b>  Processor: Intel® Xeon® Processor  Clockspeed: about 2.4 GHz, Turbo Speed: 3.2 GHz, No of Cores: minimum 6 (2 logical cores per physical),  22 nm Haswell ,6 x 256KB L2 Cache, 15MB L3 Cache  Up to 2X faster encryption and decryption - Intel® Data Protection Technology</p>	01



	<p>with Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI)  Supports DDR4 2133Mhz or higher Memory Support  Motherboard:  Intel® Core™ i7 processors on LGA 2011-v3  5-Way Optimization by Dual Intelligent Processors  Dual 32Gb/s ultrafast M.2 x4 (onboard and PCIE add-in card)  Graphic Card:  NVIDIA® CUDA® Architecture  NVIDIA® Parallel DataCache™  Remote Workstation Application Acceleration  NVIDIA® FXAA and TXAA  DisplayPort 1.2 Support (with Audio)  With minimum 16GB compatible RAM, Keyboard Mouse, Display, Cabinet and UPS (1 KVA).  Preloaded Windows 8 Operating System, Original MS Office software.  Minimum one year warranty.</p>	
10.	<p><b>Portable LCD Projector with accessories.</b>  Brightness: minimum 3,000 Lumens  Contrast(Full On/Off): 4,000:1  Auto Iris.  Native Resolution: About 1024x768  Data Modes:  Digital Inputs: HDMI  Lamp Type: UHM  Lamp Wattage: approx. 190 Watts or more  Display Type: DLP  Standard Zoom Lens: About 1.10:1  Standard Lens Focus: Manual  Good range of Throw Dist (m) and Throw Ratio (D:W)  Speakers: minimum Mono  <b>Projection Screen and Stand:</b>  Minimum 10"x 8" Tripod Projector Screen Home-Theatre HDTV Projection 3D  Projector Screen With Tri-pod Stand 10ft x 8ft  Should be easy to use and Low Maintenance  Spring Action Automatic Roll-up Technology  <b>Laptop:</b>  Windows 8.1 or higher (64 bit)  Intel® HD Graphics 4400 or higher  Screen Size: minimum 13 inches  Screen Resolution: minimum 1366x768  Processor: 2 GHz Intel Core i3 or higher  RAM: minimum 4 GB DDR3L  Memory Speed: minimum 1600 MHz  Hard Drive: minimum 500 GB HDD 5400 rpm  Graphics: Intel Integrated Graphics  Wireless: Bluetooth  Computer Memory: DDR3 SDRAM or higher  Minimum one year warranty for projector and laptop. Suitable carry case for Project &amp; accessories. Antivirus software 1 year free license</p>	01

11.	<p><b>Portable Public Address System With Dual Microphone and USB</b></p> <p>Made of Wood/ABS, Texture/Paint Transformer: Copper Wire and best grade core. Rechargeable, Portable, USB, Echo, Fm, Wireless Microphone: minimum 2 Mic &amp; 1 Aux I/P Dual Power Source Amplifier: AC Mains, 12V DC Power o/p: 100W Maximum, minimum 4 Hours long lasting working. Low Current Consumption for long battery life.</p> <p>Audio output power about 100W Max, s/n ratio &gt;80dB , Frequency Response 50Hz -20KHz</p> <p>Frequency Range: VHF about 180-270 MHz, USB audio input</p> <p>Effective distance about 70 to 100 M , Output Impedance about 600Ω Distortion &lt;0.05%</p> <p>Rechargeable With Mic Cordless Microphone Wireless Remote Control</p> <p>Built-in battery 12V / 1.2Ah rechargeable battery , Power supply voltage AC-220V/50Hz. Suitable carry case.</p> <p>Minimum one year warranty.</p>	01
12.	<p><b><i>Infrared Thermal Camera</i></b></p> <ul style="list-style-type: none"> <li>• Clinical infrared thermal imaging system</li> <li>• Thermographic resolution: 320 x 240 pixels or better</li> <li>• Spectral range: About 8-12 micron</li> <li>• Built-in variable-focus with suitable optics with good depth of field</li> <li>• Fully Radiometric video recording</li> <li>• Thermal sensitivity: <math>\leq 20</math> mK NETD at 30<sup>0</sup> C. Lower NETD will be preferred.</li> <li>• Temperature Range: 5 to 45 degrees C with suitable calibration for physiological measurement.</li> <li>• Spatial Resolution: About 0.28 mm per pixel</li> <li>• FOV: About 25° X 20°</li> <li>• Accuracy: +/- 1 degrees C or lower</li> <li>• Uncooled integral array for thermal sensing will be preferred</li> <li>• Built in touch LCD screen display</li> <li>• Display of image in °C, °F, K or radiation values in W/m<sup>2</sup></li> <li>• Free selection of different color palettes, including temperature indication at the cursor position</li> <li>• Auto and manual focus options with zoom with Digital Zoom</li> <li>• Provision of multiple image capture</li> <li>• File format for image export options must be in .bmp, .jpg, .png, .csv, .xls</li> <li>• File format for fully radiometric video: at least mpeg<sup>-1</sup></li> <li>• Storage facility: minimum of 2GB</li> <li>• Provision of multiple palette creation package</li> <li>• Suitable calibration software</li> <li>• Comprehensive post-processing software specially designed for clinical infrared thermal imaging. with multiple image display provision</li> <li>• Multiple isotherm processing capability</li> <li>• Software should facilitate placement of temperature markers with pointers at selected location in the image.</li> <li>• Option to merge visible image with thermal image for instant interpretation</li> <li>• Appropriate image labelling provision</li> <li>• Battery (two sets) with external charger (minimum 4 hrs backup), AC adapter for external power and option to work with instrument on power while charging</li> <li>• Data transfer options: Both USB/SD card and Bluetooth/Wi Fi</li> </ul>	

	<ul style="list-style-type: none"> <li>• Minimum two years comprehensive warranty</li> <li>• AMC charges for post-warranty period to be quoted</li> <li>• On-site installation, demonstration and training</li> </ul> <p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>• Tripod Stand for camera mounting</li> <li>• <i>Portable computing system with 5th Generation Intel® Core™ i7 Processor, 8GB Single Channel DDR3L 1600MHz, 1 TB hard disk, Intel® HD Graphics 5500, 64 bit, display resolution 1920 X 1080 or better, Windows 8.1, with minimum battery life of 4 hours for image data transfer and analysis using software along with and coloured</i></li> <li>• Suitable carrying bag/ box to protect the lens and the unit from extreme environment.</li> <li>• All other accessories for successful running of the unit at lab and field</li> <li>• Minimum two years comprehensive warranty on main unit and accessories</li> </ul>	
13.	<p><b>Laptops with accessories</b></p> <ul style="list-style-type: none"> <li>• <i>Operating system: licensed Windows 8.1 or higher (64 bit)</i></li> <li>• Screen Size: minimum 15 inches</li> <li>• Screen Resolution: minimum 1366x768</li> <li>• Processor speed: minimum 2 GHz</li> <li>• Processor type: Intel Core i5 or higher version</li> <li>• RAM: minimum 4 GB DDR3L</li> <li>• Memory Speed: minimum 2 GHz</li> <li>• Hard Drive: minimum 1TB HDD</li> <li>• Wireless: Bluetooth/wireless LAN</li> <li>• Integrated Webcam/speaker/microphone</li> <li>• Licensed software: Antivirus with 3 years subscription</li> <li>• Optical drive: DVD R/W drive</li> <li>• Accessories: Power cord with suitable laptop bag</li> <li>• Minimum One year comprehensive warranty</li> </ul>	02
14.	<p><b>Bar code reader, printer with accessories</b></p> <p>Unit for printing of code on meat packages; Compatible printer for water and low temperature resistant printing; Software required for printer; Provision for printing both text and number contents on different sizes of labels. Accessory: Unit for scanning of bar code labels on packages. Software required for scanning of codes. <i>Minimum One year comprehensive warranty</i></p>	01
15.	<p><b>Modified Atmosphere Packaging System</b></p> <p><b>Proposed applications:</b> To package different pork and pork products in laminated pouches under different combinations of oxygen, CO<sub>2</sub> and nitrogen to increase their shelf life.</p> <p><b>Technical specifications:</b> The system shall include the following: 1) Digital gas mixer; 2) Vacuum packaging machine with gas flushing; 3) Head space gas analyser for Oxygen &amp; Carbon dioxide; 4) Gas cylinders for O<sub>2</sub>, CO<sub>2</sub> &amp; N<sub>2</sub> with Regulators and 10 Litres buffer tank; and 5) Laminated pouches for packaging.</p> <p><b>Specifications for gas mixer:</b></p> <ol style="list-style-type: none"> <li>1. Number of Gases - 3 Gases Module for O<sub>2</sub>, CO<sub>2</sub> &amp; N<sub>2</sub></li> <li>2. Mixture Adjustment: Digital</li> <li>3. DIGITAL MIXER - Large Digital Display with Touch screen Human interface</li> <li>4. Flow rate: 05 – 150 Litre /minute</li> <li>5. Outlet pressure - Up to 4 Bar</li> <li>6. Standard inlet pressure - 9 bar</li> </ol>	01

	<p>7. Operating Mode: Buffer tank  8. Accuracy: Better than +/- 2 % absolute within a flow range of 15 – 100% and mix settings of 10 – 90%  9. Alarms: Acoustic gas inlet pressure alarm with indication per gas  10. Cabinet: Stainless Steel 304  11. Easy Interface with Packaging machines</p> <p><b>Specifications for Vacuum Packaging Machine for MAP Packaging with Gas Flushing:</b></p> <ol style="list-style-type: none"> <li>1. Stainless steel housing and chamber.</li> <li>2. Gas flushing capacity: 20 m<sup>3</sup> / h</li> <li>3. Double sealing</li> <li>4. Pneumatic sealing, wireless sealing bar.</li> <li>5. Digital electronic panel.</li> <li>6. Transparent lid and soft air.</li> <li>7. Chamber dimensions: 430 x450 x180mm.</li> <li>8. Motor: 220V/1ph/50 – 60Hz.</li> </ol> <p><b>Specifications for Head Space Oxygen &amp; Carbon dioxide Analyser:</b></p> <ol style="list-style-type: none"> <li>1. Available for oxygen/Carbon dioxide measurement</li> <li>2. Volume: &lt; 2cc Sample Volume</li> <li>3. Display – TFT with improved readability</li> <li>4. Voltage: 230 V (50-60 Hz)</li> <li>5. Power supply with low stand-by power consumption</li> <li>6. Provision for cloning of data from one instrument to another</li> <li>7. Provision for calibration at intervals</li> </ol> <p><b>Essential accessories:</b></p> <ol style="list-style-type: none"> <li>1. Gas Cylinders (one no. each) with regulators for Oxygen, Carbon dioxide and Nitrogen with Buffer tank</li> <li>2. CO<sub>2</sub> Heater (one no.)</li> <li>3. Laminated pouches: 1000 numbers each for packaging 250g and 500 g samples of pork and pork products.</li> <li>4. Offer may also include other accessories, if any, which are essential to make the unit a complete system.</li> </ol> <p><i><b>Warranty:</b> Two years comprehensive warranty and one year non-comprehensive warranty, free of cost for the equipment and accessories. On-site installation, demonstration and training</i></p> <p><b>AMC:</b> The firm shall separately quote for Annual Maintenance Contract (Comprehensive/ Non-comprehensive) <b>for three years after completion of the warranty period.</b> Shall clearly indicate the number of visits/ year, time for attending breakdown calls, coverage etc.</p>	
16.	<p><b>Retort Processing Unit</b></p> <p>Retort Processing Unit consisting of a horizontal retort, pump for coolant water, an interconnecting pipeline system, a control panel to regulate process parameters, sealing machine and a supporting structure.  The details are as follows.</p> <ol style="list-style-type: none"> <li>1. With radial locking system.</li> <li>2. Capacity: 15 kg of products packed in pouches/cans</li> <li>3. The trays made of Aluminum perforated sheets 3 mm thick</li> <li>4. Appropriate insulation with SS cladding.</li> <li>5. With pressure gauge, safety valves and calibrated thermometers.</li> <li>6. Provision (probes) to measure product temperature at three different locations and another probe for recording retort chamber temperature.</li> </ol>	01

<p>7. With automated Fo value calculation system.</p> <p>8. Fully automated Program Logic Controller (PLC), Man Machine Interface (MMI) and Computer based control system.</p> <p>9. Steam, air and coolant water injection lines with nozzles/sprayers, Neoprene gasket etc.</p> <p>10. Retort inner chamber and outer cover made of good quality 304 steel</p> <p>11. Retort fully insulated as specified.</p> <p><b>High pressure centrifugal pump for coolant water</b> High head centrifugal pump to inject coolant water. This will feed steam generator while under process</p> <p><b>Operating Pressure and Temperature:</b> 25 PSI max 130 Deg C max</p> <p><b>Steam Generators:</b> Suitable steam generation facility with immersion heater of 9 KW cap each with control Panel to set process temp, pressure and low level cut off to protect the immersion heaters. The process water can be replenished by the coolant high pressure pump.</p> <p><b>Water spray System</b> A circulation pump in SS with an inline steam injection system to enable the retort to work under water spray technology. Provision for automatic regulation of water level in retort.</p> <p><b>Interconnecting Pipe lines</b> The interconnecting lines with isolating valves located at convenient points for easy operation. The entire pipeline required during installation to fit into given space must be provided by the firm.</p> <p><b>Supporting Structure</b> The supporting structure made of good quality stainless steel square or round tubes. Structure must accommodate tank to store coolant water and act as drain tank.</p> <p><b>Controls</b> Program Logic Controller (PLC) and Man Machine Interface (MMI) based fully automatic provision with a suitable dedicated Desktop or Laptop PC to choose the parameters. The parameters must be set from the PC or at the MMI. Provision for Live display of process parameters. Data acquisition with a provision to view, store, retrieve and print data (Printer not in our scope).</p> <p><b>Fo Value Monitor</b> By the PLC installed in the control system fitted with a high sensitive temp probes (3 Nos) for measuring product temperature that has response time of a few seconds. The time temp and time Fo value data are displayed in live mode with an option to display, store, retrieve and print out data for individual cycles.</p> <p><b>Retort Cleaning Kit</b> A retort cleaning kit to carry out periodic cleaning of retort</p> <p><b>Accessories and utilities</b></p> <ul style="list-style-type: none"> <li>*Suitable compressor with SS pipeline connecting the retort</li> <li>*Storage tank with connecting pipeline in SS</li> <li>*Suitable desktop PC</li> <li>*Retort pouch sealing Machine – Impulse type single head sealer with timer control in both heating and cooling mode – foot operated</li> <li>*SS trolleys 3 ft x 2 ft with Aluminum perforated trays</li> <li>*Electronic weighing scale 10 gm to 3 kg</li> <li>*Retort Cleaning Kit with circulation pump</li> <li>*5000 pouches</li> <li>*All the required electrical and plumbing accessories</li> <li>*Any other accessory required for successful running of the system.</li> </ul>	
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	<p>*Design must confirm to IS 2825  * Can sealing unit and trays for holding can</p> <p><b>Installation and commissioning</b>  Safety certifications to be submitted. Above plant and utilities must be delivered, installed and commissioned at our Centre without any extra cost. All electricals and earthing material and wiring will be also required must be provided by the firm.</p> <p><b>Warranty:</b> Two years with one visit of service engineer for servicing every six months.  AMC charges after Warranty may also be quoted.</p>	
17.	<p><b>Programmable Freezer</b>  <b>Size range:</b> above 250 litres  <b>Temperature</b> range up to -80°C with digital controlled monitoring system  Temp control: Microprocessor Control with digital display  <b>Minimum</b> 4 Inner Compartments,  5" foamed-in-place, polyurethane insulation, CFC/HCFC-Free  <b>Environmentally</b> Safe Refrigerant Mixtures / Non-Flammable in both stages.  Evaporator type should be Cold Wall With Enhanced Heat Transfer Treatment,  <b>Warranty</b> – Minimum 1 year for instrument and 5 years for compressor  Audible/visual alarm system with battery back-up of temperature deviation,  <b>Bench-top</b> assay platform equipped with state-of-the-art optics,  The equipment should be 21CFR Part 11 Compliance Wireless data monitoring for the freezer temperature  The supplier should provide compatible stabilizer along with the instrument.</p>	01
18.	<p><b>Blood Analyzer for Livestock</b>  <b>Parameter to be analyzed:</b> Hematocrit (Hct), Hemoglobin (Hgb), MCHC, WBC, Total Granulocyte Count (GRANS)  Percentage Granulocytes, Eosinophils (EOS), Neutrophils (NEUT), Total Lymphocyte/Monocyte Count (L/M), Percentage Lymphs/Monos, Platelet Count (PLT)  <b>Printer :</b> Equipped with inbuilt printer  <b>Calibration:</b> Auto read calibration (cal)  <b>Power Supply:</b> Universal power supply  <b>Operating Temperature:</b> Ambient to 40°C  <b>Accessories: Suitable UPS with one hour power backup and all</b> accessories need to be supplied by the firm for running of the instruments  Minimum two years Comprehensive warranty.  AMC for post warranty period to be mentioned.</p>	01

19.	<p><b>Retina camera with accessories.</b></p> <p><b>Specifications:</b>  Camera for observation and photography of retina or fundus of eye. The instrument should be portable. Non-mydratic camera, wide angle coverage, vendors should indicate the magnification. Working range should not be less than 1cm. Camera with adjustable angle of coverage. Capable of acquiring high resolution red and colour free images and video that can be downloaded into a computer for analysis. The manufacturer should indicate minimum pupil diameter required for examination, dimensions and weight of the instrument. Suitable software for image processing is available, if any, should also be quoted. Equipment should comply with regulatory standards. The camera should have a warranty of 2 years.</p>	01
20.	<p><b>Iris camera with accessories.</b></p> <p><b>Specifications:</b>  Camera for capturing iris photographs for individual verification. Camera should have low power consumption. The high resolution images should be downloadable through USB and should support different operating systems (windows/Android) for use with laptops, smart phones, tablets and other handheld devices. Illuminated through infrared LED, camera should be capable for iris image capture in various indoor and outdoor environments. Captured iris images should be compliant with ISO/IEC 1794-6 or other similar regulatory standards. The camera should have a warranty of 2 years.</p>	01
21.	<p><b>Digital SLR camera.</b></p> <p><b>Specifications:</b>  Image quality not less than 18 Megapixels, ISO 100 to ISO 6400 Sensitivity, CMOS Image Sensor, LCD Screen, auto and manual function range of shutter speed, with full HD Recording capability, at least one lens each of approximate range 15-55mm and 55mm and above, Suitable macro close up lens kit set filter (1+ 2+ 4+ 10+) for macro photography. Rechargeable battery. Battery charger and high performance flash memory 32GB capacity.  One year comprehensive warranty.</p>	01
22.	<p><b>Specifications for feed mixer and grinder</b></p> <p><b>Capacity:</b> 100 kg per hour</p> <p><b>Feed Grinder:</b> Vertical type with capacity of 100-150 kg/hour</p> <p>Electric Motor: 5 HP motor or more of reputed company</p> <p>Sieve size: 8 mm pore size or less</p> <p><b>Feed mixture:</b> 100 kg capacity of feed bin over the mixture</p> <p>Electric Motor: 5 HP motor or more of reputed company</p> <p>Tool Box: One set of all the tools and spanners set required for opening and fixing of unit.</p> <p>Electric power panel at the cost of supplier</p> <p>Fitting, fixing and test run at the cost of supplier</p> <p>All the fabrication works related to the machine will be done by the supplier</p> <p>Warranty period minimum 1 year from the date of installation</p>	01