

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

TENDER NOTICE

Sealed tender are hereby invited for supply of equipments/instruments from manufacturer and other authorized dealer. The last date for submission of tenders through Registered/Speed Post/ Courier is 13.00 hours on 30 January, 2012. The tender will be open on 30-01-2012 at 15:00 hours. Tender received after due time & date will be not entertained. 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. Interested firm may collect the tender form along with specification from the office of the Dean on or before 25 January, 2012, at 13.00 hours. The cost of tender form is Rs. 1000/-. Earnest Money Deposit will be 3% of the cost of equipments/ instruments. The tenders forms may be downloaded from website www.rvskvv.nic.in

List of the equipments/instruments:-

1. Computerized seed counter
2. Top Pan Analytical Electronic Balance
3. Gel Rocker
4. Vortexer
5. Digital orbital Shaker
6. Magnetic Stirrer
7. Dry Bath
8. Tinfuge
9. Refractometer Digital type
10. Automatic Nitrogen Analyzer
11. Rotary Flask Shaker
12. Soil Moisture Meter (TDR) with accessory
13. Forced Air Circulatory Oven
14. Voltage Stabilizer (SKVA)
15. Moisture Boxes
16. Top Pan Balance
17. Yodder apparatus
18. Autoclave
19. Trinocular microscope with image analyzing unit, printer and scanner

20. Electrophoresis unit (Horizontal)
21. Flame photometer to determine K in soil & plant
22. Digital Vernier Calliper
23. Digital Refractometer (0-90°B)
24. Penitrometer
25. Root scanner

DEAN
College of Agriculture,
Gwalior 474002

SPECIFICATION OF EQUIPMENTS/INSTRUMENTS

1. Computerized seed counter

Digital Seed Counter for seed size 0.5 – 15 mm with facility for Accurately counting a predetermined number of seeds in a single batch-Batch Count. Allowing for continual duplication of a single batch count – Repeat Batch. Setting batch counts to count number of batches with different seed counts – Multiple Batch. Equipped with display of seven segment FND to count up to 9999 seeds in one batch.

2. Top Pan Analytical Electronic Balance

- I. Capacity: 220 g. Readability: 0.1 mg. Repeatability: 0.1 mg. Linearity: 0.2 mg, Pan Dia: 90 mm, and Average Response Time: 2.5 seconds. ISO/GIP compliant, with internal motorized calibration & adjustment weight backlit & high-contrast display, level indicator for fast & easy leveling, over-load protection, and Draft Shield.
- II. Capacity: 5kg, Readability: 0.1 gm, Repeatability: 0.1 gm, Pan Dia: 150mmx 150mm,
- III. Capacity : 30Kg, Readability: 05 gm, Repeatability: 0.1 mg, Linearity: 0.2 mg, Pan: 250mmx 250mm,

3. Gel Rocker

Platform Size: 30x30 cms, Speed: 0-30 Oscill/Min, Movement: See-saw, Timer: min (Optional), Models: 1 or 2 Platform.

4. Vortexer

Speed 200- 2000rpm, Operation: Manual/Auto Touch Mode

5. Digital orbital Shaker

Platform Size: 30x30 cms, Speed: 0-500 rpm Timer: 0-60 min (Optional),
Movement: Orbital

6. Magnetic Stirrer

Capacity: 2lt, RPM: 10-1500, Temp: 4⁰C -50⁰C

7. Dry Bath

Anodized Alluminium Block 49 Places, 1.5 ml Eppendorf tubes or test tubes,

8. Tinifuge

Voltage: 6000/15000 rpm Fixed, Rotor : FAG Place x 1.5ml, Noise:<60 db, Oper
Temp: 0-40°C

9. Refracto meter Digital type

Digital type for determination of concentration of dissolved solids.

10. Automatic Nitrogen Analyzer

- a) **Automatic Nitrogen/ Protein Estimation system** : Microprocessor based aluminum digestion block for 12 samples of 250ml vol. digestion block with temperature controller, range : 50-450 °C, temperature indication : Digital with feather touch membrane switches, microprocessor based PID controller, Heaters : Casted aluminum alloy heaters, Digestion tubes (Macro) 250 ml vol – 12 Nos., Stainless steel insert rack, Exhaust manifold system with Teflon adoptors, easy auto fix spring clamps to fix the manifold, water suction flow assembly with giant filter pumps – 2 Nos. and acrylic view window diacid and triacid application, Anti corrosive powder coated finish, ISO 9001:2008 Certified Electrical requirement : 220v / 50Hz Ac mains.
- b) **Automatic distillation system** : Autosequencing microprocessor based PC compatible distillation system with in-built software with 9 programmable steps and 40 pre-definable user storage auto sequence programmes.
Fully automatic sequencing with auto intelligent run of 9 programmable steps which include automatic dilution, automatic boric acid addition, automatic alkali addition, automatic reaction delay time, automatic steam processing, automatic residue delay time, automatic residue removal & automatic titration connectivity function. **40 predefinable user storage auto sequence programme**, auto door open warning indication, auto deactivating of system on error diagnosis, adjustable steam power : 10-100% distillation capacity “ 15-20 samples/hr, nitrogen recovery > 99.5%, **High grade stainless steel non corrosive steam generator**, fully automatic water level monitoring with centrifugal refilling pump & perilstatic pump for reagents addition. Machine interface with 14 keys, 32 character, 2 line back lit alpha numeric LCD display, **Standard auto titrator connectivity kit & operating software, built in safety features, ISO 9001: 2008 Certified Electrical requirement : 220v / 50Hz Ac.**
- c) **Acid Neutralizer Scrubber** : First stage : water, second stage : alkali (15% NaOH), Vacuum source: Giant Aspirator pump, Tank Capacity : 15 liters, Alkali container capacity : 2 liter, water container capacity : 2 liters, outer cover : MS power coated, Tank : Fibre reinforced plastic tank, pump : self priming water recirculation pump, electrical requirement : 230v/ 50Hz mains.

11. Rotary Flask Shaker

Rotary flask shaker – 65 x 65 cm compact bench type table up top model with platform fitted with rubber disk mounted on ball bearing crank shafts to give an orbital motion to the flask. Motor – 0.5 HP, operate able on 220/230 VAC supply, speed controlled mechanical speed controller, holding capacity – 36 flasks of 250 ml.

12. Soil Moisture Meter (TDR) with accessory

Measurement unit : Percent volumetric water content, Resolution : 0.1%, Accuracy : $\pm 3.0\%$ volumetric water content with electrical conductivity $<2 \text{ dS m}^{-1}$, Range : 0% to saturation (Saturation is typically around 50% volumetric water), Power : 4 AAA alkaline batteries Approximately 12 month life, Logger capacity : 2700 readings without GPS, 1250 readings with GPS/DGPS, Display : 16 character, 2 line LCD, Weight : 3 lbs. (1.4 kg), Probe Head : 3.1" x 3" x 1", Dimensions : (7.8cm x 7.5cm x 2.5cm), Rod Dimensions : Length : 1.5" (3.8 cm), 3" (7.6 cm), 4.7" (12cm) or 7.9" (20cm) Diameter : 0.2" (0.5 cm), Spacing : 1.3" (3.3 cm)

The internal data logger and RS-232 port are compatible with GPS/DGPS. The data logger's LCD screen will display the data in one of three modes (see MODE button p. 11):

- Volumetric water content – in standard or high clay mode
- Relative water content – up to 2 RWC modes can be established
- Measurement period – in microseconds

13. Forced Air Circulatory Oven

Outer chamber made of mild steel and inner chamber made of mild steel/stainless steel/aluminum for drying with temperature from 50 °C to 250 °C supplied with adjustable trays, temperature controlled by thermostat. with digital temperature indicator cum controller and air circulating fan. size – 605 x 605 x 605 mm or 605 x 910 x 605 mm. Mounted on castor wheels.

14. Voltage Stabilizer (SKVA)

Voltage stabilizer, 5 KVA, reputed brand, single phase, input voltage 170 to 270 V AC, output voltage 220 + 1% regulation (adjustable between 210 to 240 V), frequency 47 to 53 Hz, speed of correction 20 V per second, regulation + 1% from no load to full load, temperature 0-55 °C.

15. Moisture Boxes

Boxes for drying moist soil sample made up of aluminium/steel for a temperature range of 0 - 200 °C temperatures with tightly fitted lids of following sizes.

- a. " (dia) X 1" ht. per 10 boxes pack.
- b. 3.5" (dia) X 1.25" ht. per 10 boxes pack.

16. Top Pan Balance

Capacity: 200g. and Readability: 0.1 mg. Repeatability: 0.1 mg. and Linearity: 0.2mg. unit selection g or ct, and percent weighing.

With draft shield, port for connection to external printer, Automatic Calibration (internal) and over-load protection. Pan Size : 90mm.

17. Yodder apparatus

Yodder type motor driven sieves shaker is for carrying out weight sieves analysis of material. consists of water reservoir are made of thick S.S. sheet and a holder for sieves which can hold up to 7 sieves of 8" dia, shaker is driven by ¼ HP motor through a belt drive. suitable to operate on 230 volts, 50 cycle, single phase AC fitted with 0-6/120 min. Mechanical timer.

*For 4 set with S.S. tank

Test sieves (Fine series in 8" dia. dia brass frame.) of 4, 8, 16,30, 60 120 BS or 4.75, 2.00, 1.00, 0.500, 0.250, 0.125 MM

18. Autoclave

- Inner and outer chamber both made of stainless steel.
- Lid made of thick machined stainless steel plate.
- sizes provided with pedal lifting device for user comfort.
- Radial locking lid ensures user safety and safe locking.
- Boiler and outer shell provided with air insulation.
- Neoprene jointless rubber gasket.
- Vacuum breaker fitted as a safety device

DIA X DEPTH	CAPACITY	LOAD
350 x 550 mm	50 Ltrs	3.0 kw

OPTIONAL ACCESSORIES:

- Automatic low water cut-off device for general safety of the element.
- Pressure control switch (PIEZOSTAT) for automatic control of pressure.
- Digital temperature indicator for indication of inner temperature.
- Automatic 0-60 minutes mechanical timer.

19. Trinocular microscope with image analyzing unit, printer and scanner

Trinocular rotatable having aluminum stand with the magnification of 40x to 1000x
Light: Halogen lamp with intensity control system
Condenser: NA 1.25 with iris diaphragm

Optional Attachments	High Resolution Digital Camera, Image Analysis Software (Capture, Process, Analyze of image), Phase Contrast attachment.
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20. Electrophoresis unit (Horizontal)

Multi sub screen size 26x32 cm, bv trays 6x28 sample, combs & loading guides with following accessories: 26x32 cm uv trays, cool pack and plat for multi sub screen, positive electrode negative electrode, comb 28 samples mc 15mm, 56 sample mc, 1 mm & 1.5 mm., power supply Appropriate for the above unit

21. Flame photometer to determine K in soil & plant

- Operate able on 230 v, 50/60 Hz power supply on LPG.
- The system should have built in air regulator and air filter to deliver stable/ oil free air supply.
- The fully-scale sensitivity of sodium and potassium should be 0.5 ppm, calcium 5 ppm and lithium 2 ppm respectively.
- The standard supply must include the main unit consisting of microprocessor based system with narrow band filters of sodium, potassium, calcium and lithium, air compressor and photoconductive cell etc.
- The curve fit accuracy of the system should be $\pm 1\%$ at mid point with 3 ppm K set at 100 on scale.
- Curve fit software should be provided for high concentration mode.
- Measuring range should be 0 to 1999 with three digit LCD display.
- Reproducibility – Low conc. - + 1% FS and High conc. – 2% FS
- Aspiration time – 5 sec. + average time per element + 4 sec.
- Operating air pressure – 0.45 kg/cm²

With manual & guarantee/ warranty card & circuit diagrams

22. Digital Vernier Calliper

Size 300mm, digital display reading

23. Digital Refractometer (0-90⁰Brix)

Digital display reading, handy, capable to measure TSS of juices and processed products between 0-90⁰ Brix

24. Penitrometer

Handy with two plungers (9mm & 11mm) capable to measure the firmness in lbs and Kg.

25. Root scanner

Complete with sample tray optical sensor board, counter and display board along with cover case.

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TERMS AND CONDITIONS

Tender No.		
Date of Publication		
Date of issuing the tender form	11-01-2012	Time 10.00 to 17.00 (working hours)
Last date for submission of the tender	30.01.2012	Time 13.00 hrs. at Office of the Dean, College of Agriculture, Gwalior 474004
Date and Time of opening of Tender	30.01.2012	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 / courier or delivered up to 13.00 hrs of 30.01.2012 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. The RVSKVV is exempted from Excise duty.
9. In case of imported item the CIF value should be Mumbai or Delhi Airport. The tenderer must specify the custom clearance and transportation charges.
10. 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.
11. The tenderer should install the equipment and provide free training to the Scientist / Teachers pertaining to the use of the equipment.
12. 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.
13. Each tender must be accompanied with the technical literature of the equipment failing which the tender will not be considered.
14. The tenderer should be given the warranty minimum for 2 years to provide service/ maintenance free of cost during warranty period.
15. If desired in the specification the tenderer should quote the comprehensive AMC charges for another 3 years.

16. The tender will be opened on 30.01.2012 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.
17. The Dean, College of Agriculture, Gwalior reserves the right to extend the due date and the date of opening of the tender.
18. If required the tenderer will have to arrange a demonstration of the equipment or system without any charges or obligations.
19. The EMD shall be released after 50 days from the date of opening of the tender.
20. 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.
21. 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.
22. 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.
23. If so desired the tenderer should have to enter into an agreement.
24. 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.
25. 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.
26. 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.
27. 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. Sample of items are not enclosed.
7. The tender not submitted in the format supplied by the V.V. will not be considered and rejected at the time of opening.
8. Certificate of Registration for the type of Business is not enclosed with the tender.

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TENDER FORM FOR

Tender No.	
Date of Publication	
Last Date of Accepting Tender	
Date of Issue of Tender Form	
Seal of the Issuing Office	
Amount of fee deposited for issuing tender form	Rs. 1000/-
Details of money receipt No. & Date	No. _____ Dated / /2012
Signature of the person issuing the tender	
DETAILS OF TENDER FORM	
Name of the firm quoting the rates	
Registered address of the firm	
Name of the proprietor with telephone No.	
Whether manufacturer/ authorized dealer	Manufacturer/ authorized stockiest
Name of the manufacturer and address (to whom you represent)	
Details of Earnest Money (FDR / D.D./ Banker's Cheque	Amount Rs. /- No. Dated
Period for which FDR / DD / Banker's Cheque is issued	
Name of the Bank Issuing FDR / DD / Banker's Cheque	

DETAILS OF EQUIPEMENT (if space is insufficient use another sheet)

S. No.	Particulars	Quantity	Rate	Amount (Rs.)

Authorised Signatory