



**National Research Centre for Orchids
(Indian Council of Agricultural Research)
Pakyong – 737 106, Sikkim, India**



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F: No. NRCO/S/1/10-11/

Dated:

To,

Dear Sir,

We have a requirement of the goods/services as indicated below, tender for which will be received up to **1500 hrs on 19.08.2010.** (date) and you are invited to submit your most competitive quotation for the same. All the relevant details are given below.

1. Description of the goods/services required and the required quantity: **As enclosed in Annexure – I.**
2. Guiding specification and other technical details: **As enclosed in Annexure –II.**
3. Terms of delivery: FOR Destination i.e. **NRC for Orchids, (ICAR), Pakyong, East Sikkim-737106**
4. Delivery period for goods/services: Within 30 (Thirty) days from the date of the purchaser's signing the contract.
5. Erection/ installation and commissioning (if required, depending on the goods/services ordered) are to be completed within 15 days of delivery of the goods/services at site.
6. Terms of Inspection by the purchaser's representative: The inspection, installation and demonstration must be carried out to the satisfaction of the indenter and a certificate to this effect should accompany the final claim.
7. Training of purchaser's operator(s) for operating the goods ordered, as and if necessary: Two operators are to be trained for a period of 4 (Four) weeks at purchaser's premises for successfully operating the goods purchased. The training shall be completed by one month from the date of installation.
8. **Price structure:**
 - a. The tenderer shall quote for the complete requirement of goods & services and for the full quantity as shown against a serial number in the List of Requirements in Annexure – 1. Unless otherwise specified in Annexure – I, the tenderers are, however, free not to quote against all the serial numbers mentioned in the List of Requirements (in case there are more than one serial number in the List of Requirements).
 - b. The rates and prices quoted shall be in Indian Rupees only.
 - c. All duties, taxes and levies payable by the supplier under the contract shall be included in the quoted price. The purchaser will not pay any such duties, taxes and levies separately.
 - d. The rates and prices quoted by the supplier shall remain firm and fixed during the currency of the contract and shall not be subject to variation on any account, whatsoever, including statutory variations, if any.

e.NRC for Orchids (ICAR) is exempted from payment of Central Excise/Customs Duty.

9. **Bid Security**: The seller will submit bid security @2.5% of their quoted rate, in form of Bank Draft drawn on **STATE BANK OF INDIA**, in favour of "**Director, NRC for Orchids**", payable at **Pakyong (BRANCH CODE:9036)**.
10. No exemption on account of submission of bid security is allowed even if the firm is registered with DGS&D/NSIC/SSI.
11. **Receipt of goods & Terms of payment**:
 - a. Payment term for supply of goods, including erection/ installation and commissioning (as and if applicable) – Immediately on receiving the goods at site, the purchaser will verify the quantities of the items supplied as specified in the delivery challan of the supplier and also check for any superficial damage etc. in the goods so supplied and issue a provisional receipt accordingly. If the goods supplied do not require erection/ installation and commissioning at site, the purchaser, within seven working days of issue of the provisional receipt, will issue acceptance certificate (of the goods) to the supplier, provided the goods supplied are acceptable in terms of the contract. However, if the goods supplied also need erection/ installation and commissioning, the purchaser will issue acceptance certificate within seven working days, after successful erection/ installation and commissioning. The supplier will then send its bill along with the purchaser's acceptance certificate and other accompanying documents to the paying authority for payment.
 - b. The paying authority will release the full payment to the supplier as due in terms of the contract, within thirty working days of receipt of supplier's bill, purchaser's receipt certificate and other accompanying documents, provided the same are in order.
 - c. Payment for training of purchaser's operator(s), if applicable.

After release of payment to the supplier as per sub-para (a) above and after successful completion of training of the operator(s) in terms of the contract, the purchaser will immediately issue a certificate to this effect to the supplier. The supplier will thereafter send its bill for training charges, along with the above certificate to the paying authority. The paying authority will release the payment to the supplier in terms of the contract within fifteen working days of receipt of supplier's bill provided the bill and the accompanying documents are in order.

- 12 **Paying Authority**: Director, NRC for Orchids, (Indian Council of Agricultural Research), Pakyong East Sikkim-737106
- 13 **Liquidated Damage Clause**: If any time during the performance of the contract, the supplier encounters conditions hindering timely delivery of the goods, the supplier shall promptly inform the purchaser in writing the fact of the delay and the likely duration of the same. After receipt of supplier's communication, the purchaser shall decide as to whether to cancel the contract for the un-supplied portion after the existing delivery period, or to extend the delivery period suitably by issuing an amendment to the contract. If the supplier fails to deliver the goods and/ or perform the services within the contractual delivery period for reasons other than circumstances beyond supplier's control (which will be determined by the purchaser) and the purchaser extends the delivery period, the purchaser will also deduct from the

contract price, as liquidated damages, a sum equivalent to 0.5% (half percent) of the delivery price of the delayed goods or unperformed services for each week of delay or part thereof until actual delivery or performance. The maximum limit of such deduction will, however, be 10% (ten percent) of the contract price of the delayed goods or services.

Further, during such delayed period of supply and/ or performance, the supplier shall not be entitled to any increase in price and cost, whatsoever, on any ground. However, the purchaser shall be entitled to the benefit of any decrease in price and cost on any ground, whatsoever, of the goods & services, supplied during the period of delay.

The purchaser's letter (to the supplier, with copies endorsed to others concerned) extending the delivery period will be subject to the above conditions.

14 **Warranty Clause:**

Warranty will be for a period of one year from the date of installation. In case of any repair within the warranty period, the period of warranty would extend for a period of 12 months from the date of such repair.

15 **Dispute Resolution Mechanism**

- i) If any dispute or difference arises between the purchaser and the supplier relating to any matter connected with the contract, the parties shall make every effort to resolve the same amicably by mutual discussions. However, if the parties fail to resolve the dispute or difference by such mutual discussion within 30 days, either the purchaser or the supplier may give notice to the other party of its intention to refer the same to arbitration. The arbitration shall commence thereafter. A sole arbitrator, who will be appointed by the Secretary, ICAR and the procedure to be followed in this respect will be as per the Indian Arbitration and Conciliation Act, 1996, shall conduct the arbitration the venue of the arbitration, shall be the place from where the contract is issued.
- ii) You are also required to fulfill the following conditions and furnish the details as indicated in subsequent paragraphs.
 - a) At the time of awarding the contract, the purchaser reserves the right to increase or decrease by up to 25%, the quantity of goods & services as specified in the List of Requirements, without any change in the unit price or other terms & conditions.
 - b) Please furnish a certified copy of your latest ITCC (Income Tax Clearance Certificate).
 - c) Please indicate if you are currently registered with any Govt. organization and if registered, furnish all relevant details.
 - d) Please state whether business dealings with you presently stand banned by any Government organization and, if so, furnish relevant details.
 - e) A supplier shall not submit more than one quotation for the same set of goods.
 - f) The supplier shall at all times indemnify the purchaser, at no cost to the purchaser, against all third party claims of infringement of patent, trademark or industrial design rights arising from the use of the goods or any part thereof, with respect to the goods quoted by the supplier in its offer.
 - g) The quotation(s) as well as the contract shall be written in English language. All correspondence and other documents pertaining to the quotation(s) and the contract, which the parties exchange, shall also be written in English.
 - h) The quotation and all correspondence and documents relating to the quotation exchanged between the bidder and the purchaser may also be written in Hindi language provided that the same is accompanied by an English translation, in

- which case, for the purpose of interpretation of the quotation, the English translation shall govern.
- i) the contract shall be governed by the laws of India and interpreted in accordance with such laws.
 - j) The quotation/ offer shall remain valid for acceptance for a period not less than 90 Days after the specified date of opening of the offers.
- iii) The quotation shall be sealed in an envelope. The envelope shall be addressed to the purchaser and it should also bear the tender enquiry no. and the words “**DO NOT OPEN BEFORE * 19.08.2010. (Quotation for Scientific Equipment)**”. This envelope should then be put inside another envelope, which will also be duly sealed. The outer envelope will bear the full address of the purchaser. The supplier must ensure that its tender (i.e. quotation), duly sealed as above, reaches the purchaser at least one hour before the time and date of opening of tenders. The supplier may, at its choice, send the tender by registered Post or by speed post. Alternatively, the supplier may also hand deliver the tender to the purchaser in which case the purchaser shall give the supplier a receipt, indicating the time & date of receipt of the tender.
- iv) The tenders, which are received late by the purchaser, will be ignored. Further, the purchaser does not accept any liability and responsibility for the tenders in case the same are not properly sealed & marked and/ or sent as above.
- v) The tenders, which are received on time (as per para 3 above), will be opened at purchaser’s office at **1530 hours on 19.08.2010 (date)**. The purchaser will open the tenders in the presence of the tenderer’s duly authorized representatives, who choose to attend the tender opening. The representative should submit the authorization letter at the time of bid opening.
- vi) The purchaser will evaluate and compare the quotations, which are substantially responsive, i.e. which are properly prepared & signed and meet the required terms, conditions, specification etc. The purchaser will award the contract to the supplier whose quotation will be determined to be responsive and offering the best evaluated price.
- vii) Notwithstanding the above, the purchaser reserves the right to accept or reject any quotation or annul the tendering process and reject all quotations at any time prior to award of the contract, without assigning any reason, whatsoever, and without incurring any liability or obligation, whatsoever, to the affected tenderer or tenderers.
- viii) Please submit your quotation accordingly. You shall sign all the pages of your quotation. Your price quotation may be furnished in the format enclosed as Annexure – 3. you are also required to return this original tender enquiry (all the pages), as it is, duly signed by you on every page, for our record. You may retain a photocopy of this tender enquiry for your record.

Encl: Annexures I.II &III

(Asstt. Administrative Officer)
(Signature of the Purchaser)
(for and on behalf of Director, NRC for Orchids, (ICAR), Pakyong-737106.

Copy to:

1. Computer Assistant (T-3), NRC for Orchids, Pakyong with the request to insert the Tender Notice in the website of the Institute.
2. Notice Board, NRC for Orchids, Pakyong

Asstt. Administrative Officer

LIST OF REQUIREMENTS

SL. No.	Description of equipments	Accounting Unit	Quantity
1.	Gel Rocker	Number	01
2.	Ligation Bath	Number	01
3.	Dry Bath	Number	01
4.	Micropipettes	Number	01
5.	Liquid Nitrogen can	Number	01
6.	Stem Scrubber	Number	01
7.	PH Meter	Number	01
8.	Refrigerator	Number	01
9.	Orbital Shaker	Number	01
10.	Hybridization Oven	Number	01
11.	Nanodrop Spectrophotometer for DNA < RNA quantification	Number	01
12.	Lypholyzer	Number	01
13.	Deep Freezer (-80°C)	Number	01
14.	Programmable high voltage power supply	Number	01
15.	Ice Flaking Machine	Number	01
16.	Nitrate ion meter	Number	01
17.	Potassium ion meter	Number	01
18.	Muffle Furnace	Number	01
19.	Hot plate	Number	01
20.	Chlorophyll meter	Number	01
21.	Autoclave with timer control	Number	01
22.	Glass bead Sterilizer	Number	02
23.	Portable leaf area meter	Number	01
24.	Light meter & sensor	Number	01
25.	Plant growth chamber	Number	01
26.	Supply & installation of automatic weather station (AWS) with following sensors.	Number	01
27.	Geographical positioning system (GPS)	Number	01
28.	Rotary microtome & accessories	Number	01

29.	Refrigerated Table top centrifuge	Number	02
30.	Incubator Shaker	Number	01
31.	Hybridization Oven	Number	01
32.	Upright Showcase Cooler	Number	05
33.	UV-VIS Spectrophotometer	Number	01

Special instructions (if any) In case of equipments which require installation and demonstration by the Service Engineer of the supplier, it should be clearly mentioned whether these services are free of cost or involve extra cost and the cost should also be indicated, if applicable.

SPECIFICATIONS & OTHER TECHNICAL DETAILSOF THE ITEMS AND SERVICES (SHOWN IN ANNEXURE – 1)

Sl. No.	Name of the Equipment	Specification
1.	Gel Rocker	Division: Genetics Metal platform with non slip rubber mat, speed up to 20 oscillations per minute with electronic timer 0-60 min, Dimensions 30cmsx30cms
2.	Ligation Bath	Division: Genetics Electronic control with digital display and fix aluminium combi block
3.	Dry Bath	Division: Genetics Solid anodized aluminium with standard heating block to hold at least 24 tubes of different sizes
4.	Micropipettes	Division: Genetics Multichannel pipettes suitable for molecular biology work
5.	Liquid Nitrogen can	Division: Genetics Standard size to store liquid nitro
6.	Steam Scrubber	Division: Genetics <ul style="list-style-type: none"> • PLC controlled precise, stable, reliable, Colour Liquid Crystal Touch Screen – Advanced programmable control system with real time display and direct viewing • Rotary Spray Thrower for washing the residue completely • Self cleaning programme • Preset parameters such as cleaning time and temperatures • Safety lock to avoid door falling open • High efficiency air filtering to avoid recontamination • Large Hardened compound glass door • Double-Door channel structure to form barrier between the contaminated area and clean area • Loading surface formed by pulling down the door • Agile Caster design for easy mobility • Standard cleaning shelves • Standard cleaning basket • Special basket for cleaning flasks, beakers, test tubes and Petri dishes etc.

7.	pH Meter	<p>Division: Genetics PH Benchtop Meter with LCD display with pH ,mV, ORP mode; includes Triode 3 in 1 Combination pH/ATC probe 9157BNMD, with instruction manual with Indigenous electrode holder & stand</p> <p>Technical Specifications</p> <p>pH Range: 0.000 to 14.000 Resolution: - 0.001/0.01/0.1 Relative Accuracy: ± 0.002</p> <p>mV Range: ± 1999.9 mV Resolution: 0.1 mV Relative Accuracy: ± 0.2 mV or 0.05% of reading, whichever is greater</p> <p>Temperature Range: - 5.0 to 105.0 °C Resolution: 0.1 up to 99.9 °C, 1.0 over 99.9 °C Relative Accuracy: ± 0.1 °C</p> <p>Salient Features</p> <ul style="list-style-type: none"> ❖ 50 points data logging ❖ Last 10 calibration logged ❖ 10 user method can be saved ❖ Software down load / update facility ❖ Battery as well as power line facility ❖ IP 54, sating – splash proof, dust proof ❖ Electrode connector – water proof
8.	Refrigerator	<p>Division: Genetics Double door frost free 300lit capacity.</p>
9.	Orbital Shaker	<p>Division: Genetics Shaking frequency: 50 - 250 r.p.m. Digital display: Five-digit LED, Timer: 1-999 min, Operating temperature: 4 - 45°C, in a non condensing room, Platform size: 605 x 605 mm, Interchangable platform , Power:220V,50Hz, Accessories: Laboratory Flasks Fixation Adapter (Clamp) for 100ml,150ml, 250ml conical flask</p>
10.	Hybridization Oven	<p>Division- Genetics Suitable for hybridization in bags, incubation of flasks whilst shaking, tempering of wash bags and in-situ hybridization. The rotation unit can accommodate different bottle holders. The shaking frequency is digitally adjustable.</p> <ul style="list-style-type: none"> • Patented APT Line preheating chamber technology assures temperature accuracy and reproducible results • Temperature range 5°C above room temperature to 99.9 °C

- Multifunctional Microprocessor PID controller with LED display with several time function
- Timer Functions
 - 0 to 99 h 59 min delayed ON
 - 0 to 99 h 59 min delayed OFF
 - 0 to 99 h 59 min temperature dependent delayed OFF
- Digital temperature setting with tenth of a degree accuracy
- Powerful air turbine
- Removable, electrical rotation unit for up to 12 hybridization bottles with automatic switch-off
- Timer 0 – 99.59 h
- Shaking device with digitally adjustable shaking frequency
- One ramp function
- Adjustable heat load (0 to 100%)
- Adjustable intervals for printer
- Rotation unit for 12 hybridization bottles
- Tight collection pan
- Adjustable ventilation by means of rear exhaust 50 mm with ventilation flap and front ventilation slide
- Removable dip tray
- Temperature safety device Cl.3.1
- Printer and communication interface RS232 for communication software APT COM data control system.
- 1 chrome plated shelf
- Calibrations and validations possible

Technical Specification

Total volume: 53 lit.

No. of Shelves (standard/max.): ¼

Load per shelf: 15 kg

Temp. range, 5 °C above amb. : 99.9 °C

Temp. variation at 37 °C: ± 0.5 °C

Temperature fluctuation at 37 °C: </+ 0.1 °C

Exterior dimensions: 659 x 617 x 575 mm

Interior dimensions: 400 x 400 x 330 mm

<p>11. Nanodrop Spectrophotometer DNA<RNA quantification (Genetics)</p>	<p>Division- Genetics Minimum Sample Volume- 0.5µl. (nucleic acid) Sample Number -1</p>
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Path Length: 1mm 9auto range to 0.05mm)
 Light Source: Xenon flash lamp
 Excitation Maxima of LEDs-N/A
 Detector Type-2048-element linear, Silicon CCD array
 Wavelength Range-190-840nm
 Wavelength Accuracy 1nm
 Spectral Resolution < 1.8nm (FWHM at HG 253.7nm)
 Absorbance Precision : 0.002 (1mm path)
 Absorbance Accuracy : 2% (at 0.76 absorbance at 257 nm)
 Absorbance Range: 0.02-300(10mm equivalent)
 Fluorescence range: N/A
 Detection limit: 2ng/ µl (dsDNA)
 Max. Concentration: 15,000 ng/ µl (ds DNA)
 Measurement Time: seconds
 Footprint : 14 x 20cm
Weight 2.0 kg.
Sample Pedestal –Material of Construction-303 stainless steel and quartz fiber
 Operating Voltage -12VDC
 Operating Power consumption 12-18 W (max 30W)
 Standby Power Consumption -5W
 Software Compatibility -Windows® XP and Vista™ (32 bit)

12. Lypholyzer

Division: Genetics
 Maximum Condenser Chamber Capacity 1.5 Liters
 Ice Removal Capacity (in 12 hours) 2.2 lbs, (1.0 kg)
 Maximum Ice Capacity 3.0 lbs, (1.35 kg)
 Operating Temperature ~ -50 °C
 Refrigeration Compressor Type 1/4 hp hermetic unit
 Dimensions (H x W x D) 12 x 13 x 17 (in), 305 x 330 x 432 (mm)
 Weight 59 lbs (27 kg)
 Power Requirements 230 VAC/50 Hz, 8.0 A
 CE Approved
 8-port Column Manifold
 300 ml Flask; Flask Lid with Adapter
 Vacuum Pump, with GBORK, EMF10 Filter and DDA110DK Drain Kit, 230vac 50Hz, CE Approved
 Displacement 76 l/min@ 60Hz
 Maximum Vacuum 1.5 mtorr/1.95 x 10⁻³ mbar
 Oil Capacity 0.7 Liters
 Dimensions, W x D x H 160 x 420 x 230 (mm)
 Weight lbs. (kg) 48 (22)

	<p>Power Requirements 230 VAC/50Hz, 6A Vacuum Inlet Fitting: (mm) 12.7 O.D. CE Approved</p>
13. Deep Freezer (-80°C)	<p>Division- Genetics It Should maintain 80°C with mobile message alarm and remote monitoring function, Suppressing air convection and heat conductivity with excellent Insulating performance. Flame retarded, CFC free. Malfunction alarms: over/under temperature or voltage set points, sensor defects, condenser radiating defect, over ambient temperature, power off</p> <p>High efficiency Compressor, EBM fan, three-layer-sealing structure and heat-insulating system. Extra thick, Hi-density insulation to reach an excellent temperature preservation effect. Should have computer controlling system in low-temperature stage, avoiding the low-temperature stage compressor mishandled by the cascade system. Microprocessor control system with touch pad data entry and digital display of all functions. Key-operated switch for main power and alarm. Independent operating temperature and High/low limit alarm functions with factory-set defaults for quick start-up, all set points adjustable in 10 C increments</p> <p>Capacity : Capacity: 600 Liters Input Power : 1 HPX2 Door : Single, foaming Shelves/Inner door : 3 / 2 Exterior Dimensions : 1000 x 890 x 1960 mm Interior Dimensions : 760 x 630 x 1300 mm Net / Gross Weight : 360 / 400 kg</p> <p>Total rack/box capacity: 20 unit racks / 320 boxes can be loaded.</p>
14. Programmable high voltage power supply	<p>Division- Genetics Output voltage-0-3000V.D.C Output current-0-150mA variable Timer-0-60min/hour with digital display and at least 5-10 programmes</p>
15. Ice Flaking Machine	<p>Division-Plant Pathology Ice Flaking Machine should have automatic operation, uniform, solid, flaked ice with safety device Production: 250 liter/day Ice type: Flake type Storage capacity: approximately 125 Liter Dimension (IN): 500x490x510 mm (OUT): 990x630x680 (H) mm with stainless steel body, non corrosive, front sliding door with proper safety device</p>
16. Nitrate ion meter	<p>Division-Soil Science</p>

Principle Nitrate ion electrode method,
Readout LCDdigit display **Guarantee range** 10-3 to 10-1 mol /l (meters can be used beyond this range.)
 Repeatability± 20% of indication value
 Ambient Temperature 41 ambient temperature
 Temperature
 Display Range 0-99 x 100 ppm (9,900 ppm)
 Resolution 1ppm for 0-99 ppm for 0-99ppm
 10ppm for 10-99 x 10 ppm
 100ppm for 10-99 x 100 ppm
 Power 2-CR 2025 (lithium) user replaceable.
 Approximately 500 hours continues use
 Weight 1.4 oz (approximately 40 g.)
 Calibration 2- point calibration solutions
 Accessories Sampling sheets, tweezers, pipet, seals, rinse bottle and carrying case
 Soil Test Kit accessories: Std. Solution 450ppm
 NO₃-N, Extractant 20ppm NO₃—N
 Cups -80z. Measuring Spoon (29.5cc) Pipet Filter Papers

17. Potassium ion meter

Division-Soil Science
 Display: LCD two digital display
 Display Range 0-99 x 100 ppm (9,900 ppm 0)
 Battery : 2-CR2025 (lithium) user replaceable
 Battery life: Approximately 500 Hrs continuous use
 Resolution 1ppm for 0-99 ppm
 10ppm for 10-99 x 10 ppm
 100 ppm for 10-99 x 100ppm
 Calibration : 2 point calibration by STD/SLOPE controls using standard calibration solutions
 Weight 1.4 oz (approximately 40 g)
 Repeatability:
 ± 20% of indication value
 Compensated Sample Temperature:
 At ambient temperature

18. Muffle Furnace

Division-Soil Science
 The casing is made of thick mild steel sheet reinforced with iron angles riveting. Screw joints and welding wherever necessary and painted with attractive stoved enamel paint. Heating chamber consisting of rectangular horizontal shape totally enclosed.
 The casting is made of thick mild steel sheet reinforced with iron angles riveting. Screw joints and welding wherever necessary and painted with attractive stoved enamel paint. Heating chamber consisting of

rectangular horizontal shape totally enclosed muffle baked at 1500 deg. C. The door is counter balanced for easy operation opens upward with the hot surface away from the operator.

Heating element made of Kanthal wire special high temperature alloy are completely surrounded by the heating chamber, assuring the most uniform distribution of heat and protects heating elements against damage and chemical deterioration. Highly efficient light weight insulation is cast permanently in to the durance body, which avoids loss of energy

All furnaces are equipped with a dependable Temperature indicator Pyrometer having a 3.5” scale calibrated in 25 deg. C increments to 1200 deg. C

Temperature:- The furnace can be operated continuously upto 900 deg. C. Temperature is controlled by Digital Temp. controller cum Indicator fitted in the control panel

The control panel is provide at the top of furnace consist o temperature control regulating knob with two long life neon lights which glows while the furnace is “ON”. To work on 220/230 volt A.C

Size (Inside): W 125 mm, H 125 mm, D 300mm, Rating 3.0 KW

Supplied with porcelain dish or silica dish for use in muffle furnace.

19. Hot Plate

Division-Soil Science

This is general purpose Hot plate having max temperature 370⁰C with which is controlled with digital temperature controller cum indicator. With heavy duty contractor and Energy regulator. Outer casing is made of thick gauge mild steel with powder coating. Top is made of Stainless steel, supplied complete with main cord, connector, plug top, main indicating lamp and load indicating lamp. Works on 220/230V.AC. Platform Size: 455 x 605 mm

20. Chlorophyll meter

Division –Soil Science

Type: Handheld meter for measuring chlorophyll

Measurements sample: Plant leaves

Measurement Principle: Optical density difference at two wavelengths

Measurement Area: 2mm x 3mm

Maximum sample thickness: 1.2mm

Insertion depth: 12mm maximum : depth stop adjustable to depths between 0 and 6 mm

Light source: 2 LED (silicon photodiode)

Display: LCD panel showing- 4-digit measurement value (-9.9 to 199.9) and 2-digit data number

Date memory: space for 30 data

Controls: Power switch: Switches power on and off

Average Key: Calculators the average of all data in memory

ALL DATA CLEAR Key : deletes all data in memory

		<p>DATA RECALL Key: Recalls data graphically for previous data number</p> <p>1) DATA DELETE Key: Deletes displayed data</p> <p>Measurements automatically taken when measuring head is closed.</p> <p>Power source: 2AA-size 1.5V alkaline –manganese</p> <p>Battery life; More than 20,000 measurements per set of 2 alkaline-manganese batteries</p> <p>Minimum interval between measurements: Less than 2 seconds</p> <p>Accuracy Within ± 1 SPAD* unit (at room temperature, SPAD* value between 0 and 50.0): SPAD* values of greater than 50.0 may be less accurate and will cause “*” to appear.</p> <p>Repeatability : Within ± 0.3 SPAD* units (SPAD* value between 0 and 50.0)</p> <p>Reproducibility : Within ± 0.5 SPAD* units (SPAD* value between 0 and 50.0)</p> <p>Temperature drift: Less than ± 0.04 SPAD* units/$^{\circ}$C</p> <p>Operating Conditions: 0 to 50$^{\circ}$C (32 to 122$^{\circ}$F) relative humidity less than 85% at 35$^{\circ}$C with no condensation.</p> <p>Storage Condition: -20 to 55 $^{\circ}$C (-4 to 131$^{\circ}$F) relative humidity less than 85% at 35$^{\circ}$C with no condition.</p> <p>Other: Buzzer (single deep for measurement completer, series of beeps for error): function for inputting compensation value</p> <p>Dimensions (Lx W x D): 164 x 7B x 49 mm</p> <p>Weight: 200g (without batteries)</p> <p>Standard accessories: Sliding septh stop: carrying strap: soft case: 2 Aa-size batteries: reading checker</p>
21.	Autoclave with timer control	Division- Horticulture (Darjeeling) Vertical, 40-50 Liters; ISI Mark workable Pressure 15 psi and temperature 121 $^{\circ}$ C, low water protection device, time with alarm
22.	Glass bead Sterilizer	Division- Horticulture (Darjeeling) For tissue culture, can be placed in laminar flow, high temperature range to sterilize the tools
23.	Portable leaf area meter	Division- Horticulture (Darjeeling) High resolution, measuring unit C2 non destructive, high accuracy, suitable for high humidity regions.
24.	Light meter & sensor	Division- Horticulture (Darjeeling) Measures photosynthetic radiation (PAR), measure in micro mole m^2s^{-1} , portable.
25.	Plant growth chamber	Division- Horticulture (Darjeeling) Diurnal cycling control, digital display for temperature humidity, regulated light level nearly 1200 up to $molm^2 s^{-1}$, maintains high humidity.
26.	Supply & installation of automatic weather station (AWS) <ul style="list-style-type: none"> • Air pressure • Air temperature • Relative humidity • Wind speed 	Division- Horticulture (Darjeeling) Should IMD/WMO requirements suitable doe high humidity & rainfall area wireless data transmission or data loggers solar and or battery operated

- Wind direction
- Rain fall
- Sunshine duration
- Net radiation

<p>27. Geographical positioning system (GPS)</p>	<p>Division- Horticulture (Darjeeling) Cost effective, high sensitivity receiver, useful to work under forest canopy, good memory and processor, weather proof., with or without camera</p>
<p>28. Rotary microtome & accessories</p> <ul style="list-style-type: none"> • Microtome knife • Embedding moulds & rings • Disposable Blades & holder 	<p>Division- Horticulture (Darjeeling) Section size 1-50 μ m, section adjustment manual or digital hand operated</p>
<p>29. Refrigerated Table top centrifuge</p>	<p>Division- Plant Pathology/Genetics A compact bench top refrigerated Centrifuge which can be closed with motorized lid latch with noise free operation, automatic rotor recognition with balance sensor. Power supply: 230 V Maximum rotational speed: 14000/min Temperature range: -80C to 400C Sample temperature 40C at maximum speed Compatible with Fixed Angle Rotor of 30x1.5/2 ml with lid with 24 x 2 ml tubes and 8 x 8 PCR strips</p>
<p>30. Incubator Shaker</p>	<p>Division- Plant Pathology Refrigerated shaker should have wide temperature range, 15°C below ambient to 60°C viewing window. Monitor and control chamber temperature range with $\pm 0.1^\circ\text{C}$ accuracy at 37°C. Digital Operating System Variable speed control from 15 to 500 rpm. Continuous/timed operation from 0.1 hour to 999 hours or 0.1 minute to 999 minutes. Speed can be viewed, operating time and temperature simultaneously on three individual LED displays. Should have Visual/audible alarms alert if temperature deviates $\pm 1^\circ\text{C}$ of set point. Shaker shuts down and visual/audible alarms signal if unit operates $\pm 10\%$ of set speed. Instrument should have unbalanced load sensor to stop platform motion when excess vibration is detected and visual/audible alarms signal until condition is corrected and should retain parameters during power failure and restarts unit automatically after power is restored. Technical Specification: Speed Range (RPM): 15 – 500 \pm 1rpm Orbit Diameter in. (cm): 1 (2.54) Temperature Range & Accuracy: 15°C below ambient to 60°C; $\pm 0.1^\circ\text{C}$ at 37°C in Flask Overall Dimensions (L x W x H): 32 (81.3) x 22.5 (57.5) x 22 (55.9) In. (cm). Volt: 240, 50/60 Hz.</p>

		<p>Required Amps: 20 Universal 18"x18" Platform 125ml Erlenmeyer Flask Clamp 250ml Erlenmeyer Flask Clamp 500ml Erlenmeyer Flask Clamp Deep Well Titer Plate Clamp</p>				
<p>31. Hybridization Oven</p>		<p>Division-Plant Pathology Suitable for hybridization in bags, incubation of flasks whilst shaking, tempering of wash bags and in – situ hybridization. The rotation unit should accommodate different bottles holders. The shaking frequency is digitally adjustable.</p> <ul style="list-style-type: none"> • Temperature range 5°c above room temperature to 99.9°C. Should have multifunctional Microprocessor PID controller with LED display with several time function. Digital temperature setting with tenth of a degree accuracy, Removable, electrical rotation unit for up to 12 hybridization bottles with automatic switch-off with Timer 0 – 99.59 h. Shaking device with digitally adjustable shaking frequency. Rotation unit for 12 hybridization bottles .Removable dip tray with Temperature safety device Cl.3.1. Printer and communication interface RS232 for communication software APT COM data control system. <p><u>Technical Specification</u> Total Volume: 53 lit. No. of Shelves (standard/max.):1/4 Load per shelf :15 Kg Temp. range,5 ° C above amb: 99.9 ° C Temp. variation at 37 °C: <u>+0.5 °C</u> Temperature fluctuation at 37 ° C:</+ 0.1 ° C Exterior dimensions : 659 X 617 x 575 mm Interior dimensions : 400 x 400 x 330mm</p>				
<p>32. Upright Showcase Cooler</p>		<p>Division-Horticulture (Pakyong) FKG-371, Capacity-381 liters Dimension: 72.8 inches x 23.4 inches x 23.5 inches Temperature range:3-10°C Wheels: rear Rated Load, Wattage-300 No of Baskets/Shelves:5+1 No of lids/Doors:1</p>				
<p>33. UV/VIS Spectrophotometer</p>		<p>UV/VIS Spectrophotometer SPECTRAL</p> <table border="0"> <tr> <td>Range</td> <td>190 to 900nm</td> </tr> <tr> <td>Bandwidth</td> <td>Variable 0.2 to 6.0 nm</td> </tr> </table>	Range	190 to 900nm	Bandwidth	Variable 0.2 to 6.0 nm
Range	190 to 900nm					
Bandwidth	Variable 0.2 to 6.0 nm					

PHOTOMETRIC

System Double beam optics
Range ± 2.5 Abs
Stability (Baseline) 0.003 Abs/hr. after 2 hours warm up
Light Source Deuterium Lamp (D₂) & Tungsten Halogen Lamps

MONOCHROMATOR Czerny -Turner type with 1200 lines/mm holographic Grating

DETECTOR Wide range photo Multiplier Tube (PMT)

DATA PROCESSING

Microprocessor Mode Spectrum, Discrete, Concentration and Time scan Spectrum, Overlay, Time Scan
PC Mode Spectrum, Overlay, Time San, Discrete, Ratiometric, Concentration, Up to 4th order derivative, Peak picking, Spectra Zooming, Smoothing Averaging, Comparison, Data saving and Retrieving.

CONTROL Microprocessor (Computer-optional)

FORMAT OF PRICE QUOTATION

Serial No.	Description of Goods & allied Services	Specifications	Accounting Unit	Qty	Quoted Unit Price in Rs.		Total amount in Rs.
					In figures	In words	

Grand Total Cost: Rs. _____

Details of Bid security submitted (Rs): _____

Enclosures: Related to credentials: _____

We agree to supply the above goods & allied services. We confirm that the same will meet the description, specification and other technical details as required in the tender enquiry.

We confirm that we agree to all other terms & conditions of your tender enquiry including the terms of delivery, period of delivery and warranty provision.

We have furnished all the information, as required in the tender enquiry and attached the relevant documents.

(In case a tenderer desired to put some additional/ modified stipulations, terms & conditions etc. the same may be clearly indicated).

We confirm that our offer will remain valid for acceptance for 90 days after the date of opening of tenders.

.....
 (Signature, name and designation of the authorized executive of the tendering firm)
 for and on behalf of

(Name and address of the tendering firm)
 (Seal of the tendering firm)

Date:
 Place

