

**RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWA VIDYALAYA,  
COLLEGE OF AGRICULTURE, GWALIOR – 474 002**

**TENDER NOTICE**

**No./Dean/Tender/2573**

**dated 27.01.2012**

Sealed tender are hereby invited for supply of equipments from manufacturer/Authorized dealer. The last date for submission of tender is 1300 hours on 10 February 2012. by registered /speed post. The tender will be opened on 10-02-2012 at 1500 hours. Firms may collect the tender form along with specification from the office of the Dean on or before 04-02-2012 at 1300 hours. The cost of tender form is Rs. 1000/-. EMD will be 3% of the cost of equipments. The details of the equipment may be download from Vishwa Vidyalaya Website: [www.rvskvv.nic.in](http://www.rvskvv.nic.in)

Name of the item

**1. UV Chamber, 2.BOD Incubator, 3.Refrigerated high speed centrifuge, 4.Laminar Air Flow (Horizontal), 5.Deep Freezer, 6.Humidifier S.S Body, 7.Colony Counter (Digital), 8.Water Purification System, 9.Corcyra cage, 10.Moth Breeding cage, 11.Moth mating chamber, 12.Coreyra egg laying cage, 13.Corcyra egg sterilization chamber, 14.coryra rearing system, 15.Plant Growth Chamber, 16. Hot and cooled water circumstances bath, 17. Stainless Steel Seed Fermentor 15 liter capacity stirred, 18. Small Oil Free Compressor, 19. Measured volume broth injector, 20. Steam Generator 100 Kg/H, 21. Generator, 22. Automatic seal machine, 23. Automatic bottle filling machine (Small size), 24. Capping and labeling machine and miscellaneous items.**

**DEAN  
College of Agriculture,  
Gwalior 474002**

**COLLEGE OF AGRICULTURE, GWALIOR – 474 002**

<b>Tender No.</b>	
<b>Date of Publication</b>	
<b>Last Date of Accepting Tender</b>	
<b>Date of Issue of Tender Form</b>	
<b>Seal of the Issuing Office</b>	
<b>Amount of fee deposited for issuing tender form</b>	
<b>Details of money receipt No. &amp; Date</b>	
<b>Signature of the person issuing the tender</b>	
<b>DETAILS OF TENDER FORM</b>	
<b>Name of the firm quoting the rates</b>	
<b>Registered address of the firm</b>	
<b>Name of the proprietor with telephone No.</b>	



**Authorised Signatory**  
**RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWA VIDYALAYA,**  
**COLLEGE OF AGRICULTURE, GWALIOR – 474 002**

**TERMS AND CONDITIONS**

Tender No.		
Date of Publication		
Date of issuing the tender form	25-01-2012	Time 10.00 to 17.00 (working hours)
Last date for submission of the tender	10.02.2012	Time 13.00 hrs. at Office of the Dean, College of Agriculture, Gwalior 474004
Date and Time of opening of Tender	10.02.2012	Time 15.00 hrs. at Office of the Dean, College of Agriculture, Gwalior

1. Only the manufacturer and their authorized dealer will submit the tender. The firms submitting the tender will have to submit a certificate of manufacturing of the unit / authorization certificate of the manufacturer. The tenderer should have service center with trained personnel to undertake servicing at and other places in western M.P.
2. No person or firm shall submit more than one tender for the same item.
3. Broad based specification of the system / equipment is given along with the tender form. The tenderer should take note of it and if there are additional specification, which needs attention, should be mentioned in the specification.
4. The tenderer must submit the tender form issued by the office in original, tender document, signed copy of the terms and conditions duly stamped along with requisite EMD in a sealed cover, in the Office of the Dean, College of Agriculture, Gwalior 474002 by registered or speed post delivered up to 13.00 hrs of 10.02.2012 from the date of Publication.
5. Delayed tenders due to postal or any other reason will not be considered.
6. The EMD (Earnest Money Deposit @ 3% of the cost of Equipment) valid for six months from the date of issue should be in the form of A/C Payee DD / Banker's Cheque/ Fixed Deposit Receipt of a nationalized / Schedule Bank in favour of "Dean, College of Agriculture, Gwalior" payable at Gwalior. In absence of EMD with the prescribed form, the tender will not be considered. The EMD will be forfeited in case the tenderer fail to execute the order in specified time.
7. The tender offer should have validity for the period of 180 days.
8. The rates quoted should be inclusive of Sales Tax, F.O.R., VAT tax CST etc. College of Agriculture, Gwalior 474002, inclusive of packing & forwarding, loading, unloading and handling charges, freight, insurance, full risk coverage etc. In case of imported item the CIF value should be Mumbai or Delhi Airport. The tenderer must specify the custom clearance and transportation charges.
9. Break of the prices for the main item and its accessories should be given separately. The tenderer should also specify the probable period of delivery of the equipment.
10. The tenderer should install the equipment and provide free training to the Scientist / Teachers pertaining to the use of the equipment.
11. A list of the organizations where the similar type of equipment is supplied by the tenderer around in M.P. should be enclosed with the tender.
12. Each tender must be accompanied with the technical literature of the equipment failing which the tender will not be considered.
13. The tenderer should be given the warranty minimum for 1 years to provide service/ maintenance free of cost during warranty period.

14. If desired in the specification the tenderer should quote the comprehensive AMC charges for another 3 years.
15. The tender will be opened on 10.02.2012 at 15.00 hrs by the members of the College level purchase committee in the Office of Dean, College of Agriculture, Gwalior 474002. The tenderer can depute his authorized representative to be present at the time of opening of the tenders.
16. The Dean, College of Agriculture, Gwalior reserves the right to extend the due date and the date of opening of the tender.
17. The EMD shall be released after 50 days from the date of opening of the tender.
18. The tenderer will arrange to supply the equipment as per the specifications within 10 days/ specified period of delivery from the date of issue of order failing which the order will be treated as cancelled.
19. The standard terms and conditions of payment acceptable or – payment in full will be made after the contract is effective in full and to the satisfaction of the authority. The payment will be released to the firm supplying the equipment only on successful installation.
20. In case of the equipment to be imported the import license, CDE certificate and other required papers as per the Govt. procedure will be made available to the supplier or importer.
21. If so desired the tenderer should have to enter into an agreement.
22. Any deviation, variation or non-compliance by the tenderer shall be considered as breach of contract and the undersigned reserves the right to forfeit the amount of the EMD in part or full and to take action as per legal arrangement.
23. The Dean, College of Agriculture, Gwalior, reserves the right to accept or reject any or all the tenders without assigning the reasons thereof and to split of the tender as deemed fit.
24. Should there arise any dispute, the Vice Chancellor, RVSKVV, Gwalior shall be the sole Arbitrator whose decision in the matter shall be final and binding.
25. The tenderer shall have to give an undertaking that the terms and conditions as mentioned above are acceptable to the tenderer by providing a signed and dully stamped copy of the terms and conditions.

**Tenders are liable for rejection if:-**

1. Tender not received on due date and time.
2. Earnest Money is not enclosed.
3. Income tax clearance certificate not attached with tender.
4. The rates quoted are not F.O.R. Destination.
5. Central and state sales tax shown separately.
6. The tender not submitted in the format supplied by the V.V. will not be considered and rejected at the time of opening.
7. Certificate of Registration for the type of Business is not enclosed with the tender.

**Dean  
College of Agriculture,  
Gwalior 474002**

# SPECIFICATION OF EQUIPMENTS

## 1. UV Chamber

Our UV Chambers are available with following specifications

- Dimension 590 x 235x298 mm
- Power Consumption < 10 watts
- It has ultra violet blue light 8 w
- Micro – switch ON/OFF control
- Inside Body covered with stainless steel
- 12 SS tray for store instrument

UV Chamber

- After the sterilization of the instruments by different methods the same need to be stored in the environment so that the instruments does'nt gets contaminated again till the use of the same.
- UV Chamber is being recommended for storing of the instruments after sterilization.
- The ultra violet rays are being maintained in the chamber which keeps the instruments sterilized.
- The UV Chamber comes with imported UV Tube.
- Provided with 12 number of trays made of stainless steel.
- Size 23cm. x 14.5 cm.

## 2. BOD Incubator

Continuous ventilation and the special micro processor controlled AUTO-TUNING thermoregulation system, CFC Free

The internal temperature is programmed and displayed digitally from 3 to 50°C (stability  $\pm 0.1$  °C) with units of 0.1 °C.

Can be connected to a PC using an RS232 connector for use with dedicated software . Complete with PC.

### **Technical Data:**

Total Volume: 207 Liters , Usable Internal Volume :196 Liters, Transparent Internal Doors,  
Temp. Range : from 3.0 to 50.0 degree C., Internal Temperature Stability :  $\pm 0.5$  degree C.  
Internal Temperature homogeneity :  $\pm 0.5$  degree C., Internal Temperature Shown by display  
Temperature resolution : 0.1 degree C., Electronic thermoregulation system: AUTO-TUNING  
2 Internal electrical current sockets, Number of Sheives Included : 4,  
Max. Number of Sheives : 12 (distance of 40mm. (Between one shelf and the next)

Power : 350W., Weight : 40Kg. (88 lb), Dimension (WxHxD) : 540x1300x560mm.(21.3x51.2x22 in)

### 3. Refrigerated high speed centrifuge

#### Salient Features

- Interactive LCD display (PR-23 & PR-24 with LED display)
- User friendly microprocessor control
- Menu driven ten programme memory
- Choice of high brake, low brake and coasting (CPR-23, CPR-24 & CPR-30)
- Precise Control and reproducibility.
- Imbalance detector with cutoff.
- Safety lid interlock to prevent cover opening during centrifugation.
- Unique safety rotor identification system.
- Brush less induction motor practically maintenance free with frequency drive.
- Speed holding accuracy 100RPM
- 0-99 minutes countdown timer
- Self-diagnosis for errors.
- High voltage Safety cutoff for unit protection.

#### Technical Data

Max. Speed	:	20000
Max. RCF	:	37570
Max. tube Size	:	100
Max. Capacity	:	400
Lowest Temp.	:	-8
Connected Load	:	1.6
Voltage Stabilizer	:	VS-03

#### Rotor Head For Above

##### Angle Heads (With Polypropylene Tubes)

R-242 Complete with Polypropylene Tube 6x50ml

R-244 Complete with Polypropylene Tube 12x15ml

R-248 Complete with Polypropylene Tube 24x1.5ml

### 4. Laminar Air Flow (Horizontal)

size: 4ft.x2ft.x2ft., Inner & Outer Complete Stainless Steel,  
HEPA Filter efficiency 99.97% upto 0.3u, Protection grill for HEPA filter,  
Pre-filter efficiency 99% upto 5u, Stainless Steel work bench.,  
UV germicidal lamp : 1 Nos., Fluorescent illumination : 2 Nos.,  
Cork for gas., Balanced blower with motor.

## 5. **Deep Freezer**

Double walled Microprocessor controlled with Automatic Voltage Stabilizer Horizontal Chest type/Vertical type. Inner made of 304 grade stainless steel and outer of power coated MS with CFC free super dense PUFF insulation, evenly distributed cooling coils for quick freezing and one-piece replaceable door gasket. Mounted on castor wheels and fitted with digital temperature indicator –cum controller. Temp. Range: Ambient to – 20° C. Cap: 170 Litre / 280 Litre / 335 Litre

## 6. **Humidifier S.S Body**

- Based on the rotating disc-spate principal.
- Unit produces only super fine particles of micron size, which become part of the atmosphere.
- Produced particles there reaching every corner of the room, resulting in uniform humidity.
- Due to the upward thrust imparted to the micron sized water droplets. By high speed motorized unit, they remain suspended in the atmosphere for longer duration of time.
- Unit is capable of atomizing upto 3 liters of water in an hour at full evaporation in the driest possible ambient conditions.
- Unit has body made up of stainless steel.
- Unit is effective for an enclosed of volume upto 40 cu. mtrs.
- Provided with high speed 2800 RPM, motor to run longer period, and the blades are aerodynamically balanced to ensure dropless fumigation.
- To work on 220 / 230 volts A.C. supply.

## 7. **Colony Counter (Digital)**

- Fitted with automatic 3 digits Digital Display.
- Counting plate with illuminated standard wolfhugel ruling ensures clearly differentiated and sharply defined colonies.
- Each touch of marking pencil in the petri dish increments the colony count by '1' and the flowing LED Digital depicts the total colony count.
- Maximum colony Count possible upto 9999 (4 digital display). Provided with a manual reset of digital display, ON/OFF Switch, counting plate, 100m.m. dia lens, cord and plug.
- To work on 220 VA.C. Supply.

## 8. Water Purification System

For RO-System

- Flow rate Should be 16lt./hour
- Integral Pump
- 4 line alphanumeric display (conductivity, rejection rate, Tank level temperature etc.)
- Automatic Back flush for the RO membrane
- Rejection monitor to indicate membrane performance
- Rejection rate : 94-99%
- Maximum recovery rate Approx 55%
- ISO-9001 company
- 24 hrs fully automatic system
- Serial interface RS-232
- All water contact parts are made from FDA grade inert materials.
- Pressurized storage tank of capacity 30 liter and should be mounted in any orientation (horizontal or vertical) to save space. No external air filter

For pyrogen Ultra pure lab water system

- Carbon-resin technology to produce ultrapure water with Resistivity up to 18.2 Mohm x cm.
- Horizontal UV oxidation chamber with dual wavelength 185 and 254nm capable of reducing TOC levels<1ppb.
- Hollow fiber Ultrafilter vertically mounted capable of reducing endotoxins to less than 0.000 1 EU/ml.
- Four line alphanumeric VDC display
- Solid state control : in standby mode re-circulate water for every 15minute to maintain the purity of the water.
- Self diagnostic. Removable Display and dispense.
- Final filter is 0.2µm pleated PESU membrane
- Validated according to HIMA & ASTM F-838-83 guidelines.
- Designed, Developed and produced under DIN/ISO 9001 certificate Quality management system. Also ISO-9001 company.
- Validation guide on request
- Product water quality

Resistivity	:	18.2 M ohm x cm
TOC	:	<1 ppb
Endotoxin	:	<0.000 1 EU/ml
Particles	:	<1/ml @ 0.2um
Bacteria	:	< 1 CFU/ml

Flow rate : up to 1.5 l./min.

**9. Corcyra cage**

(A) **Corcyra cage** Mode of MDF planks, Top lids fits well in the main box and detachable, Lid provided with 20 mesh iron wire –mesh secured with beading . provided with handle on sides well finished Size 43x23x12 CM.

(B) **Corcyra Cage:** (waterproof plywood ): Some on Ri 86-01 but made of proof plywood instead of MDF Size 38x38x10 CM.

**10. Moth Breeding cage:**

Made of synthetic mesh cloth insect parasite proof Round shape. Bottom open so as to keep if on plant Pot.

**11. Moth mating chamber**

Mode of synthetic, mesh cloth insect parasite proof shape. Completely enclosed with 18” long zipper on side.

**12. Corcyra Egg Laying cage :**

Frame made of MDF sheet planks, Fine wire mesh provided On top & bottom. On one corner on top. a Rounded opening 3cm. dia is provided which can be closed with wooden plug on one side. A rounded opening 11cm. with on arrangement for drop closure with the help of MDF sheet cover is provided for manually putting in/ taking out the material. Overall Size35x25x18 cm.

**13. Corcyra Egg Sterilization Chamber :**

Sterilization chamber made of mild steel and is divided into two equal parts by horizontal partition. Each partition Provided with drawer which has a semi circular base in the inner surface of the semicircular base the drawer is provided with longitudinal flanges of 2mm thick and 9cm. apart. These flanges prevent the other from the curve face. The ceiling of each drawer is provided with a UY Tube light Each tube light is connected with a timer .

**14. Corcyra Rearing system :**

Fabricated of iron angle frame for keeping crushed jowar, 13 Not sheet trays of size 45x45x5cm. one provided Funnel shopped try Of to the collection confiner, Beautifully painted . Transparent polyhene sheet and block colour region cloth for covering the structure.

## 15. Plant Growth Chamber

- Single Control System for temperature, photoperiod, humidity and Co2
- Single board solid state design
- 10 key membrane keypad with LED indicators and vacuum fluorescent display
- Real time or circadian (countdown) programming
- Programs can be run in ramping or non-ramping or diurnal mode modes
- Programs are created and run in real time
- Up to 96 programming steps
- 22 gauge electro- zinc plated steel exterior and interior, all seams and joints welded, interior floor includes floor drain. Interior and exterior finish consists of white, highly reflective, baked enamel paint finish.
- Inner shell is solidly supported by a non-compressing and non thermal conducting material to substantially lock the inner liner in place.
- Temperature range: 10° to 44°C ( $\pm 0.5^\circ\text{C}$ ) Lights ON
- Top mounted refrigeration for easy access and cleaning, air cooled, self contained, continuous running hermetic condensing unit.
- Light intensity up to 1150 micromoles/m<sup>2</sup>/s
- 37.2 ft<sup>3</sup> capacity.
- Total shelf area (working area): 6.8 ft. one adjustable shelf; with growing height of 45.1 inches
- Caster assembly with levelers.
- One 1" access port, Door Lock, External High/ low temp safety controller with separate sensor.
- Electrical requirement: 220 volts
- High/Low temperature safeties are adjustable, provide visible and audible signals and utilize an independent sensor. Battery back-up (in event of power outage).
- Pan Type humidifier and Dehumidifier with Electronic RH sensor for high humidity control of 90% ( $\pm 10\%$ ) between temp range of 15 to 30 Degree C with all lights OFF with Dehumidification facility

### OPTIONALS needed for various stress tests on Plants and Data logging:

Connection to Data handling unit with software for data logging.  
Communications Software  
CO<sub>2</sub> enrichment package for stress  
High temp up to 60° C for Stress,  
Data Handling Unit,  
Suitable Voltage stabilizer, Suitable RO system for Humidifier

### Please also offer price for following options:

Low temp up to -10° C for Stress  
Closed loop dimmable lighting/ Open loop dimmable lighting for light variation in %  
Ultrasonic Humidifier with Dehumidification  
Observation window.  
Phenolic coated coil for Insect work.  
UV Light with switch for Stress.  
CO<sub>2</sub> Scrubber unit

## **16. Hot and cooled water circumstances bath**

- High quality and excellent temperature stability
- Ambient +5°C to 99°C operation
- Excellent temperature stability
- Drain tap included
- Dual controls for separate setups and temperature displays
- Optimum use of space and value for money
- Countdown timer with audible buzzer
- Fixed thermal cut-out
- User settable, over-temperature sample protection
- Digital PID control for quick heat-up Clear, wide-angle viewing digital LED display with indication of heating state
- Heater mat and sensor bonded to underside of tank
- Grant non-drip polycarbonate lid
- Stainless steel tank
- Clean, painted steel case
- Grant polycarbonate perforated base tray
- User calibration
- Raised feet base tank

## **17. Stainless Steel Seed Fermentor 15 liter capacity stirred**

- Mechanical agitation system
- Excellent stability
- Convenient operation
- LCD Touch Screen
- Working Volume: 5-50 L
- Surface finish: Mechanical polishing and satin finish
- Mechanical agitator; speed range 50-400 rpm
- Blade impeller, defoamer and baffles
- Sterile sampling and bottom valve
- Automatic pH control; pH sensor, pH alarm
- DO sensor with alarm; range 0-100% or 0-200%
- Automatic foam control; alarm and defoamer
- Automatic feed control with alarm
- Temperature Control - Automatic with sensor  
Digital Control  
Range: 0-150 degree
- Automatic Rotation speed, Pressure and Air Flow control

## 18. Small Oil Free Compressor

### Features:

- Absolute dry, clean and totally oil free
- High durability with simple design
- High Compression Ratio
- High efficiency suction filter
- Fast filling
- Anti vibration mounting
- Acoustically enclosed, safe to operate, high flexibility
- Internally coated air receivers
- Low power consumption

### Technical:

- Electrical - 230V-AC, 50 Hz
- Power Consumption - 500W
- Inlet Pressure - 6-20 PSI(0.04-0.14 MPa)
- Discharge Pressure - 2000 PSI(13.8 MPa)
- Flow Rate - 5-20 LPM

## 19. Measured volume broth injector

### Features:

- Body, Springs and Shafts made up of stainless steel
- Drive water inlet valve
- Drive water filter
- Regulating and distributing valve
- Fertilizer injector
- Fertilizer valve assay
- Suction head
- Non-return valve
- Fertilizer outlet valve
- Range- upto 50L
- Injection rate of 8-50l/h; 3-13 USgph
- Pressure range 2-8bar (30-120PSI)
- Water Consumption two times the quantity of chemical injected

## 20. Steam Generator 100 Kg/H

### Features:

- Vertical water tube steam boiler
- Top burner burning
- Good thermal efficiency
- Protective device controller
- Quick start-up
- Water level, steam pressure protection
- Small installing area

**Technical:**

- Heating Power - 3KW-18KW
- Voltage - 220V/380V
- Pressure - 0.4-0.7 MPa
- Vapor Capacity - 3.8-22.8 Kg/H
- Water Volume - 28L
- Power - 380V, 50Hz
- Heating - 20-144 KW
- Steam Feeding - 30-200 Kg/H
- Temperature - 170 degree

**21. Generator****Features:**

- Vertical
- Water cooled
- Direct injection
- Naturally aspirated
- Gravity feed fuel system
- Large end bearings
- Suitable for run-through

**Technical:**

- Bore x Stroke - 80 x 110 mm
- Cubic Capacity - 0.5L
- Compression Ratio - 16.5 : 1
- Rated Output - 3.7KW(5.0hp) at 1500 rpm
- SFC rated hp/1500rpm - 245g/kwh(180 g/bhp-hr)
- Lubricant Oil Capacity - 3.3L
- Fuel Tank Capacity - 6.5L
- Clockwise flywheel rotation

**22. Automatic seal machine****Features:**

- Stainless steel frame
- Low maintenance, high durability
- Easy addition to any conveyor
- Centrifugal bowl cap orientator
- Electronic single touch torque control
- Powered height adjustment
- On-the-fly speed and torque adjustment
- Angle gripper belts
- Self centering spring loaded spindles
- Knob chute adjustment
- Cap elevator/orientator

**Technical:**

- Electrical - 220V-AC, 20Amp
- Air - 120 PSI @ 2CFM
- Capping - Upto 120 CPM
- Cap Size - 10mm-120mm
- Container Size - 1/4"-81/2"(6mm-215mm)

**23. Automatic bottle filling machine (Small size)****Features:**

- Heavy duty sanitary stainless steel frame
- Steel fill nozzles and food grade reinforced tubing
- Diagnostic touch screen control with storage memory
- Food grade supply / buffer tank
- Power height adjustment of fill heads
- Variable speed conveyor
- Centrifugal food grade pump
- Container back-up detection
- Star wheel or time screw indexing
- Draining drip collection tray
- Buffer tank product flow control
- High capacity food grade diaphragm pump
- Gravity tank with float system

**Technical:**

- Electrical - 220V-AC, 60 Hz
- Air - 80-100 PSI @ 2 CFM
- Filling - Upto 60 CPM
- Cap Size - 10mm-120mm
- Viscosity - 2000 cps

**24. Capping and labeling machine and miscellaneous items.****Features:**

- Automatic label setup
- Touch screen control system
- Easy roll upto any conveyor
- Welded thick wall stainless tubing frame
- Cantering label head top, angled or side labeling
- Heavy duty stainless steel frame
- Digital control for label speed
- Container separator
- Fully integrated speed adjustable conveyor
- Tamp and Wrap station

**Technical:**

- Labeling - Upto 160 CPM
- Electrical - 220V-AC
- Label Size - Length : 0.5"-11.75"(1.25-29.75cm)  
Height : 0.5"-6"(1.9-15.25cm)