



खरपतवार विज्ञान अनुसंधान निदेशालय ,egkjktij] tcyiq  
Directorate of Weed Science Research, Maharajpur, Jabalpur

TENDER NOTICE NO. 1/2009-10

Sealed tenders are invited on behalf of the Director, Directorate of Weed Science Research for purchase of following equipments i.e. Spectroradiometer alongwith accessories; LC-MS/MS System; UV-VIS Spectrophotometer; Oven; Sonicator for cleaning & degassing; Cryocanes with accessories; Special door with electronic system; Passive extractor; Powered extractor; Liquid nitrogen containers; Muffle furnace; Tractor capacity 55 HP; Laser Land Leveler and Tractor Front Loader from reputed manufacturers/authorized dealers.

**Terms & conditions :-**

Tender forms with detailed specification along with the terms & conditions can be obtained from Store & Purchase Section of this Centre from dtd. **26.8.2009** on any working day between 11.00 AM to 4.00 PM on payment on non-refundable fee of Rs. 500/- (rupees five hundred only) in the form of DD/Pay Order in favour of "**ICAR UNIT - DWSR, JABALPUR**". Tender form to be purchased separately for each equipment. The tender form will be sold upto dtd. **5.9.2009** and sale will be closed sharp at 4.00 PM. The last date for receipt of complete tender form is dtd. **7.9.2009 at 2.00 PM**. The tender form received by post up to 3.00 PM on dtd. **7.9.2009** will also be accepted. The tender will be opened on dtd. **7.9.2009 at 3.00 PM** in presence of tenderers who wish to be present at the time of opening of tenders.

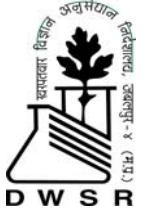
**The Director, DWSR, Jabalpur reserves the right to accept or reject any or all tenders without assigning any reason whatsoever.**

**NOTE : Details are available on DWSR Web Site [www.nrcws.org](http://www.nrcws.org)**

**Asstt. Admn. Officer**



खरपतवार विज्ञान अनुसंधान निदेशालय  
(भारतीय कृषि अनुसंधान परिषद्)  
Directorate of Weed Science Research  
(Indian Council of Agricultural Research)  
[Jabalpur] [M.P.] [India] & 482004] [M.P.] [India]  
Maharajpur, Adhartal, Jabalpur 482 004 (M.P.), INDIA



EPABX : +91-761-2353101, 2353934  
Fax : 0761 – 2353129

Gram : WEEDSCIENCE  
Email : [nrcws@sancharnet.in](mailto:nrcws@sancharnet.in)

Note : All communications must be addressed to the Director by designation

From : The Director, DWSR, Jabalpur

To,

M/s. ....

.....

.....

Dear Sir(s),

Sealed tenders are invited for supply of each the following laboratory/office equipments/items separately, on behalf of the Secretary, Indian Council of Agricultural Research (ICAR), Krishi Bhavan, New Delhi

Sl. No.	Name of the Equipment	Appox. Quantity	Required E.M.D. Rs.
01.	Spectroradio meter with accessories	One	60,000/-
02.	LC-MS/MS System	One	1,40,000/-
03.	UV/VIS Spectrophotometer	One	12000/-
04.	Oven	Three	1500/-
05.	Sonicator for cleaning and degassing	One	4000/-
06.	Cryocans with accessories	Two	2000/-
07.	Special door with electronic system	Two	3000/-
08.	Passive extractor	Four	5000/-
09.	Powered extractor	Five	7000/-
10.	Liquid Nitrogen Containers	Four	2000/-
11.	Muffle Furnace	One	1200/-
12.	Tractor capacity 55 HP	One	6000/-
13.	Laser Land Leveler	One	5000/-
14.	Tractor Front Loader	One	5600/-

Contd. ..2

**Terms & Conditions :-**

01. The original copy of the tender is to be enclosed in double cover & the inner cover should be also wax sealed. The outer cover should be mentioned that there is tender within. Right is reserved with The Director, DWSR, Jabalpur to reject all or any tender without assigning any reason and to have negotiation with the tenderers who wish to enter into negotiation proceedings (with the lowest tenderer as per rules). All tenders should be sent by registered post only. Tenders to be hand delivered should be put in the Tender Box at this Centre not later than **2.00 P.M. on dt. 7.9.2009**. Tenders received without E.M.D. amount will not be accepted. **Two bid system, that is the technical bid and the financial bid should be sealed by the bidder in separate covers duly superscribed and both these sealed covers are to be put in a bigger cover which should also be sealed and duly superscribed for the equipments item Sl.No. i.e. 01. Spectroradio meter with accessories, 02. LC-MS/MS System, 03. UV/VIS Spectrophotometer.**
02. The tenderer is being permitted to tender the consideration of the stipulations of his part that after submitting his tender, he will not resile from his offer or modify the terms & conditions thereof. In case, the tenderer fails to observe and comply with the foregoing stipulations there tender will be out rightly rejected without assigning any reason. **(A)** The tender form should accompany with E.M.D. as mentioned against each equipment/item. The E.M.D. in the form of DD/Pay Order drawn in favour of the **"ICAR UNIT - DWSR, JABALPUR"**. **(B)** The successful tenderer will be required to deposit 10% security deposit in the form of DD/Pay Order/F.D.R. of total value of the stores as soon as desired by this Centre i.e. before placing firm order for the supply of stores which will be refunded on successful completion of warranty of the equipment. **(C)** In the event of the offer made by the tenderer not being accepted, the amount of E.M.D. deposited by the tenderer will be refunded to him after he applies for the same in the manner prescribed by the Council/Centre.
03. The conditions of the supply which will govern any supply made are those contained in the general conditions of supply applicable to the supply placed by the ICAR and by the Research Institutes of the Council and the special terms & conditions detailed in the tender form and its schedules. Please submit your tender, if you are in a position to furnish the requisite services in accordance with the requirements stated in the attached schedules.
04. The schedule I & II of the tender form should be returned intact and pages should not be detached. In the event of the space provided on the schedule form being insufficient for the required purpose, additional pages numbered consecutively and signed in full by the tenderer may be attached. In such cases reference to the additional pages must be made in the tender form. If any modification of the schedule is considered necessary, it should be communicated by means of a separate letter alongwith the tender.

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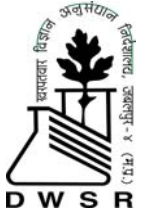
05. The tender is liable to be ignored if complete information as required is not given therein or if he is particularly asked for in the schedules to the tender or other documents connected with the contract/tender may specify whether he signs if in the capacity of (i) a sole proprietor (ii) a partner of the firm, if it be a partnership whether by virtue of the partnership in which case he must have authority to refer to arbitration of dispute concerning the business of the partnership whether by virtue of the partnership agreement or power of attorney, or (iii) constituted attorney of the firm if it is a company.
06. In case of partnership firms, where no authority to refer disputes concerning the business of the partnership has been concerned on any partner, the tender and all other related documents must be signed by every partner of the firm. A person signing the tender form or any other documents forming part of the contract on behalf of another shall be deemed to warranty that he has authority to bind such other and if, on enquiry it appears that the persons so signing have no authority to do so, the Council/Centre shall without prejudice to other civil and criminal remedies cancel the contract/supply and hold the signatory liable for all costs and damages. Each page of the tender and the schedules to the tender and annexure, if any should be signed by the tenderer(s).
07. You are at liberty to be present or to authorize a representative to be present at the opening of the tender on **dt. 7.9.2009 at 3.00 P.M.** which may please be mentioned in the tender document. Please also state the name and address of your permanent representative, if any.
08. The Council/centre does not pledge itself to accept the lowest or any tender and also reserves to itself the right of accepting the whole or any acceptance of the tender or portion of the tender. You are, however, at liberty to tender for the whole or any portion or to state in the tender that the rates quoted shall apply only if the tender is considered fully.
09. Fax/letter or any other form of communication will communicate acceptance by the Council/Centre. Formal letter of acceptance of the tender will be forwarded as soon as possible. But the earlier instruction in the fax/letter etc. should be acted upon immediately.
10. In case of any disputes arising in respect of the said tender the dispute will be solved through arbitration and the tenderers will have to abide by the decision of the arbitrator. The arbitrator will be appointed by the Director General, ICAR, Further, the tenderers will have to submit an undertaking to the effect that they shall agree to the settlements of disputes through such arbitration and they bind themselves/themselves to go by the decision of the arbitrator.
11. The selected agency shall effect the supply of above items within the period of **one month** or as specified in the supply order and no extension of time limit to this effect will be allowed. However, in case of the circumstances beyond the control of contractor, his request for the extension of time can be considered in case the competent authority to grant such extension, viz. Director, DWSR, is satisfied with the circumstances explained by the contractor in his application. The extension, if at all necessity arises, will be allowed only once and that too at the discretion of the Competent Authority.

12. The agency/Contractor shall submit his bills in triplicate after making them duly pre- receipted for the material supplied and the Council/Centre shall make payment by means of **e-payment system** drawn in favour of the Agency/Contractor. Hence Bank Account Number, Address of the Bank and IFSC code number of Bank must recorded on the body of bill.
13. **The rates so quoted must be valid for a period of at least 5 months from the date of opening of tenders.**
14. **If the rate is quoted in foreign currency, the price (FOB Value) should be quoted in the form of Proforma Invoice in the Principle's letter head. The total cost involved in Transport/Insurance/etc. up to DWSR, Jabalpur (M.P.) should also be indicated separately.**
15. All disputes will be subject to the Jabalpur jurisdiction.

DIRECTOR  
FOR AND ON BEHALF OF SECRETARY  
ICAR, KRISHI BHAWAN, NEW DELHI



**खरपतवार विज्ञान अनुसंधान निदेशालय**  
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**TENDER FORM**  
**SCHEDULE - I**

Sl.No. :  
To,

Date : .....

The Director,  
DWSR, Jabalpur

Sir,

I/We have read and understood the detailed terms & conditions of the contract and the same are acceptable to me/us.

I/We offer my/our rates as follows, which shall be firm and final during the currency of the contract.

Sl. No.	Detailed specification of the item	Qty.	Price quoted inclusive of all & full taxes
01.	<p><b>Spectroradiometer with accessories :</b> Field portable, battery operated, spectroradiometer having InGaAs detector with the following specifications :</p> <ul style="list-style-type: none"> <li>a. Spectral range-around 350 to 1900 nm or above</li> <li>b. Resolution of at least 3 to 10 nm</li> <li>c. Scanning time 100 milli seconds</li> <li>d. Modular silicon array with peltier cooled InGaAs Detector spectrometer platform</li> <li>e. Minimum 10 spectra per second data collection ability.</li> <li>f. Standard 25° field of view</li> <li>g. Fibre optic flexible cables for easy operations.</li> <li>h. Portable data collector/station with 4 GB RAM minimum 250 GB space, core 2 duo processor, 14 inches TFT, anti glare monitor &amp; additional key board and optical mouse &amp; carrying case.</li> <li>i. Windows compatible appropriate software for data Collection and post processing with real time modeling provision.</li> <li>j. Wireless Ethernet connectivity and automated data Collection.</li> <li>k. Operating temperature upto 40°C.</li> <li>l. 3 years extended warranty.</li> <li>m. Weight of equipment should be less than 6 kg.</li> <li>n. Fully Pre-calibrated. Radiometric calibration for both</li> </ul>	1 No.	

	25° FoV		
	<b>Essential Accessores</b> 1. Additional rechargeable battery for the portable spectroradiometer. 2. Tripod & Back pack carrier for field work. 3. Standard calibrated white reference panel, 5X5 Inch		

**Note : Rates must be quoted inclusive of all taxes. The Directorate does not issue any 'C' or 'D' forms.**



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Sl. No.	Detailed specification of the item	Qty.	Price quoted inclusive of all & full taxes
02.	LC-MS/MS System : Detailed Spectification is enclosed	1 No.	

**Note : Rates must be quoted inclusive of all taxes. The Directorate does not issue any 'C' or 'D' forms.**

Contd. ...

## **SPECIFICATION FOR LC-MS/MS SYSTEM**

A high performance bench top triple quadrupole LC-MS/MS system for herbicide analysis as per EU guidelines with following specification :

### **MS/MS DETECTOR**

1. LC-MS /MS should be a triple quadrupole based system in combination with the linear ion trap provision for quantitative and qualitative analysis in a single run.
2. Provision of high sensitivity full scan MS/MS and MS3 with high selectivity from true triple quadrupole ion and neutral loss scan
3. The system should be capable to trigger MS/MS and MS3 from MRM transition so that the presence and the structure of the metabolites can be confirmed at the same time on a single system.
4. Mass range from 10 da to 1500da (amu) or more.
5. Resolution should be unit mass over the entire range.
6. The mass axis stability should be  $\pm 0.1$  da over 24 hours.
7. The quadrupole should have pre and post RF ion guides.
8. The triple quadrupole analyzer should have femtogram sensitivity.
9. Highly efficient electron multiplier or photomultiplier detector.
10. The system should have electronic pressure and flow control for nebulizing gas, drying gas, auxiliary gas and collision gas.
11. The system should have +/- polarity switching time 100 millisecond or less.
12. The system should have dual stage turbo molecular pump of at least 300/400 L/s for Nitrogen.
13. The API interface should have three axis adjustment of electrospray needle.
14. The API interface should have an off-axis quadrupole ion guide and should have provision to clean the source without venting the vacuum.
15. Source should be Programmable and automatically switchable from ESI to APCI in a single run.
16. The LC flow range for ESI should be from 1 to 1000  $\mu\text{L}/\text{min}$ .
17. The ESI Needle voltage should be settable to more than 5000 V.
18. The flow range APCI approximately from 10 to 2000  $\mu\text{L}/\text{min}$ .
19. The system should have built in syringe pump and auto tune facility.
20. +ESI SIM : 50 pg reserpine S/N  $\geq 4000$  : 1, based on RMS noise.
21. +ESI MRM (MS/MS) : 50 pg reserpine S/N  $\geq 4000$ : 1, based on RMS noise.
22. Others :
  - System should be supplied with suitable low noise and vibration free gas generator to provide the gases required to operate the system.
  - The system should be supplied with easy to use control and acquisition software, and least NIST or similar library for identification of natural products, pesticides and their metabolites using MS data. The software should have new compound acceptance criteria as per latest EU directives.

### **LC System**

Liquid chromatography system should be compatible to the above MS/MS system.

1. Should consist of binary solvent manager or better, a sample manager with integral column heater and a solvent tray.
2. Provision of handling up to 2 or more chromatographic solvents and necessary wash solvents.
3. Vacuum degassing provision for each chromatographic and wash solvents.
4. Flow rate should be from 1.0  $\mu\text{L}/\text{min}$  to 2000  $\mu\text{L}/\text{min}$  (1 $\mu\text{L}/\text{min}$  increments).

Contd. ...

5. The flow accuracy should be  $\pm 1.0\%$  or less at 0.5 mL/min with methanol.
6. The Maximum pressure limit should be 9000 psi or more.
7. Integral provision of plunger seal wash.
8. Unattended operation with the provision of leak sensor.
9. Provision of automatic sampling, compatible with LC as well as MS. Two such sampling trays with vials should be provided.
10. Provision to control sample and column temperature.
11. System control via soft ware on host PC.
12. LC system should also have PDA detector.
13. Suitable licensed soft wares to run the LC system using PDA detector alone or in combination with MS/MS system.

## **DATA STATION**

Branded Computer with Dual Core processor, 3 GHz, 4 GB RAM, 160 GB HDD, Multimedia, Key Board, USB port, DVD control device, 19" TFT monitor, Mouse etc. and coloured laser printer. Windows based licensed software for data acquisition, auto calibration, quantitation and processing and complete control of LC-MS/MS system.

## **ESSENTIAL ACCESSORIES**

1. Should be supplied with Filtration kit and Sonicator, SPE unit (complete with vacuum pump).
2. SPE cartridges with carbon black, carbon/NH<sub>2</sub>, C18, C18EWP, Primary & Secondary Amine PSA in suitable formats should be supplied each 1000 pieces.
3. One kg of Bulk Primary and Secondary Amine (PSA) sorbent should be provided for sample preparation.
4. Chemelut cartridges containing hydromatrix with a high capacity for aqueous adsorption or equivalent should be supplied in suitable formats.
5. For MSPD, bulk sorbents like Bondesil C18, Bondesil NH<sub>2</sub> & Florisil each one Kg should be provided.
6. LC columns (each two) suitable for LCMS with C18, C8, Diphenyl, PFP & PAH phases should be supplied.
7. Syringe filters with nylon, Polypropylene; PVDF & PTFE material should be provided.
8. Vacelut Manifold Kit with collection racks with appropriate vacuum pump should be supplied for simultaneous processing of up to 20 SPE cartridges.
9. Columns : suitable columns required for herbicide residue analysis and analysis for natural products.
10. Good quality online UPS of 15 KVA to run the full system with at least 4 hour battery backup.

## **NOTE :**

- The firm must provide 15 days training at site, after installation, for method development and instrument usage by application specialists.
- Any other accessories and consumables required for installation and trouble free operation of LC-MS/MS system for 5 years to be quoted.
- Warrantee for 2 years and AMC for subsequent 3 Years to be quoted.
- System should be supplied with complete manuals (hard and soft copy).
- The firm should quote break up prices of individual components/items.
- The list of users in India for the quoted LC-MS/MS system should be enclosed with the tender offer.



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Sl.No. :  
To,

Date : .....

The Director,  
DWSR, Jabalpur

Sir,

I/We have read and understood the detailed terms & conditions of the contract and the same are acceptable to me/us.

I/We offer my/our rates as follows, which shall be firm and final during the currency of the contract.

Sl. No.	Detailed specification of the item	Qty.	Price quoted inclusive of all & full taxes
03.	<b>UV/VIS Spectrophotometer :</b> Detailed Specification as below	1 No.	

**Note : Rates must be quoted inclusive of all taxes. The Directorate does not issue any 'C' or 'D' forms.**

**SPECIFICATION OF UV/VIS SPECTROPHOTOMETER :**

A user-friendly bench top double beam/stable beam UV/VIS Spectrophotometer ISO 9001 certified. UV/VIS Spectrophotometer should have a PC controlled system intended for use in quantitative and qualitative analysis in biological and industrial procedures that require spectrophotometric measurements in the UV and visible region of the electromagnetic spectrum.

System should have focused micro-beam design provides a wide linear range and other specific benefits for small volumes and precious samples along with, cuvette two pairs. Spectrophotometric should have ability to control temperature of cuvette, programmable to take readings automatically at set time intervals as well as results of scans in hard disk, capacity to read volume ranging from 150 µL to 2 ml.

Display parameters : VGA graphics, LCD, methods parameters, spectra, calibration, quantification, rate and time drive curve, results etc; automatic cell positioning.

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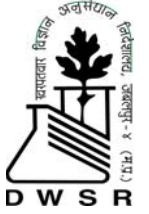
The control of the instrument, data handling, and data reduction capabilities should be contained within the confines of the PC with the frame-oriented, convenient and user- friendly software. Along with PC/printer interface, PC licensed software, 1.44 Mb Floppy disk, DVD control device, with 19" TFT monitor, Microsoft, Mouse, etc. Windows 2000 or later as the operating system, black and white laser printer, UPS with at least one hour backup to run complete system. Other specification should be as follows :

Wavelength Range	190 - 900 nm
Monochromator	Czerny – Turner technology
Light dispersion	Double
Wave length readability	0.1 nm increments
Wave length accuracy	± 0.2 nm
Wave length repeatability	± 0.2 nm
Spectra bandwidth (from 200-680 nm)	0.2 – 4.0 nm
Photometric accuracy (At 1A with NIST 930D solid filter at 546 nm)	± 0.003 nm
Stray light (measured using NaI at 220 nm per ASTM Method)	≤ 0.0005%T
Base line flatness (Abs) (from 200 – 850 nm)	±0.001
Scanning speeds	3000 nm/min
Line voltage	110 – 240V ±10%
Frequency	50/60 Hz
Power	150-250 V
Warranty : two years or more service warranty and AMC for subsequent 3 years to be quoted.	

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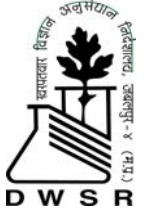
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Sl. No.	Detailed specification of the item	Qty.	Price quoted inclusive of all & full taxes
04.	<b>Oven (Hot Air Oven) :</b> 1. Size of inner chamber : 600mm W x 900mm H x 600mm D 2. No. of shelve : 3 3. Temperature range : up to 250°C 4. Temperature sensor : PT 100 5. Control system : Microprocessor based PID 6. Temperature Display : Digital 7. Temperature fluctuation $\pm 1.0^\circ\text{C}$ 8. Timer : Delay and process timers 9. Adjustable overshoot alarm and heater cut off system 10. Inner chamber material : SS 304 11. External Material : MS 12. Provision of automatic key-lock feature to prevent manipulation by unauthorized person. 13. ISI marked equipment is desirable.	3 Nos	

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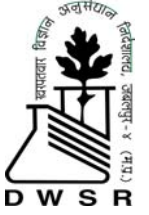
I/We offer my/our rates as follows, which shall be firm and final during the currency of the contract.

Sl. No.	Detailed specification of the item	Qty.	Price quoted inclusive of all & full taxes
05.	<b>Sonicator for cleaning &amp; degassing :</b> <ul style="list-style-type: none"><li>• Durable stainless steel tank cabinet and lid</li><li>• Capacity 1, 5, 10, 15 liters with suitable baskets</li><li>• Sandwich-type transducers to tolerate all day Continuous use</li><li>• Digital display for temperature and timer</li><li>• Non-volatile memory to maintain all setting after shut down and in the event of power loss</li><li>• Adjustable ultrasound power loss</li><li>• Built in timer can be set or timed cycles</li><li>• Adjustable heat from 20°C to 80°C in 1°C increments</li><li>• Overheat protection thermostat</li><li>• Drain port</li><li>• Suitable for degassing HPLC solvents</li><li>• Cleaners</li><li>• Pulse range 0-100%</li><li>• Power supply 230 V</li><li>• Accessories-timer, fixture for stand, sound protection box and any spares required for 3 years.</li><li>• Warranty two year or more service warranty.</li><li>• Sonicator frequency : 40 KHz</li><li>• Ultrasonic cut off at 80°C</li><li>• Heating cut off at 45°C</li><li>• Polypropylene housing</li></ul>	1 No	

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EPABX : +91-761-2353101, 2353934  
Fax : 0761 – 2353129

Gram : WEEDSCIENCE  
Email : nrcws@sancharnet.in

**TENDER FORM**  
**SCHEDULE – I**

Sl.No. :  
To,

Date : .....

The Director,  
DWSR, Jabalpur

Sir,

I/We have read and understood the detailed terms & conditions of the contract and the same are acceptable to me/us.

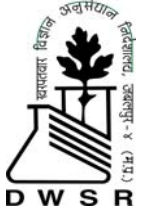
I/We offer my/our rates as follows, which shall be firm and final during the currency of the contract.

Sl. No.	Detailed specification of the item	Qty.	Price quoted inclusive of all & full taxes
06.	<b>Cryocans with accessories :</b> Size 20 ltr. Capacity : Two Nos. (with low average daily static liquid nitrogen consumption) Accessories 1. Withdrawal device (One No.) 2. Container protection for 20 ltr. Containers 3. Container : Two with long handle for 20 Ltr. 4. Suitable neck plugs for all the containers 5. Gloves : Two Pairs 6. ISO and/or with other standard international certification 7. Minimum liquid nitrogen consumption.	2 Nos	

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खरपतवार विज्ञान अनुसंधान निदेशालय  
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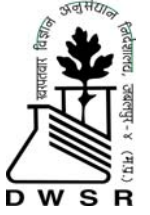
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07.	<b>Special door with electronic system :</b> Sealing doors of single panel inside of plastic, wood or other material and outer covered with SS or other suitable material used in entrance gate of quarantine lab, two in numbers of size 215 height x 115 width, interlocked with each other electronically in such a way that to open the next door, the preceding one must be closed automatically. Such door should be fitted in such a way that if insects try to escape, while the door is open, the pressure inside should suck in with negative pressure. The place between two doors should be fitted with suitable insect trapper to kill the flying insects. The doors should be fitted in the given space, commissioning and testing up to satisfactory level.	2 Nos	

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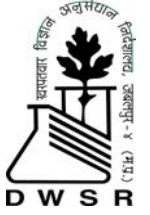
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08.	<b>Passive extractor :</b> 610 x 610 x 100 mm with disposable filter (3 Nos.) in polypropylene filter fabric with aluminium frame designed 750 cubic meters per hour at a pressure drop of 5 mm of water gauge, 95% retention over 10 micron, W 100 micron ss wire mesh screen, all mounted in a suitable housing fabricated out of 20 swg ms sheets coated, fixing in lab walls, commissioning testing and particle counting.	4 Nos	

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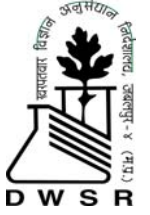
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Sl. No.	Detailed specification of the item	Qty.	Price quoted inclusive of all & full taxes
09.	<b>Powered extractor :</b> Powered extractor with 10-15 micron filter of 500 x 500 x 150 mm in polypropylene filter fabric with aluminium frame designed 750 cubic meters per hour at a pressure drop of 5 mm of water gauge, 95% retention over 10 micron, w 100 micron ss wire mesh screen, all mounted in a suitable housing fabricated out of 20 swg ms sheets coated, fixing in lab walls, commissioning testing and particle counting. Axial flow extractor with 3 phase motor with inbuilt blower 650 CFM per hour diff of 40 mm decibel, fixing, installation in lab commissioning and testing and particle counting.	5 Nos	

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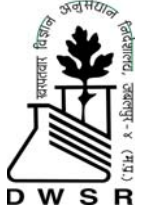
I/We offer my/our rates as follows, which shall be firm and final during the currency of the contract.

Sl. No.	Detailed specification of the item	Qty.	Price quoted inclusive of all & full taxes
10.	<b>Liquid Nitrogen Containers :</b> Size : 35 ltr. Capacity : Two Nos. 10 ltr. Capacity : One No. 5 ltr. Capacity : One No. Accessories : 1. Trolleys for 35 ltr. Containers ( Two numbers) 2. Withdrawal device (One number) 3. Container protection for 10 & 5 ltr. Containers 4. Canisters (Two with long handle for 35 litre and two with short hand for 10 & 5 ltr.) 5. Suitable neck plugs for all the containers. 6. ISO certified.	4 Nos	

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11.	<b>Muffle Furnace :</b> 1. Ceramic fibre wool insulation 2. Double walled thick outer casing 3. Heating elements backed by high temperature cerwool insulation 4. Temperature control through microprocessor based PID temperature indicator – cum – controller 5. Working temperature of 1100°C 6. Dimensions of muffle around 200 mm x 200 mm x 300 mm 7. Voltage 220 VAC 8. Digital temperature controller 9. With minimum 1 year guaranty/warranty 10. Control panel with heavy duty transformer, on/off switch, mains and heating indications, voltmeter, ammeter etc. 11. Hinged type front loading door for easy operation.	1 No.	

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Sl. No.	Detailed specification of the item	Qty.	Price quoted inclusive of all & full taxes
12.	<b>Tractor capacity 55 HP :</b> 1. No. of cylinders 3 2. Four stroke 2400 RPM 3. Power steering 4. Dual clutch 5. Hydraulic brake (oil immersed disc brake with self adjusting self equalizing) 6. Reserve torque 24% to 26% minimum 7. Lubrication system of Gear box – splash type with forced top shaft lubrication system 8. Engine cooling system coolant cool with over flow reservoir 9. Piston cooling jet spray under piston 10. Collershift type Gear box 11. Planetary type final reduction 12. Forward gear 9 13. Reverse gear 3 14. Total No. of speed 12	1 No.	

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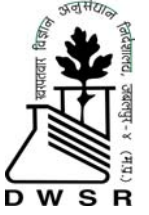
Contd. ...

Sl. No.	Detailed specification of the item	Qty.	Price quoted inclusive of all & full taxes
	<p>15. Safety system – equipped with neutral start switch having parking gear system</p> <p>16. Max. forward speed 30 to 32 km / hr</p> <p>17. Max. reverse speed 24 to 25 km / hr</p> <p>18. Electrical system battery 12 volt</p> <p>19. Alternator 40 amp.</p> <p>20. Total weight 2000 kg or above &amp; expandable upto 500 kg</p> <p>21. Turning radius 3200 to 3220 mm</p> <p>22. Feul tank capacity 65 to 70 ltrs.</p> <p>23. Ground clearance minimum 450 mm</p> <p>24. Wheel and tyre front 6.5 x 21PR Wheel Back 16.5 x 28 PR</p> <p>25. Lifting capacity 2000 kgf (Hydroulic system)</p> <p>26. Including Hitch, canopy, front weight etc.</p> <p>27. Tractor capacity 55 HP with SCV system</p> <p>28. PTO RPM – 540 @ 2376 En rpm Minimum Horse Power of P.T.O. – 51 HP</p> <p>29. Stater Motor – 2.5 KW</p> <p>30. Air Cleaner – Dry type paper filter element</p> <p>31. Bumper</p> <p>32. Draw bar</p> <p>33. Having all accessories / provision for attachment of Front end loader.</p>		

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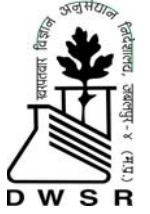
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Sl. No.	Detailed specification of the item	Qty.	Price quoted inclusive of all & full taxes
13.	<b>Laser Land Leveler : (With attachment of necessary accessories)</b> 1. Range : 2500 – 3000 ft. diameter 2. Accuracy : 1/8" 3. Coarse and fine grading selection 4. Power 12/24 VDC (Tractor Battery) operation 5. Operating temperature range : 25°C to 50°C 6. Hydraulic Power from tractor hydraulic take off 7. Trouble free operation 8. Tractor operated 9. Equiped with initial land survey components 10. Having hydraulic scrapper height controller system	1 No.	

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14.	<p><b>Tractor Front Loader : (With attachment of necessary accessories)</b></p> <ol style="list-style-type: none"> <li>1. Valve mechanism – 3D positional</li> <li>2. Effect lift height ≥ 10 feet</li> <li>1. Working depth upto – 150 mm</li> <li>2. Loader lifting capacity 900 kgs</li> <li>3. Loading 8 to 10 second</li> <li>4. Unloading 6-7 second</li> <li>5. Tractor operated</li> <li>6. Easily detachable</li> <li>7. Provision of exhchanging Loader Bucket attachments within seconds by operating a single lever, without any spanner.</li> <li>8. With fitted bucket @ 45° Dump height Base – 2700 mm Ext. – 2900 mm Maxx – 4000 mm</li> </ol> <p><b>Accessories</b></p> <ol style="list-style-type: none"> <li>1. To key for dismantling</li> <li>2. Implement and quick release</li> <li>3. Bucket position indicator</li> </ol>	1 No.	

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## SCHEDULE - II

### Part – I

- (1) Name of the Firm/Agency :
- (2) Full address with Telephone No;Fax No. :  
Post Box No; if any
- (3) Constitution of the Firm : Is the :
- Firm Registered Under ACT
- i) Indian companies act, 1956 :
- ii) Indian partnership act, 1932 :  
(Please give names of partners)
- iii) Any other act, if not the owners :
- (4) i) For partnership firms, whether :  
registered or not, registered under the  
Indian Partnership Act, 1932. Please  
State further whether by the partnership  
agreement. Authority to refer disputes  
concerning the business of the partnership  
to arbitration has been conferred on the  
partner who has signed the tender.
- ii) If answer to the above is in negative, :  
whether there is any general power of  
attorney executed by all the partners of  
the firm authorizing the partner who has  
signed the tender to refer disputes  
concerning business of the partnership  
arbitration.
- iii) If answer to (i) or (ii) above is in the :  
affirmative, please furnish a copy of either  
the partnership agreement or the general  
power or attorney as the case may be.  
The copy should be attested by a Notary  
Public or its executive should be admitted  
By affidavit of a properly stamped paper by  
all partners.
- (5) Name & full address of their agent at :  
Jabalpur, if any

Contd. ...

(6) Any other relevant information :

PART – II

Details of the Earnest Money Deposited :  
Demand Draft/Pay Order No. with date  
& Bank drawn on

PART – III

Name & address of the Firm's  
Representative and whether the  
Firm would be represented at the  
Time of opening of the tenders. :

Authorized Signatory

Date :

Place :

NOTE : Please add supplementary pages to be numbered wherever required.