



# ਬਾਟਨੀ ਵਿਭਾਗ

ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ-147002

(1961 ਦੇ ਪੰਜਾਬ ਐਕਟ ਨੰ: 3 ਤਹਿਤ ਸਥਾਪਤ)

ਫੋਨ: 0175-3046265(ਮੁਖੀ), 0175-3046266(ਦਫਤਰ)



Sr.No	Instrument Name	Qty
1	B.O.D. incubator S.S.Digital cap 336 lt -Make Navyug India- with 0-24 hours day night cycle. Microprocessor based Digital Temp./timer indicator cum controller, co 2air mixer Nozzle is provide. Internal illumination with fluorescent tube, with suitable Automatic Voltage stabilizer.	Three
2	<b>Cooling Incubator Shaker Digital-- Make-Remi</b> Temperature range from 5 C to 50 C arrangement thru hermetically sealed compressor, fitted with microprocessor based PID electronic digital temp. Controller cum indicator an accuracy of +_1 c. Double walled, outside make of mild steel sheet duly powder coated inner stainless steel with two air circulating fans. Double doored, inner made of 6mm thick acrylic sheet to observe the sample placed inside the chamber. built in rotary shaker with control and rpm meter, to work on 220/230 volts A.C. with shaking tray (100ml x40 flasks, 150ml x 34 flasks, 250ml x 23 flasks, 500ml x 23 flasks, 1000ml x 9 flasks)	One
	<b>Laminar air flow (horizontal) complete S.S. with Microprocessor control (SIZE -180 x 60 x 60cm) - Make-Rescholar</b> microprocessor based switches for blower, LED light & UV light with LCD back light display (UV light with timer) Made up of stainless steel 304gr. Dynamically balanced with 0.25 HP Electric motor Mount on anti vibration pad 1440rpm motor.	One
	<b>Rotary Evaporator system (Digital model) - Make -JSGV-</b> fitted with 40w, AC motor, continuously frequency variable speed control 20-200rpm, digital display, water bath with RT to 90 c temperature control, Heater 1.5KW, jack lifting upto 150mm, Boiling flask 2000ml, Vertical coil condenser, with automatic feed arrangement, receiver with ball cup joint with Vacuum pump for Rotary flash Evaporator oil free.	One
	<b>Chiller refrigerated circulator--</b> circulating pump and water tank of rust proof stainless steel, the built in pump has a flow rate of 2.5 meters and internal tank capacity 10 lt. the temperature is controlled by a digital temp. indicator cum controller. Cooling from -10 c to ambient.	One
5	<b>Ultrasonic Probe Sonicator, Model: VCX-500 Make: Sonics &amp; Materials USA :</b> <b>Specifications for Ultrasonicator System</b> <ul style="list-style-type: none"> <li>• Power-500 Watt or More, Frequency-20 KHz</li> <li>• Liquid Processing Capacity of System-250 ul to 1 liters or Better</li> <li>• Ultrasonicator should have Automatic tuning and Frequency Control.</li> <li>• It should have Energy monitor, digital wattmeter, and have Integrated Temperature Controller,</li> <li>• Equipment should have micro- processor - based, programmable, LCD screen with user prompts.</li> <li>• Converter should be sealed.</li> <li>• Should have Pulse on and Off of 1 second to 1 Minutes</li> <li>• Equipment should have 10 or more programs storage capability</li> <li>• It can control independently processing time from 1 second to 10 hours</li> <li>• Ultrasonicator should have Automatic Amplitude Compensation to ensure uniform probe amplitude</li> <li>• Standard probe 1/2" (13mm) with replaceable tip/Solid should be Supplied with System for Volume-10-250 ml</li> <li>• Solid Probe 19 MM</li> <li>• Tapered Microtip 5 mm</li> <li>• System Should be ROHS and CE Certified and Certificated of the same need to be submitted along with tender Document</li> <li>• Temperature Probe should be supplied with System to measure samples temperature up to 100deg C</li> <li>• Ultrasonicator should be supplied with Imported, OEM Manufactured sound abetting system and All other Accessories.</li> <li>• Following Accessories need to be Supplied with System.</li> </ul> <p><b>2. Accessories for the above instrument:</b></p> <ul style="list-style-type: none"> <li>(i) Standard 1/2" Titanium alloy probe with replaceable tip :</li> <li>(ii) Standard 3/4" Titanium alloy probe with replaceable tip :</li> <li>(iii) Standard 1/4" Titanium alloy probe with replaceable tip :</li> <li>(iv) Sound abating Enclosure of Sonics &amp; Material, USA :</li> <li>(v) Temperature probe:</li> </ul>	One One One One One

M. R. D. J. S. S.

6	<p><b>MINI Electrophoresis System- Make-GE Healthcare-Horizontal and Vertical with power supply</b></p> <p><b>Specifications</b></p> <ul style="list-style-type: none"> <li>The horizontal unit should be able to cast 7 x10 cm gel ; with Max voltage 500 V for 5 minutes or less ; Max. wattage 15 W ; Max. current 500 mA ; Max. operating temperature 50 °C; Max. buffer volume 250 ml</li> <li>Should have inlet hole to fill in coolant - Coolant required ≈600 ml , 50/50 water/ethylene glycol</li> <li>should meet international safety certifications EN61010-1, UL3101-1, CSA C22.2 , 1010.1, CE</li> <li>Should have color coded sheathed electrodes to save from electrical shock</li> <li>Should come with gel casting and running tray and one 8-well, 1.5 mm thick comb, comb back, bubble level and screws.</li> <li>Mini Vertical unit should come with 10x10.5 cm size glass plates for mini gels- lab cast as well as pre-cast , for SDS Page for 1-2 gels simultaneously .</li> <li>Capable of casting and running 8 x 7 or 8 x 9.5 cm gel size in same unit.</li> <li>should provide 10sets of glass plates, 2 notched alumina plate for efficient cooling ; Two 0.75 mm 10-well comb and T shaped spacer set , gel casting unit , well locating decal .</li> <li>Extra 5 sets of rectangular and notched glass plates of size 10x 10.5 cm .</li> <li>It should have serpentine cooling heat exchanger to fill up with coolant in upper buffer chamber for efficient run without smiling, in addition to alumina plate which acts as heat sink.</li> <li>The spacers should be T shaped and clamps with integral springs</li> <li>The power supply should be capable of output volts at 300 V, current at 400 mA and Power at 80 W , with 2 terminal output and timer with 24 hrs constant voltage or current , automatic recovery after power failure , short circuit/overload protection .</li> </ul> <p>NOTE: All the above-mentioned units should comply with international European/USA safety certification</p>	One
7	<p><b>Gradient Thermal Cycler System: Make: Bio-Rad/Agilent</b></p> <p><b>Specifications:</b></p> <ol style="list-style-type: none"> <li>Gradient Thermal Cycler having 96 well Block for 0.2 ml plates, strips &amp; tubes. System should be upgradable to 384 well format block PCR for high through put work.</li> <li>Maximum block ramp rate should be 6°C or better</li> <li>Block temperature range 4°C – 100°C</li> <li>Gradient range from 30°C – 99°C. System must offer at least 12 rows of gradient.</li> <li>The system should have a Temp accuracy of +/- 0.2 °C or better and temp uniformity of +/- 0.4 °C or better</li> <li>The system must support reaction volume of 10 – 100 µL</li> <li>The system must have memory for less than 8000 protocols &amp; unlimited using USB.</li> <li>The system should have color touch screen for ease of and operation of the system.</li> <li>USB should be available for easy transfer of data. Remote access facility should be possible for monitoring experiment progress &amp; data remotely.</li> <li>The Instrument must be provided with two years of comprehensive warranty.</li> <li>The System should be US FDA/European CE certified.</li> </ol> <p>2: 2 KVA online UPS with minimum 30 min backup : one 3. PCR vials: 1000 4. Warranty: Minimum 2 years</p>	One

**Note:-** Kindly mention whether you are a manufacture/ authorised /sole supplier/sole distributor etc,

1. ਟੈਂਡਰ ਨਿਤੀ 07-01-2020 ਤੱਕ Sealed ਲਿਫਾਫੇ ਵਿੱਚ Coordinator, UGC-SAP-1, Department of Botany, Punjabi University, Patiala ਦੇ ਨਾਮ ਤੇ ਭੇਜਿਆ ਜਾਵੇ।
2. ਟੈਂਡਰ Acept ਕਰਨ ਦਾ ਅਧਿਕਾਰ Coordinator, UGC-SAP-1, Department of Botany, Punjabi University, Patiala ਪਾਸ ਹੋਵੇਗਾ।

Coordinator,  
D.R.S. (SAP-1)  
Deptt. of Botany  
P.U. Patiala

Head  
Deptt. of Botany  
Punjabi University,  
Patiala-147002