



**ICAR-Directorate of Groundnut Research  
(Formally: National Research Centre for Groundnut)**

(Indian Council of Agricultural Research)

Ivnagar Road, P.B.No. 5, Junagadh - 362 001, Gujarat, India

PHONE:2673041/2672461, FAX:0285-2672550

Website: <http://www.nrcg.res.in>

F.No.SP.36-5/14-15

Dated 09.09.14

To.

Sub:-Forwarding of Limited tender forms for various equipment – reg.,

Sir,

Sealed tender are inviting to you, we are enclosing herewith the tender forms and specifications for purchase of various equipment .

The bidding documents are also available at the website <http://www.nrcg.res.in> and it can be downloaded free of cost. **For each item**, a separate tender and EMD should be furnished. Non-submission of EMD and duly signed bidding documents will be liable for rejection. If you are interested kindly submit Sealed tender along with EMD ( EMD amount Separate sheet enclosed ) (refundable) through cross DD in favour of The Director DGR, Junagadh has to enclosed with tender documents. Non enclosing of EMD will be liable for cancellation of offer. The offer should be submitted in a **sealed cover super scribing the name of the items & due date on the top of the envelope prominently and** should reach to **DGR** on or before **30.09.14 up to 3. 00 p.m.** the same will be opened on **30.09.14 at 03.30 P.M.** in presence of the tenderer, if any. The date of submission and opening if fails holiday, the same may take place on the next working day.

The successful bidder will have to pay security deposit 10% of the quoted price, prior to issue of the formal supply order, irrespective of status of the firm which will be released after and obtaining satisfactory performance certificate by the user/indenter, on completion of warrantee/guarantee **period or one year whichever is later**

The Director, DGR reserves the right to reject any or all the tenders without assigning any reason thereof.

Thanking you,

Yours faithfully,

Stores Officer (I/C)

Copy to : I & D cell In charge ( upload in our website )

## BIDDING DOCUMENT

### Other details

#### (A) General requirements

1. Printed catalogue/literature of the equipment quoted giving complete technical specification/features. (in case more than one models are quoted, details to be given separately.)
2. The rates quoted should be inclusive of installation and other material (if required).
3. The quotation should reach this directorate latest by on **30.09.2014.** up-to 3:00 pm. The quotations will be opened on **same day** at 3:30 PM in presence of the bidders, if any. If the date of submission and opening falls on a holiday, the tenders will be opened at the same time on the next working day.
4. Technical comparison statement indicating purchaser's specifications; bidder's specifications with remark column mentioning deviations, if any.
5. All taxes should be mentioned separately.
6. Price should be F.O.R., DGR, Junagadh.
7. Warrantee period to be mentioned.
8. Delivery period to be mentioned.
9. Time required for Installation after delivery of goods to be mentioned.
10. Terms of delivery, if any.
11. All the pages of the bid must be signed.
12. Validity of the bid should be mentioned and should not be less than 90 days.
13. List of institutions where the items has been supplied may be attached.

#### (B) The following documents will also be required for determining the eligibility of the bid

- (1) Certificate of Incorporation.
- (2) Copy of PAN card or latest IT return.
- (3) Sale tax/ Service tax registration.
- (4) **Please mentioned bank details, like Name of Account holder (This should be same as name of the firm), Account No., Name of the bank, Location of the bank, IFSC code No. for releasing electronically payment**
- (5) As EMD in form of a Demand Draft or Bankers Cheque drawn in favour of the "Director, DGR, Junagadh". Without EMD the tender will not be considered.
- (6) ST/CST registration certificate.
- (7) Service Tax registration certificate.
- (8) Duly certified copy of authorization certificate from their principal, if bidder happens to be an Agent/Distributor.

The bidder shall seal the bid in one envelope duly superscribed "**Tenders for various equipment due on 30.09.2014.**"

The successful bidder will have to deposit 10% of the total value of the work awarded as a security deposit ( for one year ). The Director, DGR. Junagadh reserves the right to reject any or all the tenders without assigning any reason thereof.

Stores Officer

Sr. No.	Name of Equipment	EMD in Rs.
1	Water Bath	03000
2	Lab. Centrifuge	10000
3	pH Meter	06000
4	Autoclave	07000
5	Incubator	10000
6	Oven	03000
7	Digestion Unit	06000
8	Automatic humidity cut off	04000
9	De-Humidifier	08000
10	Air conditioners	9000
11	NUCLEIC ACID/PROTEIN EXTRACTION SYSTEM	5% of total value

Stores Officer

**Specification for Water Bath**

Type	Table-top
Ambient Temperature:	+ 5 to 99°C
Dimension h x d x w:	250-270mm x500- 570mm x 300-350mm (Rectangular)
Tank Capacity:	18-20 liters
Temperature range (°C):	Ambient + 5 to 99°C
Stability @37°C (°C):	±1.0
Temperature setting / energy regulation:	Digital
Temperature display:	3 digit bright, wide – angle view LED
Power Consumption:	240 VAC, 50-60 Hz
Drain Tap included:	Yes
Sample Protection:	Adjustable cut-outs for variable size containers
Warranty:	Two years

Sr.NO.-2/1

**Specification for Centrifuge**

General features:

- Microprocessor based controller
- Digital speed indicator with speed regulator
- Minutes based countdown timer
- Safety lid lock to prevent opening during centrifugation
- Automatic safety rotor identification system
- Dynamic break without disturbing the samples

**Technical specifications:**

Temperature	Temperature controlled at room temperature
Rotor	4 X100 mL 6 X 50 mL 8 X 25 mL
Max. Speed	10000 to 12000 rpm
Tube size	25, 50 and 100 mL capacity round base with safety lids suitable for different rotors
Container	Suitable for plastic/propylene tubes having round base
Rotor head	Swing out/angular type rotor head replaceable for suitable polypropylene tubes
Tools	Suitable tools for replacement of rotor heads
Power	240 V 50 Hz single phase power supply
Warranty	Two years

## Sr.No.-2/2

### Bench top Centrifuge:

#### **Technical Specification**

- Rotor 6X10/15 ml
- Digital display for speed and countdown timer.
- Safety lid interlock
- Speed: 4000-5000 rpm
- Steel chamber, brushless induction motor, Imbalance detector with cutoff
- Interchangeable rotor system

## Sr.No.-2/3

### Refrigerated table top Centrifuge

Rotor	Fixed Angle Rotor
Angle	34°
Max Capacity	8 x 50 ml and 24 x 1.5 ml
Max Speed	15,000-18,000 rpm
Max RCF	26,920 x g
Acceleration/braking time	75 / 60 sec
Min. Temp. at Max. Speed	-1°C
Max. Speed at 4°C	15,000-18,000 rpm
Max. / Min. Radius	10.7 cm / 5.6 cm
K Factor	729
Distinctive Feature	Aerosol Tight

## **Sr. No.-2/4**

### Laboratory Centrifuge

<b>Max. RCF</b>	12000-14000 x g
<b>Max. speed</b>	12000-13000 rpm
<b>Speed set and displayed in RPM and RCF</b>	Yes
<b>Rotor</b>	Fixed angle suitable rotor, chemically resistant
<b>Rotor capacity</b>	18 or 24 x 1.5 ml/2.0 ml
<b>Timer</b>	15 s to 60 min, with continuous function
<b>Power supply</b>	230 V/50–60 Hz
<b>Lid</b>	Suitable
<b>Additional rotors and lid</b>	To accommodate PCR tubes, 12/24/48 well plate
<b>Adapters</b>	For 0.5 ml micro-tube set of 6 or suitable, 0.4 ml tubes of set 6 or suitable and 0.2 ml PCR tubes, strip tube adapter
<b>Warranty</b>	One year
<b>Other</b>	Complete working configuration consisting of basic unit, rotors, adapters, lids, power cables, maintenance free drive, etc.

### **Sr. No.- 3**

<b>pH meter</b>	
<b>pH Range</b>	-2.000 to +19.999pH
<b>Resolution</b>	0.1/0.01/0.001pH
<b>Relative Accuracy</b>	±0.002pH
<b>Calibration</b>	Auto calibration and /or Manual Calibration; 1 to 5 points with auto, and custom buffers recognition
<b>Temperature Range</b>	-5° to +105°C
<b>Resolution</b>	0.1°C up to 99.9°C, 1.0°C over 99.9°C
<b>Relative Accuracy</b>	±0.1°, ± 1 digit
<b>Compensation</b>	Automatic or manual; -5° to +105°C
<b>Display</b>	Backlit LCD or Bright LED; simultaneous display of selected measurement and temperature, pH calibration points, and current electrode condition
<b>Inputs</b>	BNC for pH electrodes; 8-Pin Mini-DIN Locking for ATC probe; Pin tip for separate reference electrode
<b>Sensor Type</b>	pH/ORP Electrode
<b>Other features</b>	Automatic or manual temperature compensation Auto-read/hold function
<b>Power</b>	240 V AC, 50 Hz
<b>Complete with</b>	All cables/ chords, and all other hardware and accessories for a working configuration, installation and service manual
<b>Warranty</b>	Three years on site

### **Sr. No.-4/1**

#### **Autoclave (Vertical**

1. Electrically operated (220 V- 240 V)
2. Vertical type
3. Should be double walled. Inner and outer walls made up of Stainless steel
4. Size 900-1000mm (H) x 500-600mm (W)
5. Stainless steel racks to keep the materials
6. Lid should be made up of stainless steel & provided with tightening device.
7. Should have pressure gauge, water level indicator, steam release valve & safety valve & drain for emptying the Autoclave.
8. Steam Generator: Non corrosive SS / Chromium plated Brass
9. Joint fewer Gaskets.
10. Working pressure 10psi to 20psi.
11. To be supplied with cord, plug & stainless steel basket.
12. Should have pedal lifting arrangement to lift the lid or handle to lift the lid.
13. Features: The equipment should have ISI mark on quality.
14. Installation: Installation shall be done at free of cost
- 15 *Warranty* one years

Sr. No. 4/2

<b>Autoclave</b>	
<b>Capacity</b>	65L or nearest
<b>Inner and outer chambers</b>	Stainless steel
<b>Lid</b>	Thick machined Stainless steel
<b>Locking system</b>	Radial
<b>Boiling chamber</b>	18 SWG minimum thickness, with air insulation and, joint-less neoprene rubber gasket (5 spare gasket to be supplied)
<b>Safety system</b>	Vacuum breaker
<b>Lid lifting system</b>	Pedal operated
<b>Fitted with</b>	1. Water level indicator
	2. Pressure gauge
	3. Piezostat (pressure control switch, settable)
	4. Digital Temperature indicator cum controller with totaling timer.
	5. Spring loaded safety valve
	6. Air/steam release cock
	7. Drain cock
	8. Low water level protection system
<b>Certification</b>	Test withstanding min 40psi inner chamber pressure
<b>Power</b>	240 V AC, 50 Hz
<b>Complete with</b>	All cables/ chords, and all other hardware and accessories for a working configuration, installation and service manual
<b>Warranty</b>	Three years on site

**Sr. No.-5**

**Specification for BOD Incubator**

Capacity	15-16 cubic ft.
Temperature range	10 °C -80°C
Temperature accuracy	±1°C
Adjustable shelf position	3 trays, SS
Illumination system	Built in
Door	Double door (interior glass, exterior stainless steel)
Controller	Digitally controlled timer, temperature and humidity
Heating and cooling system	Heaters for all round heating (all sides) to maintain temperature homogeneity. Compressor for cooling to work below ambient temperature
Construction	Inner chamber made up of SS, outer MS, powder coated
Sensor for temperature control	Yes
Tube light	In built
Stabilizer	Yes
Warranty for compressor	Three years

**Sr. No.-6****Hot air oven for drying plant samples**

Inner dimensions: approximately 2'6" x 2'6" x 6' (L x B x H)

Thick walled construction with lining of glass wool or suitable material to prevent loss of heat; inner wall made up of SS outer made of cold rolled steel or suitable material; 3 shelves;

Temperature range: 50°C to 150°C; lockable doors; operating voltage: 160-240 V; 50-60 Hz;

Digital display of temperature: Temperature controller

<b>Digestion Unit with Scrubber System</b>	<ol style="list-style-type: none"><li>1. Block digestion system suitable for multiple acids and alkali digestions of soils, plants, food &amp; feed, fertilizers, pesticides and water samples.</li><li>2. Microprocessor-based programmes for digestion</li><li>3. Max. temperature for digestion 400-450°C, with digital temperature controller</li><li>4. Capacity: 20 digestion tubes (of 250 mL capacity)</li><li>5. Twenty place digestion block should be made up of non-corrosive casted metal providing equal heating in all directions</li><li>6. Two sets of 20 digestion tubes of 250mL capacity, SS Insert rack and exhaust manifold system with Teflon adaptors, Cooling support rack for digested tubes</li><li>7. Alarm facility and auto power off upon completion of digestion</li><li>8. Power requirement : 220 V</li><li>9. Two years warranty</li><li>10. Acid Neutralizing Scrubber: Microprocessor sensor based timer and auto-drain facility, digital display, four-step acid neutralization, water and alkali containers of suitable capacity, suitable tanks/containers with circulating pumps or flow water acid neutralizing systems, power requirement 220 V.</li></ol>
--	---

## **Sr. No.-8**

### **Humidifier with auto cut-off**

- Ultrasonic spray humidifier or droplet size should be dispersed in air, NOT to settled on any surface
- Maintaining room humidity minimum 80% irrespective of weather
- Minimum 8-12 hours of continuous use and covers areas minimum 10 feet (L)x 10 feet (W)x 15 feet (H)
- Variable vapour flow control with auto-stop function
- Automatic cut off when waterless
- If any display, should be LCD/LED
- Made by stainless steel/cast iron /ceramic glass-glazeand resistant to rusting
- Fitted on caster wheel for mobility
- Safe to use
- Voltage: 120 volts
- Noise Level: 35 dB or less
- Warranty: 1-year manufacturer's warranty

## **Sr.No.-9**

### **Specification for Dehumidifier**

Required a dehumidifier to maintain the humidity and temperature inside a walk-in-seed storage structure/module (gene bank) on turn-key basis which can fit well with a duct (approximate length 1.5 meter; diameter 65 to 70 cm) and adapters, if required.

The internal dimensions of the cold room are 12 x 10 x 10 cubic feet (1200 cu ft) with a frequency of door-opening of one/hour. The dehumidifiers should be of a desiccant dryer type and should be capable of maintaining a RH of  $30 \pm 5\%$  and temperature of  $4 \pm 1^{\circ}\text{C}$ .

The dehumidifiers should be supported by a suitable servo stabilizer, control panel, sensors and display units.

### **Technical Specifications**

- \*Working Voltage: 415 volt, 3 phase, 50 hertz
- \*Process Air flow (CMH): 600
- \*Reaction Air flow (CMH): 200
- \*Reaction ESP (Pa): 150
- \*Dryer: Chemical-desiccant type
- \*Should be ISO12100-2:2003 certified
- \*Suitable servo stabilizer of minimum 33-35 KVA capacity

### **Other Necessary control and safety requirements**

- \*Suitable for continuous operation
- \*Digital controller with appropriate sensor, auto/manual selector switch
- \*Independent blower and motor for each airflow
- \*Volume control damper for both (Process & Reactivation)
- \*Electrical interlocking of fan motors, heaters and rotor drive
- \*Differential air pressure switch for providing react air flow
- \*High temperature safety thermostat cut-out

## Sr. No. 10

### **Specification of Air conditioner :**

Type: Split/Window

Capacity ; 2.5T; Compressor: Rotary: Air

Circulation: 750-1000 CFM: Star rating : 3 star

Only ; Power: 220-240 VAC ; 50-60 HZ;

Additional : Antibacterial Filters

## **Sr. No.-11**

### **NUCLEIC ACID/PROTEIN EXTRACTION SYSTEM**

<b>NUCLEIC ACID/PROTEIN EXTRACTION SYSTEM</b>	
<b>Description</b>	Automated system for extraction and purification of nucleic acid and proteins based on commercial kits or custom made protocols
<b>Type</b>	Spin column or magnetic bead based
<b>Sample handling capacity</b>	10-20 samples in one go
<b>Automation</b>	Total automation for Pipetting, shaking, centrifuging, transferring etc.
<b>Processing</b>	Totally programmable with detailed display and storage features
<b>Control</b>	Built in or computer interface, with facility to store and edit custom built programmes
<b>Relative Accuracy</b>	$\pm 0.1^\circ$ , $\pm 1$ digit
<b>Power</b>	240 V AC, 50 Hz
<b>Complete with</b>	All cables/ chords, and all other hardware and accessories for a working configuration, installation and service manual
<b>Warranty</b>	One year on site