# BIDHAN CHANDRA KRISHI VISWAVIDYALAYA

Department of Plant Pathology, Faculty of Agriculture P.O. Krishi Viswavidyalaya, Mohanpur-741252, Nadia, West Bengal

Dr. J. Saha, AssociateProfessor, and Principal Investigator, RIDF projectEmail: sahaiavanta100@gmail.com



P.O. Krishi Viswavidyalaya Mohanpur-741252, Nadia, West Bengal

Date: 30.10.2019

## Ref. No. BCKV/RIDF/Biocon/08/19

# **Notice Inviting E-Tender**

The Principal Investigator, RIDF project "Establishment of a Center for Biological Control, Department of Plant Pathology, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur is inviting e-tender from competent and bona-fide manufacturers,authorized distributors/ dealers/ agents having registration of GST for supply of following items to University as per specifications appended against each item. E-Tenders published for the following items in Tender ID Nos. 2017\_BCKV\_121876\_1 dated 28.07.2017 (Trinocular Stereo Zoom Microscope); 2017\_BCKV\_121874\_1 dated 28.07.2017 (Plant Growth Chamber); 2017\_BCKV\_121877\_1 dated 28.07.2017 (Phase Contrast Microscope); 2017\_BCKV\_140381\_1 dated 27.11.2017 (Refrigerated Centrifuge) & 2018\_BCKV\_157187\_1 dated 20.02.2018 (UV-Visible Spectrophotometer) are cancelled.

(i) Preparation of Bids: - The tenders should be submitted under two-bid system (i.e. Technical bid and Financial bid).

(ii) Submission of e-tender: - The tender shall be submitted on line within 02.01.2020 upto 6.00 P.M. Technical Quotations may also be submitted separately for each item by sealed envelope mentioning name of the item on top of the envelope to the below-mentioned address.

(iii)Opening of the tender: - The technical bid will be opened by the Central Tender Committee, BCKV duly constituted for this purpose. After scrutinizing,the financial offer/bid of technically qualified vendors will be opened.

(iv) Prices: - The prices, **in INR** only, of items must be quoted net per unit (including all taxes and duties, installation charges, if any etc.). However, University will provide valid DSIR. Quotation must include all essential accessories (as mentioned for each item).Without essential accessories tender will be considered as incomplete. Quoted price must be inclusive of installation, extended warranty of two years beyond standard manufacturers' warranty. Quoted rates must be FOR DESTINATION (including packing, insurance and delivery charges up to the laboratory at BCKV, Mohanpur) with satisfactory installation and demonstration.**Payment will be made after installation and demonstration.No advance payment will be allowed.** 

(v) EMD: - Vendors are required to pay the requisite amount (in INR) as EMD in Bank draft as specified against each equipment/goods individually. Scan copy of the requisite draft must be uploaded as the supporting document for each item during submission of e-tender. Original Bank draft need not be submitted with the tender document.Without EMD quotations will not be considered for technical or financial comparison. Amount of EMD for each instrument is mentioned specification & condition of the respective instrument. Draft must be in favour of 'Bidhan Chandra Krishi Viswavidyalaya' payable at Kalyani (IFSC: SBIN0001082). However, bidders are requested not to send the original DRAFT during tendering process.

(vi) Supporting documents:-

(a) Bid papers should accompany authorization certificate from original manufacturer, trade license, GST registration, etc;

(b) Scan copy (self attested) of the original supporting document in favour of the specification-claim for each item must have to be uploaded separately;

(c) Scan copy of supporting document of assured after sales services in Eastern India and availability of spare parts need to be uploaded.

Price bid of the vendors will be compared only if technical specificity as appended against each item is fulfilled. The Viswavidyalaya authorityreserves the right to accept or reject any tender without showing any reason.

Dr. J. Saha, AssociateProfessor, Department of Plant Pathology Faculty of Agriculture, Bidhan Chandra Krishi Viswavidyalaya and Principal Investigator, RIDF project Email: <u>sahajayanta100@gmail.com</u> Mobile: 09433164218

# List of Items with specifications:

## Laboratory Instruments: See separate sheet attached.

Item No: BIOCON/02: Microprocessor Controlled Plant Growth Chamber Item No: BIOCON /03: Refrigerated Centrifuge Item No: BIOCON /04: Trinocular Phase Contrast Microscope with Photographic Attachment Item No: BIOCON /05: Trinocular Stereo Zoom Microscope with Photographic Attachment Item No: BIOCON /07: Double Beam UV-Visible Spectrophotometer

**DETAIL SPECIFICATIONS ARE AVAILABLE ON E-PROCUREMENT SYSTEM OF GOVT. OF WB** (<u>http://wbtenders.gov.in</u>). Tender IDs: 2019\_BCKV\_260325\_1 to 2019\_BCKV\_260329\_1;

## MICROPROCESSOR CONTROLLED PLANT GROWTH CHAMBER WITH TEMPERATURE, LIGHT & HUMIDITY CONTROL OPERATED ON 220V/50Hz, CFC FREE REFRIGERATION SYSTEM.

## **Technical Specifications**

Growth chamber volume: GMP, ISO & CE Certifiedat least 1000 L or more to be installed inside a room with double door to be used in microbiological and biological processes.

Temperature range:  $5^{\circ}$ C- $50^{\circ}$ C with fluctuation not more than  $\pm 0.5^{\circ}$ C

Humidity: 50-95% RH (at 20-35°C) ±3% (at 60%)

Illumination range 0 to 35000 lux or higher with control of 10 steps or more.

The system should have minimum FL lamps 32W X 16nos or higher to achieve the desired illumination.

Microprocessor PID controller, Temperature calibration and automatic tuning. The Temperature, humidity, and illumination profiles repeatable steps more than 900 cycles for long continuous operation. Designed to exhaust heated air through upper vent holes.

Stable and long lasting lighting through introduction of high frequency electronic ballast lamps

Water level check indicated by water level bar in the tank.

Water supply during operation must be there for long term test purposes.

Detachable condenser air filter.

Casters wheel for easy mobility during installation or relocation.

Automatic alarm.

Low and empty water level alarm.

Power supply leakage breaker.

Inner ChamberMaterial: Stainless steel 304 Grades

Exterior Construction: Stainless Steel 304 Grades

Inner door: Tempered safety glass with Silicone Packing

Glass Shelves: minimum10nos

Refrigeration: minimum <sup>3</sup>/<sub>4</sub> H.P.

Temp. Heater Power(w): minimum 1500W x 2EA

10 nos 32W FL lamps and 2 nos 400W metallamps as extra

10 KVA online UPS as alternative power source.

LUX and humidity measurement instrument for periodic checking.

## **Other conditions**

The system should be quoted with 2 years non-comprehensive AMC after expiry of standard warranty of 1 year.

List of reputed users with certificates from the users.

Must have post sales local service back up facilities so that problem could be attended within 48 hours (documents to be attached)

## **REFRIGERATED CENTRIFUGE**

## **Refrigerated centrifuge with multiple rotors**

## **Technical Specifications**

Must be a Powerful machine so that reaching maximum speed within 8 seconds Maximum speed with 50 ml rotor at least 15000 rpm or higher Temp. range: -20°C to +35°C Machine should be capable of Angle rotor Swing-out Rotor Vertical Rotor Microplate rotor System should be completed with rotor suitable for 1.5/2ml, 50 ml and 15ml conical tubes 100nos 50ml, 100nos 15 ml and 100 nos 1.5/2.0 conical tubes as extra. Large digital display with ergonomic slopping for easy reading Microprocessor system with provision to display total operation time of machine The run time should be started only after reaching to the set speed to use actual runtime. Maximum capacity at least 1 liter or more.10 KVA UPS as alternative power source

## **Other conditions**

The system should be quoted with 2 years non-comprehensive AMC after expiry of standard warranty of 1 year.

List of reputed users preferably with certificates from the users.

Must have post sales local service back up facilities so that problem could be attended within 48 hours (documents to be attached)

## TRINOCULAR PHASE CONTRAST MICROSCOPE WITH PHOTOGRAPHIC ATTACHMENT

## **Technical Specifications**

## Upright wide field research microscope for bright field, dark field, phase contrast, DIC.

Large heavy rugged stand for longevity, highest stability and vibration free work.

The microscope for BF, DF, Phase, Polarization optical DIC(for plastic dishes also), Fluorescence

Transmitted light halogen illumination, 10 nos. extra halogen lamps as spares

Transmitted light filter holding capacity: 6 nos on wheel 2 nos on slider

Encoded 6x or higher nosepiece

Trinocularphototube with field of view minimum 22mm or higher.

5x,10x,20x,40x,100x objectives. 10x, 40x, 100x with phase and 20x and 40x with DIC.

Intensity regulator and focusing knob should be placed side by side, accessible from both side and can be controlled each of them without moving the hand position for better ergonomic and continuous observation without moving away from eye piece.

Completed with dust cover and dust protection arrangement from manufacturer.

Microscope should be upgradable for 4-channel LED fluorescence with facility for precise control of individual channel and with LCD display for continuous brightness adjustment, switching of LEDs<300microsecond

Dedicated photographic attachment of high resolution microscopy camera of 8Mpixel, 4K with driver software and accessories, capture button along withhigh definition full 4K resolution LED monitor 20" for live demonstration, with necessary attachments including data storage devices, remote control shutter system. Alternative power backup system (2KVA) of APC/Emersion

Camera and microscope should be from same manufacturer to store all microscope data on image including scale bar.

Latest full version Image analyzing, user friendly soft ware

Immersion oil 250ml for viewing with 100x objective

Spare LED lamps : 06 nos.

## Other conditions

Microscope should be quoted with 2 years non-comprehensive AMC after expiry of standard warranty of 1 year.

List of reputed users with certificates from the users.

Must have post sales local service back up facilities so that problem could be attended within 48 hours (documents to be attached)

## TRINOCULAR STEREO ZOOM MICROSCOPE WITH PHOTOGRAPHIC ATTACHMENT

## **Technical Specifications**

#### Stereo Zoom microscope with photographic attachment

Apochromatic stereo zoom microscopy system for Macro, Dark Field and Fluorescence

Telescopic apochromatic optical system with apochromatically corrected lenses with minimum stereoscopic base of 24 mm or higher. Aperture 0.116.

Zoom ratio 8:1. Total magnification Minimum 80x with full object field diameter with 1x and 2x Plan Achromatic objective and 10x evepiece.

Minimum of working distance 80 mm at maximum zoom with 1X objective and 10X eye piece with object field diameter around 23 mm or higher and depth of the field of 70 micron. However preference will be given to higher field of view. Stand base and stand should be capable of taking motorized focus system.

Stand base and stand should be capable of taking motorized focus system.

Minimum resolution of 340 lp/mm or higher (1X objective and 10X eyepiece)

The transmitted light base should accommodate 6"x4" plate and allow full movement of the said plate on top of the

transmitted light accessories. There should be provision for transmitted light polarization contrast facility.

Minimum 150 watt Cold light source and goose neck (two) light guide and ring light, coaxial light should be available. Other perfocal objectives such as 1.5x, 3.2x or 2.5x to be quoted.

Minimum 3position objective revolver should be included in the system.

Completed with dust cover and dust protection arrangement from manufacturer.

Dedicated photographic attachment of high resolution (min 5 mp), high definition LED monitor 20" for

live demonstration, with necessary attachments including data storage devices, remote control shutter system.

Image analyzing, user friendly soft ware latest full version

Alternative power backup system (2KVA) of APC/Emersion

## **Other conditions**

Microscope should be quoted with 2 years non-comprehensive AMC after expiry of standard warranty of 1 year.

List of reputed users with certificates from the users.

Must have post sales local service back up facilities so that problem could be attended within 48 hours (documents to be attached)

#### DOUBLE BEAM UV VISIBLE SPECTROPHOTOMETER

## **Technical Specifications**

### Spectrum analyser (wave length).

Measuring of optical density converted to electrical measurement in millivolt.

Optical system	: Double Beam
Monochromator	: Seya – NamiokaMonochromator
Wavelength range	: 190 to 1100 nm
Spectral bandpass	: 1. 5nm
Stray light	: 0.05% or less (220 nm for Nal, 340 nm for NaNO2)
Wavelength accuracy	: ±0.3 nm ( at 656.1, 486.0nm)
Wavelength setting repeatability : +/-0.1 nm	
Photometric mode	: ABS, CONC, %T
Photometric range	: - 3 to 3 Abs / 0 to 300% T
Photometric accuracy	$\pm 0.002$ Abs ( 0 to 0.5 Abs), $\pm 0.004$ Abs (0.5 to 1.0 Abs)
(certified according to NIST SRM 930) $\pm 0.008$ Abs (1.0 to 2.0 Abs), $\pm 0.3\%$ T	
Photometric repeatability)	$\pm 0.001$ Abs (0 to 0.5 Abs), $\pm 0.002$ Abs (0.5 to 1.0 Abs), (certified
according to NIST SRM 930) $\pm$ 0.004 Abs (1.0 to 2.0 Abs), $\pm$ 0.1% T	
Baseline flatness	$\pm 0.0006$ Abs (within 200 to 950 nm)
Baseline stability	: 0.0003 Abs/hr (at 500 nm, 2 hours after power on)
Response	: fast, standard, slow
Wavelength scan speed: 10, 100, 200, 400, 800, 1200, 2400, 3600 nm/min	
Light source	: Deuterium Lamp, Tungsten Iodide Lamp
Light source changeover	: Automatic switchover interlocked with wavelength.
Sample Compartment	: Beam Spacing – 100nm
Detector	: Silicon photodiode
Display	: 26.4 cm (10.4 inches) colour LCD display with backlight
Noise level	: ± 0.00015 Abs (at 500 nm)
Printer I/F	: Centronics interface
Serial I/F	: RS-232C (exclusive for UV solutions program)
Dimensions	: 500(W) x 605(D) x 283(H) mm (with LCD lowered)
GLP/GMP Complied.	
UPS 2.0 KVA	

#### **Other conditions**

The system should be quoted with 2 years non-comprehensive AMC after expiry of standard warranty of

1 year.

List of reputed users preferably with certificates from the users.

Must have post sales local service back up facilities so that problem could be attended within 48 hours

(documents to be attached)