

### Specifications of Instruments

Sr. No	Name of instruments alongwith specifications	Preferable make	Qty.
1.	<p data-bbox="384 427 847 461"><b>FREEZE DRYER (LYOPHILIZER)</b></p> <p data-bbox="384 499 584 533"><b>Specifications:</b></p> <p data-bbox="384 535 1126 853">2.5-5 L Ice capacity, Condenser Temp. up to -50°C, Refrigeration system: 2 unit x 1/3 HP, Double stage vacuum pumps, Electronic controller cum vacuum indicator, with 3 step automatic voltage stabilizer, hermetically sealed CFC free compressor, vacuum drum made of stainless steel, Moisture Sensor to prevent moisture inside vacuum pump, 12 port stainless steel drying chamber for connecting up to 48 flasks or vials</p>	Labconco/ Virtis/ ILSHIN	1 no.
2.	<p data-bbox="384 898 580 931"><b>AUTOCLAVE</b></p> <p data-bbox="384 969 584 1003"><b>Specifications:</b></p> <p data-bbox="384 1005 1126 1285">Microprocessor based fully automatic operation, PID digital controller with LCD display, Inner chamber, outer chamber fully made of stainless steel, 400x600 mm, 78 ltrs, µProcessor based controller with time and temperature programmable by user, Low water level alarm and cut off for safety of heater, operating pressure from 15psi to 22 psi (adjustable), Sterilizing temperature up to 134°C, with auto purging, auto exhaust facility</p>	Labtech/ NSW/MAC	2 no.
3.	<p data-bbox="384 1323 751 1357"><b>VACUUM DRYING OVEN</b></p> <p data-bbox="384 1395 584 1429"><b>Specifications:</b></p> <p data-bbox="384 1431 1126 1603">Capacity 20-22 L, Temp., Nearly ambient to 150 °C, Digital LED Display for set value (SV) and process value(PV), Microprocessor based digital temperature indicator –cum –controller , vacuum range 10-750mm Hg, Internal chamber and shelves made of stainless steel</p>	Labtech /MAC/NSW	1 no.
4.	<p data-bbox="384 1615 871 1648"><b>SHAKING ORBITAL INCUBATOR</b></p> <p data-bbox="384 1686 584 1720"><b>Specifications:</b></p> <p data-bbox="384 1722 1126 1924">Temp. 5 to 50°C, shaking Speed range 20 to 250 RPM, 4 fluorescent tubes, inside chamber made of stainless steel, Microprocessor controller with 4” LCD display for shaking speed and temperature, Power failure alarm,, Door Open alarm ,Platform Size 580x600mm with clamps and voltage stabilizer</p>	Labtech /REMI/ Acmas	1 no.

5.	<p>REFRIGERATED CENTRIFUGE (HIGH SPEED)  Max speed : 18,000 rpm.; Max rcf: 30,076 xg  Max Volume: 1600 ml ( 4 x 400 ml)  Temperature: -20 to +40°C, CFC free refrigeration</p> <p>20 curves of acceleration and deceleration  10 freely programable Accel/Decl. Curves with graphic display  Storing of up to 50 run protocols</p>	Sigma-SVI/ Eppendorf/ Bio-tech	1 no.
6.	<p>HOMOGENIZER  (High speed)</p> <p><b>Technical specifications</b>  Speed range 4000 to 23,000 rpm,  Batch volume range 1 to 1500 mL,  Ambient operating conditions 5 to 40°C 80% RH max,  Noise rating 72 dB,  Speed adjustment Stepless,  Wattage 500 input, 300 output  Power 220 VAC, 50/60 Hz</p> <p><b>The instrument should be supplied with</b></p> <p>Stand with stainless steel rod,  beaker/test tube holder, two movable clamps for  positioning the beaker/test tube holder,  and a tool kit for shaft assembly.</p>	IKA/Cole- parmer/ Pro- Scientific	1 no.
7.	<p>ROTARY EVAPORATOR</p> <p><b>Specifications</b>  Motorized lift (stroke 140 mm) with “safety stop“  function, if the power cuts out the evaporator flask is  automatically lifted out of the heating bath</p> <p>Evaporating Flask: 20 to 3000 ml</p> <p>Speed range from 20 to 280 rpm</p> <p>Bath Water Temp. Maximum 100 °C, Capacity 3-4 L</p> <p>Digital speed display</p> <p>Digital Water/oil heating bath with integrated carrying</p>	IKA/Buchi/ Boeco/ Cole- Parmer	1 no.

	<p>handles for safe handling</p> <p>Vertical glassware</p> <p>Temperature control of the heating bath by a micro controller – Digital temperature display</p> <p>Timer function shuts off heating bath at completion of timer sequence</p> <p>100% oil free vacuum pump (vacuum 15 mbar)</p>		
<b>08.</b>	<p><b>BINOCULAR LABORATORY MICROSCOPE</b></p> <p><b>Specifications</b> Binocular, <b>Eyepiece:</b> CWHK 10X/18L, <b>Nosepiece</b> Quadruple, <b>Focusing:</b> Coaxial coarse &amp; fine adjustment <b>Objectives:</b> 4x, 10x, 40x 100x all Olympus <b>Substage:</b> Abbe Condenser 1.25 N.A. with rack &amp; pinion <b>Light Source:</b> Built in 120v 30w with variable intensity</p>	Carl Zeiss/ Olympus/ Nikon	3 no.
<b>09.</b>	<p><b>CANNING UNIT</b> Including following assemblies/components Along with</p> <ol style="list-style-type: none"> <li>1. <b>Rotary Flat Can Body Reformer:</b> Speed 10 to 15 Cans per minute, useable with 200 to 700 diameter, rubber rollers (301 &amp; 401 dia), roller bearings (301 &amp; 401 dia),</li> <li>2. <b>Round Can Body Bidder :</b> suitable for (301 &amp; 401 dia), along single phase motor.</li> <li>3. <b>Hand Flanger:</b> With flenging dies with rings (301 &amp; 401 dia)</li> <li>4. <b>Double Seamer:</b> Equipped with one hP Motor Capacity: 35 to 40 cans per minute, along with seaming chucks (211, 301 &amp; 401 dia), seaming rolls, adapter plate (211, 301 &amp; 401 dia).</li> <li>5. <b>Lid Embossing:</b> with alphabets and numerals, one set of double row die holders.</li> <li>6. <b>Empty Can Sterilizer:</b> Tunnel length 5 ft.</li> <li>7. <b>Canning Retort:</b> Capacity- 90/100 along with two crates,.</li> <li>8. <b>Can Hand Tester:</b> Complete with foot and pressure gauge</li> <li>9. <b>Vacuum Tester &amp; seam checking gauge:</b></li> </ol>	Bajaj Machinen/ B Sen Barry	1 no.

### **General Requirements**

- (1) The supplier must have supplied similar Instrument in India and abroad. The suppliers must be a certified dealer of the instrument for that particular make. The list of users should be sent along with the quotation and also copies of Research Papers published using the quoted Instrument for the applications mentioned above. The supplier must also provide along with the quotation the list of organizations that have purchased the quoted Instrument during last two years. The complete original brochure of the instrument with full details must be enclosed along with.

### **TERMS AND CONDITIONS GOVERNING THE TENDERS FOR THE SUPPLY**

1. Every tender shall be accompanied by the earnest money equal to 2 % of the involved value. The earnest money should be deposited through Bank Draft in favour of the Finance Officer, M. D. University, Rohtak, payable at the State Bank of India, Maharshi Dayanand University, Rohtak.
2. The tender received without earnest money or after the due date shall not be entertained except with the special approval of the competent authorities.
3. The supplies shall be executed within the time specified in the supply order which may be extended by the Registrar on an application of the supplier explaining reasons/circumstances due to which time limit could not be adhered to. In the event of the supplier failing to supply the material within time, he shall be liable to pay as compensation an amount equal to one percent or such small amount as the Registrar may decide on the said amount of the contract, for every day that the quantity remains incomplete, provided that the entire amount of compensation shall not exceed 10 percent of the total amount of the contract. An appeal against these orders shall however lie with the Vice-Chancellor whose decision shall be final.
4. In case the contractor backs out of his contract, the earnest money deposited by him shall be forfeited besides any other action as may be considered necessary by the Vice-Chancellor.
5. All the charges including packing, forwarding and installation, taxes and other levies should be specified in the tender. The charges etc. not specified in the tender shall not be paid.
6. The quantity of material/supplies shall be subject to increase on the tendered rates. This increase shall be communicated by the University within 30 days of acceptance of the tender.
7. Supplies shall be made as per the schedule and within such time as is indicated in the supply order.

8. 100% payment will be made on receipt and inspection of goods to ensure the specifications and their good condition.
9. The rates accepted by the University shall be applicable up to 31.3.2013 and the supplier shall have to make supply during the period as and when required.
10. The tenders shall be opened by the Purchase Committee on 26.07.2012 at 11:00 AM in the Department of Food Technology in the presence of contractor/supplier and the Committee reserves the right for negotiation thereafter if considered necessary.
11. The Registrar reserves the right to reject or accept any offer without assigning any reason.
12. All disputes subject to **Rohtak jurisdiction.**
13. Guarantee / warrantee of items must be mentioned.
14. **The University stands exempted from the payment of Central Excise Duty/Custom Duty. The rates are quoted keeping that fact in view. Necessary certificate will be provided by the University.**
15. No tender documents will be issued and rates are to be offered on company's letter pad.
16. If a holiday occurs on the opening day, the tenders will be opened on the next working day.
17. The tenders received not in proper sealed cover shall not be considered and will be liable for rejection in a straightway.
18. Rates for each item are to be quoted in a separate letter head and are to be sent in a separate cover.

REGISTRAR  
M.D. University, Rohtak