



भाकृअनुप -राष्ट्रीय अजैविक स्ट्रेस प्रबंधन संस्थान
ICAR-National Institute of Abiotic Stress Management

(समतुल्य विश्वविद्यालय)/(Deemed to be University)
भारतीय कृषि अनुसंधान परिषद, कृषि अनुसंधान एवं शिक्षा विभाग
Indian Council of Agricultural Research, Department of Agricultural Research & Education
कृषि एवं किसान कल्याण मंत्रालय, भारत सरकार
Ministry Of Agriculture & Farmers Welfare, Government of India
मालेगांव, बारामती- 413 115, पुणे, महाराष्ट्र, भारत
Malegaon, Baramati- 413 115, Pune, Maharashtra, India



F. No: 4-6/2018-19

Date:16.07.2018

Notice Inviting E-Tender

The Director, ICAR-NIASM, Baramati invites e-tenders for the “SUPPLY OF LABORATORY EQUIPMENTS” through the website www.eprocure.gov.in under two bid system from reputed firms as per Schedule given below:

| Tender ID | Equipment | Start of Sale of Tender | Last date for submission of Tender | Opening of Tender |
|--------------------|--|--------------------------|------------------------------------|-------------------------|
| 2018_DARE_360729_1 | SAP FLOW SENSORS | 16-July-2018 01:00 PM | 13-Aug-2018 01:00 PM | 14-Aug-2018 03:00 PM |
| 2018_DARE_360754_1 | SOIL TENSIO METER SYSTEM | | | |
| 2018_DARE_360790_1 | TEXTURE ANALYZER | | | |
| 2018_DARE_360805_1 | UV-VIS-SPECTROPHOTOMETER | | | |
| 2018_DARE_360813_1 | SOIL MOISTURE PROBES WITH DATA LOGGER AND WIRELESS COMMUNICATION | | | |
| 2018_DARE_360820_1 | MICROSCOPE FLUORESCENT | | | |
| 2018_DARE_360828_1 | GEL DOX SYSTEM | | | |
| 2018_DARE_360837_1 | MICROSCOPE (LIGHT) | | | |
| 2018_DARE_360845_1 | VACUUM CONCENTRATOR | | | |

Sd/-

Assistant Administrative Officer

Important Notes:

1. Tender Document can be downloaded from ICAR-NIASM website www.niam.res.in or from Central Public Procurement Portal www.eprocure.gov.in. Bidders should enroll / register in the e-procurement module of Central Public Procurement Portal through the website: www.eprocure.gov.in. Bidders should also possess a valid DSC for online submission of bids.
2. Bids received on e-tendering portal only will be considered. Bids in any other form sent through sealed cover/email/post/fax/by hand etc. will be rejected.
3. ICAR-NIASM, Baramati reserves the right to accept / reject any /all tenders in part /full without assigning any reason thereof.
4. ICAR-NIASM will not be responsible for any delay in enrollment/registration as bidder or submitting/uploading the offer on e-tender portal. Hence, bidders are advised to register in e-tendering website www.eprocure.gov.in and enroll their Digital Signature Certificate and upload their quotation well in advance.
5. Any changes/corrigendum/ extension of opening date in respect of this tender shall be issued only through websites and no press notification will be issued in this regard. Bidders are therefore requested to regularly visit our website for updates.

Sd/-

Assistant Administrative Officer



भाकृअनुप -राष्ट्रीय अजैविक स्ट्रेस प्रबंधन संस्थान
ICAR-National Institute of Abiotic Stress Management

(समतुल्य विश्वविद्यालय)/(Deemed to be University)
भारतीय कृषि अनुसंधान परिषद, कृषि अनुसंधान एवं शिक्षा विभाग
Indian Council of Agricultural Research, Department of Agricultural Research & Education

कृषि एवं किसान कल्याण मंत्रालय, भारत सरकार
Ministry Of Agriculture & Farmers Welfare, Government of India

मालेगांव, बारामती- 413 115, पुणे, महाराष्ट्र, भारत
Malegaon, Baramati- 413 115, Pune, Maharashtra, India



F. No: 4-6/2018-19

Date:16.07.2018

NOTICE INVITING ONLINE TENDER FOR SUPPLY OF LABORATORY EQUIPMENTS AT ICAR-NIASM, BARAMATI (MAHARASHTRA).

THE ONLINE TENDER SHALL BE OPENED ON 14.08.2018 at 15.00 hrs

1. Name & address of the Proprietor : _____
2. Name & address of firm/address of firm : _____
3. Telephone No : Office _____
Residence _____
Mobile No _____
4. Particulars of firm/agency/company
(Partnership Deed/Constitution in case of
Society) : _____
5. P.A.N. : _____
6. GST Registration No. : _____
7. Name of Banker with full postal address : _____
8. Account No : _____
9. IFSC No : _____

10. The Bidder(s) may note that ONLINE BIDS will ONLY be accepted. All the requisite supporting documents as mentioned in the online bid document must be uploaded On-line <https://eprocure.gov.in/eprocure/app>. The Bids sent through any other mode shall not be considered and will be summarily rejected. The Demand Draft towards cost of EMD must reach this office in **original** by hand/post latest by 1.00 PM on 13.08.2018.

11. Visit us at our website: www.nism.res.in

Signature of Tenderer



भाकृअनुप -राष्ट्रीय अजैविक स्ट्रेस प्रबंधन संस्थान
ICAR-National Institute of Abiotic Stress Management

(समतुल्य विश्वविद्यालय)/(Deemed to be University)
भारतीय कृषि अनुसंधान परिषद, कृषि अनुसंधान एवं शिक्षा विभाग
Indian Council of Agricultural Research, Department of Agricultural Research & Education

कृषि एवं किसान कल्याण मंत्रालय, भारत सरकार
Ministry Of Agriculture & Farmers Welfare, Government of India

मालेगांव, बारामती- 413 115, पुणे, महाराष्ट्र, भारत
Malegaon, Baramati- 413 115, Pune, Maharashtra, India



F. No: 4-6/2018-19

Date:16.07.2018

NOTICE INVITING ONLINE TENDER FOR SUPPLY OF LABORATORY EQUIPMENTS AT ICAR-NIASM, BARAMATI (MAHARASHTRA).

1. The Director, ICAR-NIASM, Baramati invites Online bids from the reputed Companies/firms:
2. Tender for above can be downloaded free of cost from the website www.niam.res.in. The tender schedule is as under:

| | |
|--|---|
| Tender ID | Shall be notified on the website of Institute www.niam.res.in |
| Tender Reference No. | F.No.4-6/2018-19 |
| Date of release of tender through e-procurement | 16.07.2018 from 1.00 PM |
| Last date & time for submission of Online | 13.08.2018 up to 1.00 PM |
| Pre bid Meeting | 04.08.2018 on 3.00 PM |
| Date & time for opening of online Technical Bid | 14.08.2018 at 3.00 PM |
| Address for communication | The Director, ICAR- National Institute of Abiotic Stress Management, Malegaon (Kh), Baramati Pin-413 115. |

3. The Bidder(s) may note that ONLINE BIDS will ONLY be accepted. All the requisite supporting documents as mentioned in the online bid document along with duly signed Tender and scanned copies of DD of EMD must be uploaded On-line immediately. The Bids sent through FAX, E-mail, by hand and/or by post shall not be considered and will be summarily rejected.
4. The bidders may submit duly filled in and completed documents ONLINE as per instructions contained in the bidding documents. Incomplete online bid shall be rejected.
5. In case, holiday is declared by the Government on the day of opening the online bids, the online bids will be opened on the next working day at the same time. The Director, ICAR- NIASM, Baramati reserves the right to accept or reject any or all the tenders without assigning any reason(s) whatsoever.
6. The detailed instruction(s) for online submission(s) of online bid(s) through e-procurement module of Central Public Procurement of NIC, the bidder(s) may visit following link:-
<https://eprocure.gov.in/eprocure/app>

Sd/-

Assistant Administrative Officer



भाकृअनुप -राष्ट्रीय अजैविक स्ट्रेस प्रबंधन संस्थान
ICAR-National Institute of Abiotic Stress Management

(समतुल्य विश्वविद्यालय)/(Deemed to be University)
भारतीय कृषि अनुसंधान परिषद, कृषि अनुसंधान एवं शिक्षा विभाग
Indian Council of Agricultural Research, Department of Agricultural Research & Education
कृषि एवं किसान कल्याण मंत्रालय, भारत सरकार
Ministry Of Agriculture & Farmers Welfare, Government of India
मालेगांव, बारामती- 413 115, पुणे, महाराष्ट्र, भारत
Malegaon, Baramati- 413 115, Pune, Maharashtra, India



F. No: 4-6/2018-19

Date:16.07.2018

INVITATION FOR BIDS

The Director, ICAR-NIASM, Baramati invites e-tenders for the “**SUPPLY OF LABORATORY EQUIPMENTS**” for the supply of following equipment’s from manufacturers / firms/ authorized dealers of Indian/foreign manufacturers only **FOR basis**.

TECHNICAL SPECIFICATION

| Sr. No | Name of Equipment | Quantity |
|--------|--|----------|
| 1. | Sap Flow Sensors (Technical Specification as Per Annexure-1 of Tender Document) | 01 |
| 2. | Texture Analyzer (Technical Specification as Per Annexure-2 of Tender Document) | 01 |
| 3. | Microscope Fluorescent (Technical Specification as Per Annexure-3 of Tender Document) | 01 |
| 4. | Soil moisture probes with data logger and wireless communication (Technical Specification as Per Annexure-4 of Tender Document) | 01 |
| 5. | UV-Vis-Spectrophotometer (Technical Specification as Per Annexure-5 of Tender Document) | 01 |
| 6. | Microscope (Light) (Technical Specification as Per Annexure-6 of Tender Document) | 01 |
| 7. | Gel Dox System (Technical Specification as Per Annexure-7 of Tender Document) | 01 |
| 8. | Vacuum Concentrator (Technical Specification as Per Annexure-8 of Tender Document) | 01 |
| 9. | Soil Tensiometer System (Technical Specification as Per Annexure-9 of Tender Document) | 01 |

INSTRUCTION TO THE TENDERERS

The Tender shall be submitted in accordance with these instructions and any tender not confirming the instructions as under is liable to be rejected. These instructions shall form the part of the tender and contract.

1. For Online Bid Submission, as per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal (URL:<http://eprocure.gov.in/eprocure/app>). The bidders are required to submit soft

copies of their bids electronically on the CPP Portal using valid Digital Signature Certificates. More information useful for submitting online bids on the CPP Portal may be obtained at www.eprocure.gov.in/eprocure/app.

2. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal ([URL:http://eprocure.gov.in/eprocure/app](http://eprocure.gov.in/eprocure/app)) by clicking on the link "Click here to Enroll". Enrolment on the CPP Portal is free of charge.
3. The manufacturers/authorized distributors/dealers shall upload a self-declaration on their letterhead as PDF file in Cover-I of e-tender, along with the tender documents, confirming that they are regular in manufacturing/supplying of the item.
4. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/schedule and generally, they can be in PDF formats. Bid documents may be scanned with 100 dpi with black and white option.
5. A pre bid meeting will be held on 04.08.2018 at 3.00 PM. Bidders are requested to attend either themselves or through their authorised representatives to clarify any doubt relating to specifications etc.
6. The Technical Bids will be opened on 14.08.2018 at 03:00 P.M. The date & time for opening of Financial Bids will be notified on the portal. The bidders may regularly check the portal regarding the date of opening of financial bid.
7. While submitting the tender, if any of the prescribed conditions are not fulfilled or are incomplete in any form, the tender is liable to be rejected. If any Tenderer stipulates any condition of his own, such conditional tender is liable to be rejected.
8. The Director, ICAR-NIASM, reserves the right to reject any tender/bid wholly or partly without assigning any reason.
9. All the tender documents & Price Bid to be uploaded as per this tender are to be digitally signed by the bidder.
10. **Earnest Money Deposit (EMD):** An amount, **which is 2% of total value quoted rounded to nearest hundred rupees** in the form of **Demand Draft drawn in favour of "ICAR Unit NIASM" payable at Baramati**. This EMD should be submitted in sealed envelope super-scribed as **"SUPPLY OF LABORATORY EQUIPMENTS" and Name of equipment**. Failure to deposit Earnest Money will lead to rejection of tender. In the event of the awardee bidder backing out, EMD of that bidder will be forfeited. The EMD of the accepted Tender will be refunded only after on receipt of Contract Form.

Note: EMD envelop should be placed in another sealed envelope and address to: "The Director, ICAR-National Institute of Abiotic Stress Management, A/p. Malegaon Kh, Tal- Baramati, Dist-Pune-413115. This envelop having tender fee & EMD should reach on or before last date & time of submission of bid.

11. The payment shall be arranged by this Institute within reasonable period of time on production of proper Printed Invoice/Bills (3 SETS) along with ORIGINAL, DUPLICATE AND TRIPLICATE SHEET with full details with advance stamped receipt.
12. The Tender Documents are not TRANSFERABLE under any circumstances.
13. Only Courts in Pune shall have the jurisdiction over any dispute arising out of this Tender.
14. The Tenderer(s) shall furnish the complete **BANK DETAILS** for arranging payment through RTGS as per the details below:
 1. The following documents/certificates should also be furnished online:-
 - a) Certificate of registration of Firm and GST Certificate.
 - b) List of supply of Laboratory equipment/instruments executed during last three years with other Govt. organization/Institutes/Departments.
 - c) A Certificate that the firm is not blacklisted or debarred from dealing by any Government Organization/Institute/Department etc.
 - d) All documents/certificates etc. uploaded in the tender must be signed with seal by the firm.
 - e) Authorization certificate must be submitted from foreign supplier showing latest validity date.
 - f) Bank details for e-payment should be furnished as below:-

| | |
|-------------------------|--|
| ACCOUNT NAME | |
| BANK & BRANCH NAME | |
| BANK ADDRESS | |
| BANK SWIFT CODE | |
| BANK CODE NO. | |
| BANK ACCOUNT NO. | |
| 9 DIGIT (MICR) CODE NO. | |
| PAN ACCOUNT NO. | |

(PAN No. is mandatory for principal firm and their authorized dealer)

15. The last date of tender (along with EMD) etc., is 13.08.2018 up to 1.00 PM. The Online tender shall be opened on 14.08.2018 at 3.00 PM. The incomplete tender will not be considered in any case and will be rejected.
16. In case, holiday is declared by the Government on the day of opening of online bids the received proposal will be open on the next working day at the same time.

GENERAL TERMS AND CONDITIONS OF PURCHASE ENQUIRY:

1. Validity of Tender:

- a) The tender shall be valid for a period of 180 days from the date of opening of the tender.
- b) No representation for the enhancement of the prices of the accepted tender or alteration of the terms and conditions will be entertained till supplies are completed.

2. All the tenderers should give an undertaking that they would render after sales service of the equipment/machine and will supply all spares/consumable for at least 5 years from the date of installation of the same.
3. The firm qualifying technical specification may be asked to demonstrate the performance/working of the quoted model of the equipment/machinery, if needed.
4. **The tenderers should quote their rates of imported equipments/machine on FOR basis. Rates should be quoted in Indian Rupees.**
5. **PRICE:**
 - i. Price schedule must be properly filled in for each equipment based on its Foreign/Indian components/parts & related service, otherwise bid may be rejected.
 - ii. As per notification of Government of India, Ministry of Finance (Department of Revenue), Notification no. 45/2017-Central Tax (Rate) dated 14th November, 2017, this institute seeks exemption due to which GST payable will be 5% only (CGST @2.5% and SGST @2.5%)
6. **Qualification Criteria:**
 - i. The bidder firm should not be blacklisted firm any Govt. department/organization during last 5 years
 - ii. Copies of satisfactory Performance certificate for minimum last 3 years may be enclosed.
 - iii. Three purchase orders received during last 3 years for similar items with copies of purchase orders.
7. **MAKE:** You should clearly indicate the name of the manufacturers (Make) and Model along with brochure containing full specifications against each of the item.
8. **Terms of Delivery and Destination:**
 - i. Within 90 days from the date of opening of clear and acceptable Letter of Credit for imported goods/components.
 - ii. The delivery of items securely and neatly packed should be made at ICAR-NIASM, Baramati.
 - iii. **The successful tenderer shall complete supplies strictly within the accepted delivery period. Material ordered by the ICAR-NIASM, Baramati shall be delivered FOR destination securely packed as may be necessary.**
 - iv. The items shall have to be delivered and installed at ICAR-NIASM, Baramati to the satisfaction of Stores Team at ICAR-NIASM, Baramati.
 - v. Supply and Installation of equipment/ instrument has to be carried out free of charge at ICAR-NIASM, Baramati. Within 60 days from date of issuing of purchase order for Indian goods/components.

9. A valid certificate of authorization in the format enclosed with the tender from the Principal firm must be enclosed by the Indian agents/firms quoting rates on behalf of their Principal.
10. In case of imported equipment, Principal firm should give guarantee for after sales service of their equipment through their agent/authorized dealer located in India.
11. If the Indian agent is changed, it would be responsibility of the Principal firm to ensure to intimate the ICAR-NISAM office about their changed agent in India and ensure after sale service through him.
12. If handling of the equipment requires training of the lab technician/scientist, the same will have to be provided in India either at the Institute or their Indian establishment, as the case may be, free of cost.
13. The tenders received late will be rejected.
14. The Director, ICAR-NIASM, Baramati reserves right to accept/reject any or all the tenders without assigning any reasons.
15. Any tender not accompanied by Earnest Money will be straight way rejected.
16. **Performance Security:**
 - i. Within thirty (30) days, the successful tenderer shall furnish to the purchaser the Security Deposit equivalent to 5% of the purchase value.
 - ii. The Security Deposit shall be in one of the following forms: (a) Bank Guarantee, issued by a scheduled bank or a FDR/Demand Draft payable to "ICAR Unit NIASM, Baramati".
 - iii. Failure of the successful Tenderer/bidder to sign the contract and/or furnish the Security Deposit shall constitute sufficient grounds for the annulment of the award and forfeiture of the Earnest Money, in which event the Purchaser may make the award to the next lowest evaluated Tenderer or call for new tenders.
 - iv. The Security Deposit will be discharged by the purchaser and returned to the Supplier following the date of completion of the Supplier's performance obligations under the contract, including any warranty obligations after receiving agreement letter.
17. **Incidental Services:**
 - i. The supplier may be required to provide any or all of the following services, including additional services, as specified in Technical Specifications:
 - ii. Performance or supervision of on-site installation, etc. of the system. b) Furnishing of tools required for assembly and/or maintenance of the System.
 - iii. Furnishing of detailed operations and maintenance manual for each appropriate unit of system.

18. Warranty:

- i. There should be a comprehensive warranty of 24 (twenty four) months post installation and operationalisation of the equipment.
- ii. Subsequent to the period of comprehensive warranty, rate for comprehensive Annual Maintenance Contract (AMC) may also be quoted on year-to-year basis for 3 years.

19. You are also required to fulfil the following conditions and furnish the details as indicated in subsequent paragraphs.

- i. At the time of awarding the order, the purchaser reserves the right to increase or decrease the quantity of goods, without any change in the unit price or other terms & conditions.
- ii. Please indicate if you are currently registered with any Govt. organization and if registered, furnish all relevant details.
- iii. Please states whether business dealings with you presently stand banned by any Government organization and if so, furnish relevant details.
- iv. A supplier/ manufacturer shall not submit more than one quotation for the same set of goods.
- v. The supplier shall at all times indemnify the purchaser, at no cost to the purchaser, against all third party claims of infringement of patent, trademark or industrial design rights arising from the use of the goods or any part thereof, with respect to the goods quoted by the supplier in its offer.
- vi. The contract shall be governed by the laws of India and interpreted in accordance with such laws.
- vii. The Director, ICAR-NIASM, Baramati reserves the right to reject any tender in part or full without assigning any reason thereof.

20. Contract: The technically qualified vendor who is awarded the order will have to submit acceptance letter within 15 days of issue of order and will supply material within the stipulated time given in purchase order as per the quoted specifications.

Sd/-

Assistant Administrative Officer

TECHNICAL SPECIFICATION OF SAP FLOW SENSORS**Item No 1: Sap Flow Sensors****Specification:**

1. The Sap Flow Sensors/System should measure the sap flow from roots to shoot, reverse sap flow, low sap flow and zero sap flow in an effective way through varied range of stem diameters of three years old fruit crops viz. Sapota, Pomegranate, Guava, Grape etc.
2. Principle of measurement should be Heat ratio method and system should be advanced, reliable and acceptable (supported with references in high impact journals).
3. The sensor length/diameter can be used for varying stem diameters of fruit crops should be same and sensors can be easily installed in fruit trees. It should not disturb the bark of stem in fruit trees.
4. The rates should be quoted as per unit cost of sensor/sap flow meter including data logger and essential accessories i.e. tool kit for fixing sensors. The rates should also be quoted for additional sensors, data logger and accessories/spare parts if needed. Accordingly, the rates for extension cables and necessary accessories should also be quoted.
5. Data logger should have continuous logging, storing and retrieving of stored information. The data can be easily transferred from data logger to portable data analysis system (Laptop/Note pad) through USB/Micro SD card for further analysis. Sap Flow tool software will be compatible with windows 7 and above. Data logger should be portable and battery powered. Remote data/wireless downloading system to be provided with storage for unattended operation in the data logger.
6. Portable data acquisition system (Laptop/Note pad) for onsite data loading, data retrieval, transfer and processing should be supplied.
7. All the essential accessories including tool kit for fixing the sensors and data logger, carrying case should be supplied with the system.
8. The carrying case should be provided for sensors and all necessary accessories.
9. Supply for alternate source of energy like solar panel/external batteries/charger to be supplied for the system or data logger.
10. Installation, Training and Demonstration at site to be provided.
11. **Warranty:**
 - i. There should be a comprehensive warranty of 24 (twenty four) months post installation and operationalisation of the equipment.
 - ii. Subsequent to the period of comprehensive warranty, rate for comprehensive Annual Maintenance Contract (AMC) may also be quoted on year-to-year basis for 3 years.

TECHNICAL SPECIFICATION OF TEXTURE ANALYZER**Item No 2: Texture Analyzer****Specification:**

1. Force load cell capacity: About 1 to 700 kg with facility to attach fixture for testing food rheology (e.g. dough etc.). At least three load cells of 5, 100, 700 kg should be provided with equipment in a mentioned range of load cell capacity.
2. Accuracy of load cell: Minimum 0.5% of load cell capacity.
3. Force resolution: minimum 0.1 g
4. Speed accuracy: better than 0.1%
5. Speed range: about 0.01 to 20 mm/sec
6. Operating modes: Tension or Compression (measurement of force and distance)
7. Display: Inbuilt or separate display for simultaneous speed, force plots etc.
8. Position setting/travelling length/aperture: minimum 500 mm
9. Position resolution/distance resolution: minimum 0.001 mm
10. Library with wide range of programme (e.g. stress relaxation, TPA, fatigue cycling etc.)
11. Data input and output ports for data transfer (USB/RS232/Wifi/SD cards etc.)
12. Operating temperature range: approx. 0 to 40°C
13. Power supply: 220-240 V (AC)
14. Data logger and suitable software package for data analysis of parameters like firmness, hardness, compression, relaxation, plasticity, peel strength, break strength, toughness, extensibility, friction etc.
15. Probes (cylinder-1 No, Spherical-1 No, Needle- 1 No)
16. Fixtures (compression plate-1 No, Kramer Cell-1 No, Blade set -1 No.)
17. **Warranty:**
 - i. There should be a comprehensive warranty of 24 (twenty four) months post installation and operationalisation of the equipment.
 - ii. Subsequent to the period of comprehensive warranty, rate for comprehensive Annual Maintenance Contract (AMC) may also be quoted on year-to-year basis for 3 years.

TECHNICAL SPECIFICATION OF MICROSCOPE FLUORESCENT**Item No 3: Microscope Fluorescent****Specification:**

1. Research Microscope stands for Biology with transmitted light LED at least 4W illumination with long life of more than 1, 00,000 hours.
2. 3-step focus drive coarse, medium & Fine adjustment with focus torque adjustment.
3. Objective nosepiece for 6/7 or better objectives.
4. DIC turret to be available with empty DIC slots.s
5. Infinity corrected / Harmonic Corrected (HC) Optical System.
6. Universal Condenser 0.90/1.25 Oil, Colour Coded with Condenser lens & accommodation for DIC prism, Phase rings with rotatable Polarizer & analyser.
7. X/Y mechanical stage either for right hand operation or for left hand operation.
8. Trinocular phototube with beam splitter. Provision to adapt two cameras simultaneously
9. Eyepiece pair 10x/22 or better.
10. Immersion Oil - 20ml
11. Infinity corrected Objectives suitable for DIC, Phase & Fluorescence: Fluorite / Semi Apo 4x, 10x, 20x, 40x & 100x (oil). objectives should be with fluorescence or better.
12. Dust cover for the complete set.
13. Ultra high pressure Hg-Lamp, HG 100W, Fluorescence Filter turret should be at least 5-positions or more. Along with 5 or more position.
14. Neutral Density filters to control Fluorescence Intensity to be incorporated into the microscope.
15. Fluorescence zero pixel shift free filters for DAPI, FITC and TRITC with band pass.
16. High sensitive and high speed Monochromatic cooled digital camera with a CCD sensor of minimum 1.3 / 1.4 mPixel resolution. Speed shall be 22 fps or higher in full frame or better Peltier cooling shall be available. The camera should be controllable from Komet assay software.
17. Digital USB Colour digital camera for on-screen microscope image display; 2048 x 1536 with 3.1 M Pixels, Exposure time 2 m sec- 2 sec, A/D converter 10 bit, dynamic range >45dB, Max.15 frames per sec, Gain 1x - 20x, shading correction, CMOS sensor progressive scan, Pixel Size – 3.2 um x 3.2 um, Colour depth 24 bits Colour filter RGB.
18. Software should meet wide variety of multidimensional imaging requirements like multi- channel acquisition, time lapse imaging, basic analysis to capture uneven surface, feature like annotations and labeling, distance measurement, area, and perimeter.
19. A latest configuration computer system with 2 TB hard drive, core i7 processor, frequency 3.6 GHz. Or better, at least 8 GB RAM memory and Monitor 27” should be provided.
20. External Hard drive 1 TB.
21. Compatibility with comet assay procedure.
22. **Warranty:**
 - i. There should be a comprehensive warranty of 24 (twenty four) months post installation and operationalisation of the equipment.
 - ii. Subsequent to the period of comprehensive warranty, rate for comprehensive Annual Maintenance Contract (AMC) may also be quoted on year-to-year basis for 3 years.

**TECHNICAL SPECIFICATION OF SOIL MOISTURE PROBES WITH DATA LOGGER AND
WIRELESS COMMUNICATION**

Item No 4: Soil moisture probes with data logger and wireless communication

Specification:

1. The probe should have capacity to measure the soil moisture up to 1m or more soil depth. It should have high quality inbuilt/integral/mobile soil moisture sensors for measurement of soil moisture content.
2. Sensor should have the flexibility of connection and disconnection quickly and easily.
3. The probe should have the high quality connector for reliable and adaptable connectivity with wide range of cable length and connectivity options. Also should have the protective tube to cover the probe.
4. The measurement of accuracy should not be less than $\pm 0.04 \text{ m}^3\text{m}^{-3}$ or variable with a wide range of temperature.
5. **Quote with the following essential accessories.**
 - High quality and durable fiber glass tube for installation in augured hole including tube caps.
 - The display unit/moisture meter should be compatible with probe and have high quality connector for sensor or PC connection, connector cap, software (data collection software and manuals disk), battery and cable assembly.
 - Augur kit of suitable diameter for access tube installation up to 1 m or more. It should also include access tube insertion, stabilization plate, and access tube insertion rod.
 - Quote for compatible field data recording device/system with adequate storage facilities and latest configuration.
 - Company should have adequate infrastructure for service and repair of the instruments.

Quote along with user list, manual for user application, warranty and all other accessories required for the successful install, demonstration and running of the unit.

6. Warranty:

- i. There should be a comprehensive warranty of 24 (twenty four) months post installation and operationalisation of the equipment.
- ii. Subsequent to the period of comprehensive warranty, rate for comprehensive Annual Maintenance Contract (AMC) may also be quoted on year-to-year basis for 3 years.

TECHNICAL SPECIFICATION OF UV-VIS-SPECTROPHOTOMETER**Item No 5: UV-Vis-Spectrophotometer****Specification:**

1. Double beam optical system.
2. Differential grating monochromator (ranged between 1100 to 1250 grooves/nm)
3. Light path through sample: 10 mm (standard)
4. Spectral bandwidth: 1nm
5. Wavelength range: 190–1100nm (0.1nm increment)
6. Wavelength accuracy: ± 0.3 nm
7. Wavelength repeatability: ± 0.1 nm
8. Photometric modes T, A, and conc. measurement.
9. System self-testing (wavelength, light sources, etc.)
10. Light sources: Tungsten-Halogen & Deuterium.
11. Screen touch color display.
12. Provision to connect PC for inter communication.
13. Separate data logger for interpretation with standard software package.
14. Signal output USB & Printer Port.
15. Detectors- minimum 2 silicon photodiodes.
16. Storage function 128 standard curves.
17. Power requirement (110/200VAC).
18. Accessories (one additional spare of Tungsten-Halogen & Deuterium light sources should supplied separately).
19. Equipment should be CE compliance.
20. **Warranty:**
 - i. There should be a comprehensive warranty of 24 (twenty four) months post installation and operationalisation of the equipment.
 - ii. Subsequent to the period of comprehensive warranty, rate for comprehensive Annual Maintenance Contract (AMC) may also be quoted on year-to-year basis for 3 years.

TECHNICAL SPECIFICATION OF MICROSCOPE (LIGHT)**Item No 6: Microscope (Light)****Specification:**

1. **Type:** Motorised upright microscope facilitated with Bright field, Phase contrast & upgradable for fluorescence.
2. **Light source:** Transmitted pre-centered LED illuminator LED at least 5W illumination with long life of 50,000 hours or better.
3. **Eyepiece:** Paired wide-field eyepiece 10X with minimum 22mm FOV, eyepiece 12.5x with minimum 16mm FOV, eyepiece 16x with minimum 14 mm FOV and spacer rings if required.
4. **Objectives:** Automated objective turret fluorite/Semi Apochromatic objectives 1.25x, 2.5x, 4x, 10X phase, 20x phase, 40X phase and 100x phase oil objective. All objectives shall be suitable for fluorescence as well.
5. **Observation tube:** Trinocular tube, for selection of light path for 100%:0 & 50%:50% observation.
6. **Revolving nosepiece:** Interchangeable six-fold revolving motorized nosepiece with DIC and analyser slot.
7. **Condenser:** Universal automated condenser with automated switchable condenser top for Bright field, phase, polarised and DIC applications.
8. **Mechanical stage:** Rectangular XY stage with slide holder suitable for analysis of thick tissue specimen.
9. **Camera:** Scientific (dedicated for microscopy) Digital HD CMOS Camera, with High definition & Resolution 10 mp, with a provision for software interpolation, 1/2" scan with software kit, color filter RGB, 30 fps with full HD. Fire wire/USB connection to PC. Upgradable to other s/w modules. Preview images on an HD monitor, Projector, Saving directly on SD card & SD card provided.
10. **Software:** Imaging system automatically upgraded software that allows quantification of distance between two points and related morphometric measurements and intensity measurements, contrast and other adjustments. Microscope, camera and software should be provided from single manufacturer. Please enclose the compliance statement.
11. **Computer:** A high end computer with 21 inch monitor should be supplied for offline image analysis and loading of software. All necessary image editing software's are required.
12. **Warranty:**
 - i. There should be a comprehensive warranty of 24 (twenty four) months post installation and operationalisation of the equipment.
 - ii. Subsequent to the period of comprehensive warranty, rate for comprehensive Annual Maintenance Contract (AMC) may also be quoted on year-to-year basis for 3 years.
13. **Technical document:** Vendor should supply all the required technical document in support of their compliance sheet.

TECHNICAL SPECIFICATION OF GEL DOX SYSTEM**Item No 7: Gel Dox System****Specification:**

1. A Gel-Dox system with imaging software able to provide automated and reproducible results for image acquisitions and analysis.
2. It should be able to autofocus at any required zoom levels to get a quality image.
3. It is able to provide publication ready image without any further manipulation.
4. Software should have options for image analysis.
5. It should be able to image protein and DNA gel imaging for stain free and dyed gels.
6. It should have options for colony counting.
7. It should be able to image film and 2-D protein gel and their analysis.
8. All of the accessories related to user safety must be supplied with the system.
9. High end computer with a 27" screen should be supplied for loading software and image analysis.
10. **Warranty:**
 - i. There should be a comprehensive warranty of 24 (twenty four) months post installation and operationalisation of the equipment.
 - ii. Subsequent to the period of comprehensive warranty, rate for comprehensive Annual Maintenance Contract (AMC) may also be quoted on year-to-year basis for 3 years.

TECHNICAL SPECIFICATION OF VACUUM CONCENTRATOR**Item No 8: Vacuum Concentrator****Specification:**

A Computer controlled gel documentation system able to imaging DNA, RNA, Protein gels and Bacterial colonies

1. It Should have motorized zoom lens.
2. System should have at least **10-position filter wheel** with emission filter for ethidium bromide, Gel Red, Gel Green, SYPRO Ruby, etc.
3. The dark room with full slide out UV trans illuminator on pull-out rails for comfortable work.
4. UV safety shutoff with widely accessible door to handle gels while placing or moving gels on trans illuminator table.
5. Trans illuminator should have **super-bright technology** so as to have publication quality gel image with no visible UV tube background noise.
6. Scientific grade, zero defect **CX5 camera** with native image resolution of **5 megapixels and image resolution of 20 megapixels or better is required.**
7. System should be capable of producing **16-bit – 65,536 grey levels.**
8. **USB 3.0 interface** for faster image transfer will be an advantage.
9. Field of imaging must be at least 26 x 21 cms.
10. Should allow upgrade in future for imaging colorimetric/protein gels and gels with DNA tagged with various visible fluorescent dyes, like, FAM, FITC, etc.
11. System should have analysis software for image enhancement; image analysis includes molecular weight calculation, band quantification, distance calculation, 3D dynamic scan.
12. **App Studio**, library of imaging protocols for quick access is a must.
13. Software must have advanced imaging parameter setting possibilities including background subtraction, flat fielding, pseudo-color representation, saturation evaluation and its indication, etc.
14. System must be supplied with high end branded desktop (27 Inch screen) computer and multi user licensed software.
15. All the required technical document in support of specification should be submitted.
16. **Warranty:**
 - i. There should be a comprehensive warranty of 24 (twenty four) months post installation and operationalisation of the equipment.
 - ii. Subsequent to the period of comprehensive warranty, rate for comprehensive Annual Maintenance Contract (AMC) may also be quoted on year-to-year basis for 3 years.

TECHNICAL SPECIFICATION OF SOIL TENSIO METER SYSTEM**Item No 9: Soil Tensiometer System****Specification:**

1. Tensiometer tubes: UV resistant plastic tubes.
 - 15 cm depth
 - 30 cm depth
 - 45 cm depth
 - 60 cm depth
 - 75 cm depth
2. Computer gauge: for reading and storing soil moisture tension readings from all tubes.
 - Measuring unit: KPa
 - Measuring range: 0-100 Kpa.
 - Accuracy :<=1 %
 - Portable and battery operated.
 - Display: LCD which displays Date, Time, Tube Number and reading in kPa.
 - Software: Software which is compatible with Windows 7 and above for downloading readings and easily plotting graphs on computer.
3. Accessories:
 - Auger for installing tensiometer tubes in soil.
4. **Warranty:**
 - i. There should be a comprehensive warranty of 24 (twenty four) months post installation and operationalisation of the equipment.
 - ii. Subsequent to the period of comprehensive warranty, rate for comprehensive Annual Maintenance Contract (AMC) may also be quoted on year-to-year basis for 3 years.

Online Bid Submission Details**Online Bid Submission:**

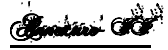
The Online bids (complete in all respect) must be uploaded online in Two Covers as explained below:-

| COVER - I (Following documents to be provided as PDF file) | | | |
|---|------------------|--|-------------------|
| Sl. No. | Documents | Content | File types |
| 1 | Technical Bid | Scan copy of PAN and GST Registration | .PDF |
| 2 | | Scan copy of Earnest Money Deposit by way of Demand Draft | .PDF |
| 3 | | Scan copy of certificate for EMD exemption, if claiming. | .PDF |
| 4 | | Certificate that the firm is not black-listed or debarred from dealing by any Govt. organization/Institute/Department etc. | .PDF |
| 5 | | Department/organization/Institute to whom the Firm is having supplies of similar item to other organization(s), if any (attach copies) | .PDF |
| 6 | | Scan copy of Authorization letter | .PDF |
| 7 | | Undertaking regarding after sale repair up to 5 years | .PDF |
| 8 | | Technical literature/brochure (Original copy) etc. of the equipment/machinery offered by the firm | .PDF |
| 9 | | Scan copy of self-declaration that all the terms and condition of contract is acceptable | .PDF |
| 10 | | Compliance sheet for technical specification | .PDF |
| 11 | | Self-declaration in letter-head that they are regular in manufacturing/supplying of the item | .PDF |
| COVER - II | | | |
| 1 | Financial Bid | Price bid (BOQ) to be filled in Excel format | .XLS |

All the documents has to be digitally signed by the bidder.

Sd/-

Assistant Administrative Officer



Format for Financial Bid

Please refer to the Bidding Document for the CP Project