

INDIAN INSTITUTE OF PULSES RESEARCH

KALYANPUR, KANPUR – 208 024

Fax : 091-512-572582 Phone : 2570 146 {EPABX Exchange} 2572464, 2572465 Ext. 212

Tender Form

Tender No. 4/IIPR/2010

From

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.....
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To,

Director,
Indian Institute of Pulses Research,
Kalyanpur, Kanpur 208024

Dear Sir,

I/We, hereby offer to supply the stores detailed in the schedule hereto or such portion thereof as you may specify in the Acceptance of Tender at the price given in the said schedule and agree to hold this offer upon tillI/We shall be bound by a communication of acceptance dispatched within the prescribed time.

I/ We have understood the instructions to Tenderers and conditions of contract included in the General Conditions of Contracts governing contracts placed by the Indian Council of Agricultural Research Institute under in and in the special conditions of contract and have thoroughly examined the specifications drawing and/or pattern quoted in the schedule thereto and am/are fully aware of the nature of stores required and my/ our offer is to supply's strictly in accordance with the requirement.

I/we have deposited a sum of Rs.....(Rupees..... only) in cash with your cashier vide receipt No.....Dt..... or Rupees.....(only) vide DD/Bankers cheque No..... Dt..... in favour of ICAR Unit, IIPR, Kanpur is enclosed as Earnest Money.

The following pages have been added to and form part of this tender.

1.
2.
3.
4.

Yours faithfully,

Signature of Tenderer

**INDIAN INSTITUTE OF PULSES RESEARCH (I.C.A.R.)
KALYANPUR, KANPUR – 208 024, (U.P.), INDIA**

OPEN TENDER NOTICE

Tender Notice No. 4/IIPR/2010 : The Director, Indian Institute of Pulses Research, Kalyanpur, Kanpur (U.P.), India, on behalf of Secretary, Indian Council of Agricultural Research, New Delhi; invite sealed tender for the purchase of equipments/instruments from the reputed firms/authorized dealers/ Foreign firms/Manufacturers. The details of equipments/instruments, EMD to be deposited and cost of tender against each item is given below :

(In Rs.)				
S.No.	Name of equipments/instruments	Qty.	EMD	Cost of tender form (Non-refundable)
1.	Refrigerated Water Bath	1 no.	4,000/-	300/-
2.	Mechanical Rotary Shaker	1 no.	2,000/-	300/-
3	PH Meter	2 nos.	1,000/-	300/-
4.	Laminar Air Flow	1 no.	7,000/-	300/-
5.	Vertical Autoclave	1 no.	4,000/-	300/-
6.	Refrigerated Centrifuge with various rotors	1 no.	14,000/-	500/-
7.	Culture Racks	5 nos.	5,000/-	300/-
8.	Micropipettes	2 sets	2,500/-	300/-
9.	High Precision Top Pan Balance	3 nos.	3,000/-	300/-
10.	UV + Visible Transilluminator	1 no.	5,000/-	300/-
11.	Horizontal Electrophoresis unit with power packs (Imported)	2 units	4,000/-	300/-
12.	Deep Freezer (-20°C)	1 no.	10,000/-	300/-
13.	High Speed Centrifuge with various rotors	1 no.	7,000/-	300/-
14.	Digital Electronic Balance	2 nos.	3,000/-	300/-
15.	Cryocans	3 nos.	3,000/-	300/-
16.	Stirred Water Bath	1 no.	3,000/-	300/-
17.	UPS (5 KVA)	3 nos.	4,000/-	300/-
18.	Vertical Electrophoresis units with accessories	2 nos.	10,000/-	300/-
19.	Ice Flaking Machine	1 no.	2,000/-	300/-
20.	Gel Documentations systems with PC/Laptop	1 no.	24,000/-	1000/-

21.	Air conditioners (2.0 & 1.5 ton) with stabilizers	19 nos.	8,000/-	300/-
22.	Amino Acid Analyser	1 no.	50,000/-	1000/-
23.	a) ELSD detector and pump for HPLC b) Fraction collector	1 no. 1 no.	16000/-	500/-
24.	Incubator Shaker	1 no.	3,000/-	300/-
25.	Plant Canopy Analyser	1 no.	10,000/-	300/-
26.	Deep Freezer (-80°C)	1 no.	16,000/-	500/-
27.	Fabrication of Net House	1 no.	14,000/-	500/-

Terms & Conditions :

1. Tender form for each item can be obtained from the Office of Administrative Officer (Stores), IIPR, Kalyanpur, Kanpur (U.P.), India between 10.00 AM to 3.30 PM on all working days on payment indicated against each item . The tender form can also be obtained by post by making an additional payment of Rs. 75/- in addition to the indicated cost of tender form. The DD may be sent in favour of “ICAR Unit IIPR”, SBI, Kalyanpur, Kanpur for sending the tenders by post.
2. The detailed technical specifications of equipments/instruments & others terms & conditions will be supplied alongwith tender form.
3. “Technical Bid”, “Price Bid” and E.M.D. with terms & conditions should be submitted separately in separate sealed envelopes, superscribed accordingly in Bold Letter. Those three envelopes be submitted within a common bigger envelope. **The sealed envelopes and common bigger envelope should superscribed “Tender for supply of (Item No.....) to be opened on, if the technical bid and the price bid are merged together, the tender will not be considered and will also not be included in the comparative chart.**

The envelope of EMD will be opened at first. Thereafter technical bid will be opened. The price bids only of those firms will be opened who qualify in technical bids.

4. No supplier/firm, who is registered with DGS&D & NSIC etc. is exempted for paying of Bid Security (EMD). The performance security in the form of Demand draft or Bank guarantee or FDR will also be obtained from those firms who are registered with DGS&D.
5. Indian Agent/Authorized distributors/dealers may also submit tenders on behalf of their principals abroad. This Authorization of the principal may be enclosed with the tenders.
6. Conditional/Telegraphic/Incomplete tenders will not be accepted.
7. The validity of tenders should be 180 days from the date of opening of the tenders.
8. The tenderers will be bound by the departmental rules & instructions.

9. The quantity is always subject to change and the competent authority has the absolute right to accept or reject any or all tender(s) in part or full without assigning any reason thereof.
10. Tender can also be sent by post but this will be at the risk and responsibility of the tenderers themselves. No responsibility whatsoever will be accepted with regard to postal delay or for wrong delivery of tenders sent by post.
11. Late tender received after the specified date and time will not be considered.
12. Tender notice & Tender Document can be seen on the Institute's website No. www.iipr.res.in from where it can be down loaded and used as tender document.
13. Tender shall be accompanied by required earned money and tender cost in the form demand draft of any scheduled Bank of India duly pledged in the name of ICAR Unit, IIPR, Kanpur
14. L/C will be opened on 100% value. But 80% of the payment of L/C will be made on the despatch of the consignment by the consignee and balance 20% payment will be made of the installation of the equipment. No condition of the offering firms will be considered for 100% payment on despatch of the consignment.
15. Instructions regarding issue of tender and submitting of the offer can be seen in the tender document.

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
Last Date for receipt of Tenders : **Upto 1.00 P.M. on 21.10.10**
Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

Sd/-
Administrative Officer

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
Last Date for receipt of Tenders : **Upto 1.00 P.M. on 21.10.10**
Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no. : 1-34/10-11/ST

Item No. 1

Refrigerated Water Bath

Qty: 1 No.

Specification:

- Bath capacity should be 25-30 litres
- Temperature range between -20°C to 105°C
- Temperature stability should be maximum
- Temperature accuracy should be very high ($\pm 1^\circ\text{C}$)
- Temperature sensor should be pt RTD, digital LDC display
- Over temperature cutoff should be present
- Pressure pump should have maximum head flow

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Date of opening the Tenders : On 21.10.10 at 2.30 P.M.

F.no. : 1-35/10-11/ST

Item No. 2

Mechanical Rotary Shaker

Qty: 1 No.

Specification:

Heavy and sturdy iron frame, should have mechanical speed controller, compatible with 220/230 volt AC supply, RPM with digital display, RPM range should be 20 to 300.

Date for the sale of Tenders : From 4.10.2010 to 20.10.10
Last Date for receipt of Tenders : Upto 1.00 P.M. on 21.10.10
Date of opening the Tenders : On 21.10.10 at 2.30 P.M.

F.no. : 1-36/10-11/ST

Item No. 3

PH Meter (Digital)

Qty: 2 nos.

- Range of pH: 1.999 to 20.000
- Operational temperature range: -5.0°C to 105.0°C
- Multipoint calibrations
- Very High accuracy
- Automatic detection for temperature fluctuation with ATC probe
- Should have non-glass solid state FET pH electrode
- Microprocessor based with autobuffer recognitions for calibrations
- Internal electrode stand and adapter if required

Date for the sale of Tenders : From 4.10.2010 to 20.10.10
Last Date for receipt of Tenders : Upto 1.00 P.M. on 21.10.10
Date of opening the Tenders : On 21.10.10 at 2.30 P.M.

F.no. : 1-37/10-11/ST

Item No. 4

Laminar Air Flow

Qty: 1 no.

Stainless steel top working area approx 6'x2'x2' (wxdxh) dimension, Provision of full frontal covering with foldable acrylic pannel, High capacity HEPA filter, UV resistant acrylic side and front panels, should be provided with fluorescent light emitting tube light.

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F.no. : 1-38/10-11/ST

Item No. 5

Vertical Autoclave

Qty: 1 No.

- The outer chamber should be made of thick gauge Mild Steel while inner of 304 grade Stainless Steel.
- Lid should be made of Mild Steel with inside lined with S.S. for double protection.
- Pressure adjustable from 5 psi to 35 psi \pm 3 psi. Supplied complete with cord, plug etc. To operate 220 volts single phase 50 cycles.
- Working Temperature: upto 120°C
- Hydrotest Pressure: 2.5 kgf/cm sq.g (35 psi)
- Working chamber: Aprox. 600 x 450 mm
- Double safety radial locking arrangement.
- Stainless steel steam release valve.
- Spring loaded safety valve of stainless steel (grade SS-304)
- Water inlet and water valves.
- Water level indicating gauge glass with stainless steel gurard.
- Pressure guage.
- Electrical control box, fitted with toggle switch, indicating Neon lamps and steam release valve.
- Foot paddle lifting device.

Date for the sale of Tenders : From 4.10.2010 to 20.10.10
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F.no. : 1-39/10-11/ST

Item No. 6

Refrigerated centrifuge with various rotors

Qty: 1 no.

(High Speed table top refrigerated centrifuge freely programmable)

- Speed range: 30,000 rpm & above gravitationals fields up to more than 65,000xg
- Microprocessor controlled time, temperature, speed
- Max volume 1000 ml (4x250 ml)
- Temperature range -20 to 40°C, CFC free refrigeration
- Electronic imbalance and Automatic rotor identification
- Single Knob Operation, Graphic Display, Brushless motor drive
- Preselection of run parameter in terms of rpm and rcf
- Preselection of time up to 9 hrs. or continuous
- 10 freely programmable accel/decl. curves
- Free programming of all parameters
- Possibility of precooling rotors during standstill,
- Refrigerant R404a, (CFC-free)
- Two motorized lid locks
- Self diagnostic error message
- Illuminated symbol keys start, stop, lid open
- Power supply 220-230V, 50Hz

Rotors:

- Angle rotor 24 x 1.5/2.2. ml speed 26000 rpm or more
- Angle rotor 10 x 10ml. incl cover speed 26000 rpm or more
- Swingout rotor for Deepwell Plates 3000 rpm or more
- Angle rotor 6x50ml Falcon Tube 14000 rpm, 2000xg
- Additional adapters for centrifuging variable volumes
- Angle rotor 6x30 ml, 26000 rpm or more

Date for the sale of Tenders : From 4.10.2010 to 20.10.10
Last Date for receipt of Tenders : Upto 1.00 P.M. on 21.10.10
Date of opening the Tenders : On 21.10.10 at 2.30 P.M.

F.no. : 1-40/10-11/ST

Item No. 7

Specification for Culture Racks

Qty: 5 units

- Frame made up of tubular aluminium/stainless steel/sturdy rectangular iron pipe, powder coated
- Frame fitted with castor wheels at bottom for easy movement
- Each rack with 5 storage shelves (with 15" gap between two shelves), white colour
- Shelves covered with thick unbreakable plexi glass/ sunmica paste duro board., terminate and insect proof fire and weather resistant
- Provision of two PAR lamps and two yellow light emitting tubelights at each rack
- All fluorescent tubes chocks and ultra violet germicidal tube chocks fitted out side rack to avoid heat dissipation inside the rack.
- Dimensions approx. 4.0 x 1.5 x 6.0 feet (L x W x H)

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
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F.no. : 1-41/10-11/ST

Item No. 8

Specification for Micropipettes

Qty: 2 sets

- The set should have pipettes of following capacities
 - 0.1 μ -2.5 μ l
 - 0.5 μ l-10 μ l
 - 10 μ l-100 μ l
 - 20 μ l-200 μ l
 - 100 μ l-1,000 μ l
- Should have high accuracy
- TUV approved user-friendliness
- Optimized pipetting force
- Delivered as System Pack (Reference and ep TIPS Box inclusive)
- IvD conformity
- Calibration-seal for optimal GLP requirements
- Lock-in facility

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
Last Date for receipt of Tenders : **Upto 1.00 P.M. on 21.10.10**
Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no. : 1-42/10-11/ST

Item No. 9

Specification for High Precision Top Pan Balance

Qty: 3 nos.

- Weighing range: upto 250 gm
- Linearity: ± 0.2 mg
- Readability: 0.1 mg
- Reproducibility: ≤ 0.1 mg
- Balance pan: 80-90 mm dia
- Verifiability: Capable of EC/OIML certification
- Calibration: Use 100 gm ± 0.1 mg
- Display: LCD (bright Vacuum fluorescent)
- Draft shield: Glass shield XB 260
- Size: Approx. 210x 340 x 345 mm (W X D X H)
- Net weight should not be more than 6 kg

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
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F.no. : 1-43/10-11/ST

Item No. 10

Specification for UV+ Visible Transilluminator

Qty: 1 no.

UV Transilluminator with filter (312 nm) 20cm x 20cm Imported, should have visible light source also,
Maximum surface area for image analysis

Date for the sale of Tenders : From 4.10.2010 to 20.10.10
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Date of opening the Tenders : On 21.10.10 at 2.30 P.M.

F.no. : 1-44/10-11/ST

Item No. 11

Specification for Horizontal Electrophoresis Unit With Power Supply

Qty: 2 units

Gel Electrophoresis Unit

- The gel size should be 15x10 cm
- Sample throughput 30-60
- Base buffer volume 0.60-0.70 litres
- Bromophenol blue dye migration rates should be 4.5 cm/hr.

Power supply specification:

- Output range should be 100-300 volt, programmable
- Constant current or voltage with automatic crossover
- Output terminals should be 4 pair banana jacks in parallel
- Timer range 1-999 min
- Digital display (LED)
- High safety features should be present
- Input protection should have fuse

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
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Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no. : 1-45/10-11/ST

Item No. 12

Specification for Deep Freezer (-20°C)

Qty: 1 no.

- Vertical model
- Fully automatic defrost function in the fridge
- Adjustable Bottle shelf
- 'A' energy rating
- Visual and acoustic alarm
- Super freeze function for large amounts of biochemical and plant samples
- Net capacity Fridge/Freezer 249/100 litres
- High Freezing capacity, Min 12 kg
- Freezing holdover time (without power) upto 20 hrs
- Minimum Noise level (upto 40 DBA)
- Dimensions approx 200H X 60W X 62D cm

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
Last Date for receipt of Tenders : **Upto 1.00 P.M. on 21.10.10**
Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no. : 1-53/10-11/ST

Item No. 13

Specification for High Speed Centrifuge with various rotors

- Speed: 18,000 rpm or more
- Capacity: minimum 4x250 ml. (1000 ml)
- Single Knob operation
- Maintenance Free, Noise less, brushless motor drive.
- LCD Graphical display.
- Self-diagnostic error message with facility of alarm.
- 50 users program memory.
- Magnetic rotor identification, provision of prevention of rotors from over speeding.
- Run time pre-selection of minimum up to 9 hrs or continuous run.
- Speed setting in terms of rpm and 'g' in steps of one unit with digital display
- Should be supplied with suitable Servo Voltage Stabilizer.

Rotors:

- Angle rotor 24x1.5/2.2 ml Max. Speed 18,000 rpm; Max. ref 30000xg
- Angle rotor 10x10ml Max. Speed 18,000rpm; rcf 26,000xg or more
- Swing out rotor for Microtiter plates, Max. Speed 3,000rpm; rcf 1210xg

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
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Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no: 1-54/10-11/ST

Item No. 14

Specification for Digital Electronic Balance:

Qty: 2 nos

- Should be extremely fast, rugged, monolithic weighting system
- F.A.S.T. motorized draft shield with intelligent "learning" functions
- Should have self-calibration and fully automatic adjustment function with storage of calibration and adjustment records/printouts
- ISO/GLP –compliant and user-definable records/printouts
- Backlit, graphic display
- Detachable display and control unit
- Stainless steel weighing pan with removable pan support
- Min. 15 built-in application programs
- Separate Rs-232 and printer interfaces
- Large, palm-activated keys for operating the draft shield
- Highly resistant keypad overlay
- Highly resistant coating over the weighing chamber base
- Remote-capable display and control unit
- Integrated hanger for below-balance weighing
- Anti-twist weighing pan for integration of the balance into automated equipment

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
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Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no.: 1-55/10-11/ST

Item No. 15

Specification of Cryocans:

Qty 3 nos.

Bigger unit

Capacity LN2 - Min. 20 liters
Empty weight - 11 kgs, approx.
Full weight - 30 kgs. Approx
Neck diameter - 51 mm
Outer diameter - 400 mm
Total height - 720 mm
Static evaporation loss
Rate -
Static holding time - 100 days

Smaller unit

Capacity LN2 - 4 liters approx
Empty weight - 3.0 kgs. approx
Full weight - 6.0 kgs. approx
Neck diameter - 50 mm approx
Outer diameter - 220 mm approx.
Total height - 500 mm approx
Static evaporation loss - 0.15 liters/day
Rate
Static holding time - 30 days

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
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Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no.: 1-56/10-11/ST

Item No. 16

Item: Stirred Water Bath

Qty: 1 no.

Specification

Volume 25-30 litres, temp. range 5-90°C, accuracy $\pm 0.1^\circ\text{C}$, stainless steel sturdy body, powder coated outside

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Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no. 1-58/10-11/ST

Item No. 17

Specification for UPS (5 KVA)

Qty: 3 nos.

5 KV capacity, online, Minimum 1.5 hr. backup Uninterrupted power supply

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
Last Date for receipt of Tenders : **Upto 1.00 P.M. on 21.10.10**
Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no.: 1-59/10-11/ST

Item No. 18

Specification for Vertical Electrophoresis Units with accessories

Qty: 2 nos.

- Capacity of screening of upto 200 samples.
- Should include dual sided high throughput unit with 2 bar clamps, 2 Gel Wrap gaskets, gel sealing tapes, temperature strips, plate separators, spring clamps, guide rods and rotating base.
- Should have combs, 2 sets glass plates with UV-transparent back plate of variable height, 2 sets spacers of variable thickness.
- The glass plate sandwich should be of dimension approximately 50cm (w) x 22cm (h),
- It should also include a low fluorescence back plate, making it ideal for fluorescence-based assays. Low fluorescence glass should allows direct UV visualization and photography of the results without gel removal
- The system should include two 100 well combs that feature microtitre spacing for multichannel pipettor loading.

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
Last Date for receipt of Tenders : **Upto 1.00 P.M. on 21.10.10**
Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no.: 1- 60/10-11/ST

Item No. 19

Specification for Ice Flaking Machine

Qty: 1 no.

- Capacity: 179kg/24hrs
- Mounting: Floor standing
- Refrigerant: R404 (Eco friendly gas)
- Ice Storage Bin: Built in 26 kg.
- Dimensions: 650 x 662 x 962 (WXDXH)
- Granular Flakes: Provided
- Should be supplied with suitable servo voltage stabilizer

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
Last Date for receipt of Tenders : **Upto 1.00 P.M. on 21.10.10**
Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no. : 1-61/10-11/ST

Item No. 20

Specification for Gel Documentation System with PC/laptop

Qty: 1 no.

- Resolution should be 1.4-5.5m pixels
- Bit depth should be 16 bit
- Minimum Greyscales: 65,536
- Dynamic range around 4.8
- The machine should have regulated Low level cooling for extended fluorescence with UV 20x20 transilluminator
- Provision of NovaGlo visible light converter as well as blue light converter option
- Option of Dual UV Epi/Blue Epi, EPI RGB (LED lighting unit) and fold down visible light Table
- Latest version laptop with compatible software

Date for the sale of Tenders : From 4.10.2010 to 20.10.10
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Date of opening the Tenders : On 21.10.10 at 2.30 P.M.

Fno. : 1-49/10-11/ST

Item No. 21

Specification of Ait Conditioners

Qty: 19 nos.

1. **Air Conditioners**, Split type, 2 ton, should have jet cooling, dual display, 4 way swing, auto clean, should have neoplasma filter, min. 4 star energy saving rating alongwith suitable capacity stabilizer

Qty: 14 nos.
(CID-12 nos., PC(P)-1 no. & CPT 1)

2. **Air Conditioners, window** type, 2 ton with suitable stabilizer, remote for operation with autotimer (Standar Make)

Qty: 1 no.
(CPBM)

3. **Air Conditioners, split** type 1.5 ton with suitable stabilizer, remote for operation with autotimer (Standar Make)

Qty: 4 nos.
(PC(M)-3 nos. & CPT 1)

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
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Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no. : 1-50/10-11/ST

Item No. 22

Specification for Amino Acid Analyser

Qty: 1 no.

Ultra-performance Liquid chromatograph (UPLC) based Amino Acid Analysis System consisting of binary gradient pump for solvent delivery with programming, on-line Degasser, Column Oven, Sample manager (controller), Auto-sampler, UV-VIS Detector, Refractive Index Detector and Fluorescence Detector, UPLC columns-C-18, C-8 and C-4 columns of 100mmX2. 1X1.7 μ m size with guard columns, interface/facility for post-column derivatization, complete system for the analysis of amino acids in hydrolysate of plant samples/grains.

Work station consisting of Computer with latest configuration, flat SVGA colour monitor, mouse, Microsoft windows latest (XP/2000/7) compatible to software and licensed software for data processing. Desk-jet coloured printer, complete with set of cartridges.

System should have a servo stabilizer of 5 KVA capacity for protection against erratic voltage to run on 220 Volts A.C. supply having input in the range of 175-275 volts and output of 220 volts \pm 2% and an on-line UPS of 3 KVA capacity with one hour back-up so as to cope up the power cut.

Two years warranty from the date of installation, demonstration of analysis of amino acids in plant samples/grain/physiological fluids. After sale service from qualified engineers and service support within 24 hrs of breakdown. Annual Maintenance Contract for a period of ten years at reasonable price, adequate spares to run the system for at least five years. Users list where the system can be checked for its satisfactory working/functioning. A set of reagent kit for analysis of amino acids in 200 samples of pulses.

Before placing the supply order, the firm has to organize a demo of system at their cost for the satisfactory reproducible analysis of sample.

Date for the sale of Tenders : From 4.10.2010 to 20.10.10
Last Date for receipt of Tenders : Upto 1.00 P.M. on 21.10.10
Date of opening the Tenders : On 21.10.10 at 2.30 P.M.

F.no. : 1-51/10-11/ST

Item No. 23

Item: ELSD Detector
Specification:

Qty: 1 no.

Evaporating light scattering detector to be attached to 'Shimadzu' LC-10 Avp HPLC system, detection by photomultiplier tube, light source-tungsten halogen lamp, temperature setting range room temperature $\pm 80^{\circ}\text{C}$, nebulizer gas-particle free nitrogen or air, mobile phase flow rate 0.1 to 5ml/min, operating temperature range 4°C - 40°C , to work on 220/230 volts AC supply, for the analysis of compounds with limited UV activity.

Date for the sale of Tenders : From 4.10.2010 to 20.10.10
Last Date for receipt of Tenders : Upto 1.00 P.M. on 21.10.10
Date of opening the Tenders : On 21.10.10 at 2.30 P.M.

F.no. : 1-52/10-11/ST

Item No. 23

Specification for Fraction collector

Fraction collector for small fractions with 5 mL vials (glass, 100 pcs/set) to attach with HPLC Shimadzu make model 10Avp. A 2-solvent high pressure mixing gradient pump is to be hooked with the system. This fraction collector will be used for wide range of flow rates for semi-preparative work and separation of fractions. The unit must work on 220 volts A.C. supply, complete unit with all accessories and glass tubes.

Date for the sale of Tenders : **From 4.10.2010 to 20.10.10**
Last Date for receipt of Tenders : **Upto 1.00 P.M. on 21.10.10**
Date of opening the Tenders : **On 21.10.10 at 2.30 P.M.**

F.no. : 1-33/10-11/ST

Item No. 24

Specification for Incubator Shaker

Qty: 1 no.

- Compact counter balanced drive mechanism conserve high stability and reliability even in continuous operation and an even load distribution.
- Step less electronic frequency control ensuring gentle start and maintain preset speed.
- Brushless induction drive motor practically maintenance free.
- Variable speed from 20 RPM to 250 RPM
- Speed of shaker to controlled by solid state electronic controller, digital display with preset facility.
- Shaking amplitude 25 mm
- Uniform platform to accommodate interchangeable clamps of assorted sizes for different capacity of flasks (maximum capacity)

100ml x 40 flask

250ml x 23 flasks

150ml x 34 flasks

500ml x 16 flasks

- Chamber volume: 180 litre
- Max. shaking capacity: 9 litre
- Double wall construction
- Inner chamber made of stainless steel of 304 quality outside sheet steel powder coated with plexiglass inner door.
- Powerful air circulator for uniformity of temperature
- Automatic restart at preset speed in case of power failure
- Hermetically sealed compressor housed below the incubator to provide temperature below the ambient
- Temperature range 5°C to 60°C \pm 0.5°C is controlled by digital temperature indicator cum controller.
- Should be supplied with chamber illumination
- Feather touch buttons inbuilt in panel.
- With suitable servo voltage stabilizer to run the instrument
- List of users of Govt. organizations

Date for the sale of Tenders : From 4.10.2010 to 20.10.10
Last Date for receipt of Tenders : Upto 1.00 P.M. on 21.10.10
Date of opening the Tenders : On 21.10.10 at 2.30 P.M.

F.no. : 1-59/08-09/ST/II

Item No. 25

Plant canopy analyser

Qty: 1 No.

Specification:

The complete Plant Canopy analyzer system with packages of scan items including Scan probe, Data softwares, PDA, Sunshine sensor, tripod and carrying case. Light weight, Battery operated, field portable instrument for instantly measurement of Leaf Area Index (LAI) under any weather condition bright or diffuse cloudy days, PAR interception using either spot readings or unattended logging, measures sunflecks and other related parameters. Non Imaging PAR (Light Interception) base instrument having digital display. The Instrument should be able to display the data in the field without any further analysis. Separate Display unit with cable attached with the PAR Probe for easy operation and viewing of data in the field.

1 meter long measuring probe or better, Display should be Sunlight readable, Memory: ≥ 100 MB; Spectral Range: 400-700 nm; Measuring Time: 120ms; Resolution: $0.3 \mu\text{mol.m}^{-2}.\text{s}^{-1}$
 Power: Rechargeable Battery with charger, 12h continuous use. Option to use the instrument using car battery with similar power rating. Instrument should be supplied with instructions manual, Data Downloading Cable and softwares, Carrying Case.

Scan probe:

Scan Probe	
Active area	Atleast 1m x 13mm wide, sensor spacing 15.6mm and or more
Spectral response	400-700 nm (PAR)
Measurement time	120 ms
Maximum reading	2500 $\mu\text{mol.m}^{-2}.\text{s}^{-1}$
Resolution	0.3 $\mu\text{mol.m}^{-2}.\text{s}^{-1}$
Linearity	Better than 1%
Accuracy	$\pm 10\%$
Analogue output	1 mV per $\mu\text{mol.m}^{-2}.\text{s}^{-1}$
Serial interface	RS232, 9 pin female 'D' connector
Environmental	0-60° C working temp
Power	4XAA Alkaline cells (lifetime up to 1 year)
Size and weight	Compact and light weight

Sun Shine sensor

Sunshine sensor with user manual, Telescopic Tripod, connecting cable for sunshine sensor to connect with PDA and datalogger of automatic weather station

Sun Shine sensor	
Output sensitivity total & diffuse	1 mV / $\mu\text{mol.m}^{-2}.\text{s}^{-1}$ PAR cosine corrected
Accuracy	Total \pm 12%; Diffuse \pm 15%
Temperature range	-20 to +50°C with alkaline batteries
Range	0-2500 $\mu\text{mol.m}^{-2}.\text{s}^{-1}$ (total & diffuse)
Spectral response	PAR (400-700 nm)
Power	4 x AA Alkaline cells (lifetime up to 1 year)
Input voltage	5-15V DC (powered from scan probe)
Size & Weight	Light weight and compact

Data analysis and storage (PDA)

The device which collects and analyses readings from the Scan Probe. Raw readings, and derived functions such as LAI, can be displayed, reviewed and stored in the field by the Data Software. Reading should be stored in the internal memory which holds >1 million readings, or in widely available Compact Flash cards which provide removable data storage. Collected data should be transferred easily to a PC using supplied softwares. Direct and diffused incident light, canopy leaf area index, leaf PAR absorption, Solar zenith angle, Canopy leaf angle distribution, transmitted fraction.

PDA	
Screen	¼ VGA sunlight readable
Operating system	Windows XP/Vista/Windows 7/Windows Mobile 6
Display options	a) LAI; b) PAR average; c) All individual sensor readings
Environmental	-30°C to 60°C, 1.2m drop test
Power	Rechargeable battery, 12h continuous use
Memory	>100 MB
Size & Weight	Compact and light weight

Main Components

Scan Probe including alkaline batteries and user manual (technical manual on CD).

Data Software device (PDA) which displays reading and store data with rechargeable battery, comms cable and carrying case.

Sunshine Sensor including user manual with cables to connect PDA and data logger.

Telescopic Tripod for mounting sunshine sensor

Carrying Case for scan Probe and accessories

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Date of opening the Tenders : On 21.10.10 at 2.30 P.M.

F.no. : 1-20/10-11/ST

Item No. 26

Specification for Deep Freezer (-80°)

Qty: 1 no.

- Upright model
- Should have temperature range of -50°C to -85°C
- Capacity: about 500-550 litres
- Good quality VIP insulation on all walls
- Should have two independent compressors
- Should have central LCD display
- Provision of maintenance of temperature of -65°C for indefinite time in case one compressor fails
- Should have minimum 3 stainless steel shelves
- Exterior dimensions should not be more than 30"x34"x78 (WXDXH)
- To be supplied with all essential accessories like voltage stabilizer, if required, additional racks with capacity of 5-8 boxes of 55 mm height

Date for the sale of Tenders : From 4.10.2010 to 20.10.10
Last Date for receipt of Tenders : Upto 1.00 P.M. on 21.10.10
Date of opening the Tenders : On 21.10.10 at 2.30 P.M.

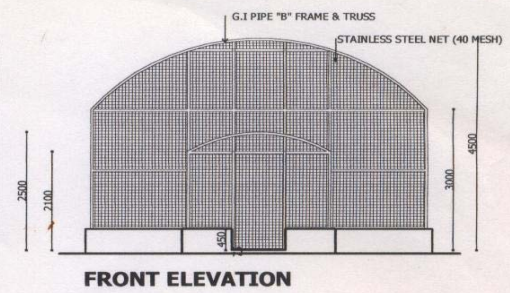
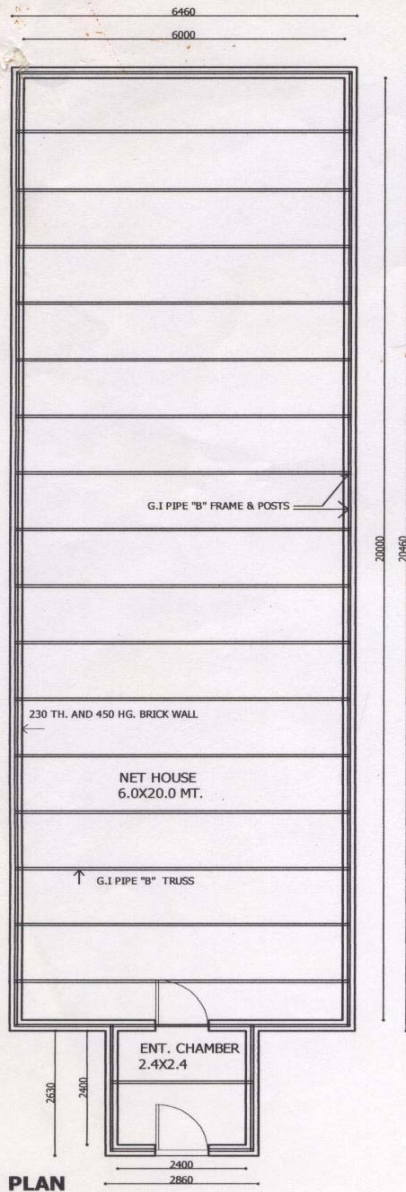
F.no. : 1-111/09-10/ST

Item No. 27

Fabrication Of Net House:

1 Job

- Length: 20m, width: 6m, center height-4.5m and side height 3 m
- Design: dom shape
- Structure: made of GI pipe medium 'B' class square ISI marked 47x47mm, 38x38mm and 32x32mm and 25x25mm +2mm complete as per requirement
- Entry chamber having two doors: Size 8 x 8 feet, door size 1.0 m x 2.1m each (dom shape)
- Entry room should have one wooden cupboard (2.5x3.0x3.0 feet)
- Side and top covering-with stainless steel net (40 mesh) to be fixed with high quality aluminum strip (25 mm x 2 mm)
- High quality stainless steel mesh completely to be used
- Structure to withstand wind loading of not less than 100 km/hr and method of affixing net cover should be strong enough to with stand similar wind velocity.
- Foundation: grouting of vertical poles in CC 1:2:4 (1 cement: 2sand: 4 stone aggregate 20 mm nominal size) 30x30x60-70 cm) below ground level
- Floor: cemented (40 mm thick with 1:2:4 mix including 40 mm x 5 mm glass strips @ 1.0x1.0 meter)
- Curtain wall: 23 cm brick wall with suitable foundation i.e., 45 cm above ground and 45 cm below ground including base concrete in foundation 1:5:10 (10 cm ht.), wall to be plastered from both sides and with 3 coats of epoxy acrylic paint in both sides and top.
- Provision of water tap (L and K make brass C.P. 15 mm) and one sink (600x450x200 mm made of china clay) with water tap (Land K make brass C.P. 15 mm) , by providing underground GI pipe ISI marked (20 mm GI pipe B class medium up to nearest main water line including excavation and connection)
- Electric fitting: four no. 40 wt. Tube lights inside the net house and two no. 15 amp. Power plug in entry room.
- 0.90 meter wide C.C. Plinth protection with edging all-round the net house (outside)
- A sump of 2 m wide diameter and 1 m depth with concrete cover to be constructed to collect all water coming out of the net house.



FRONT ELEVATION

**PROPOSED NET HOUSE
FOR CROP PRODUCTION DIV.
AT IIPR MAIN CAMPUS, KANPUR.**

SCALE:- 1:100 DATE:- 19.03.10

NOTE:- THIS IS A SKETCH PLAN. FOR DETAIL SPECIFICATIONS REFER ENCLOSED SHEET PREPARED BY THE INDENTOR.

PLAN