



**Bidhan Chandra Krishi Viswavidyalaya**  
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Ref. No. RRSS/CH-18/ RIDF

Dated : 14.03.2018

Ref. e- Tender ID: 2018\_BCKV\_163644\_1

**Notice Inviting e- Tender**

Principal Investigator, Promotion of improved technology .....reference to High yielding and Hybrid Rice Project -- RIDF, is inviting e-tender from competent and *bonafide* vendors/ parties/ distributors/ dealers/agents/ manufacturers having registration of GST for supply of following item to University **within 23.03.2018 upto 6.00 pm** as per specifications appended below.

i) Preparation of bids: the tender should be submitted under two bid system (i.e. technical and financial bid) with validity for a period of 2 (two) months.

ii) Submission of e-tender: the tender shall be submitted on line **within 23.03.2018 upto 6.00 pm**.

iii) Technical bids will be evaluated by the PI and the Co PIs of the project and the financial bids will be opened of those bidders who qualified for technical bids.

iv) Price: The price Equipments should be quoted in INR & net per unit (including taxes and duties, etc). bidders must stipulates the delivery period of the same .

v) EMD: Vendors are required to pay the requisite amount of Rs.5000 (Rupees five thousand) only as EMD draft as specified against their quotation. Scanned copy of the demand draft must be uploaded as supporting document during submission of e-tender. Without EMD quotations bids will not be considered for technical of financial comparison. Draft must be in favour of 'Bidhan Chandra Krishi Viswavidyalaya' payable at Kalyani (IFSC: SBIN0001082). EMD exemption certificate must be attached, if any.

vi) Supporting documents:

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

b) Scanned copy (self attested) of the original supporting document in favour of the specification – claim for each items must have to be uploaded separately

c) User list along with certificate from reputed users also need to be uploaded

d) Scanned copy of supporting document of assured after sale service in Eastern India needs to be uploaded

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

Prof. Sukanta Pal  
RIDF, RRSS Chakdaha, BCKV-741222

### Specification of the Item

S. No	Instrument	Specifications	Quantity
1.	BOD Incubator	Capacity 200 l	1
2.	Digital pH meter	Range 0-14 pH within accuracy of $\pm 0.05$ pH, complete with combination electrode	1
3.	Electronic Weighing balance	Weighing capacity upto 10 gm and precision upto 4 digits	1
4.	Seed germinator (Single chamber)	5-60 <sup>0</sup> C, 70 x 550 x 875 mm (280 l)	1
6.	Double Distillation unit	BOROSIL made 2 l/ hr capacity	1
7.	Portable Heat Sealer	-	1
8.	Vernier Caliper Digital	Measurement: 0.1 mm to 10 cm, Weight less than 200g, data storage card system	1
9.	Digital refracto meter	Refractive index (nD) : 1.32422 to 1.58000 Brix : 0.000 to 100.000% (5- 75 <sup>0</sup> C ATC)	1
10.	Digital pocket scale	500 g -0.01 g	1
11.	Portable vacume emasculator for rice	Portable/ stationary Vaccum operated rice emasculator	1
12.	Magnetic Hotplate Stirrers	LED display for precise monitoring of temperature t A wide speed range of 0 to 1500rpm t Max. Heating plate temperature 550 <sup>0</sup> C t External temperature control is possible by connecting the temperature sensor(PT 1000) with accuracy at $\pm 0.2^{\circ}\text{C}$ t The “HOT” warning will flash when the work plate temperature is above 50 <sup>0</sup> C even the hotplate is turned off	1
13.	Photoelectric Colorimeter	Wave length range: 400-700 nm with 8 optical filters Filters peak wavelength: 420 nm, 440 nm, 490 nm, 520 nm, 540 nm, 570 nm, 600 nm, 700 nm Measuring Mode: % T, Abs, Conc & K factor Photometric Resolution: 0.1 % T, 0.001 Abs up to 1.999 Abs (O.D.) Display: 2 line 16 character LCD K factor range: 0 to 1999 Concentration: 0 to 2 times the absorbance Sample Volume: 1 ml in 4 ml test tube	1

		<p>Source: White LED          Detector: Hermetically sealed photodiode          Printer port: Epson compatible 80 column D.M. Printer          Accessories: Four test tubes, two glass cuvettes</p>	
14.	Water Bath	<p>Temperature Range: -20 to 100°C          Bath Volume: 5 Lit Heater Capacity: 2000 watts Cooling Capacity @ 20 o C: 300 watts Pump Type: force Flow Rate max: 12 Lit / min Pump Pressure: 300 mbar Bath opening ( w x d x h): 13 x 12 x 15 cms Overall dimensions ( w x d x h): 25 x 45 x 62.5 cms Supply voltage: 230 / 50 Volts / Hz Recommended bath liquid 5 to 40°C -- Distilled Water -20 to 40°C -- Water with Antifreeze In applications below 5°C the water has to be mixed with an antifreeze. In doing so, the amountof antifreeze added should cover a temperature range 5°C lower (but max -20°C) than theoperating temperature of the particular application. This will prevent the water from gelling(freezing) in the area of the evaporating coil the surface area of which is much colder than the working temperature. An excess of antifreeze deteriorates the temperature accuracy due to its high viscosity. Filling with heat transfer liquid: Filling level of the interior bath: max. up to 2.0 cm below the cover plate, When working with water or water with antifreeze or with oil below ambient temperature: The filling level should be 2 cm below the deck plate.</p>	1
15.	Cooling Centrifuge		1
16.	Hand Held photosynthetic system	<p><b>Main Unit</b></p> <p><b>Main Unit:</b> On board IRGA for CO2 Analysis,          H<sub>2</sub>O Analysis with humidity sensor capacitor,          Flow Control, Pump, Display and Key Board,</p>	1

Leaf Chamber attachment ports and Battery.  
 Display: LCD 40 x 6 characters or 320 x 64 pixel  
 Data Storage: 4 MB Internal FLASH RAM  
 Data Output: USB  
 Flow Rate: 100 ~ 1000 cm<sup>2</sup> / min  
 Operating Temperature: 0-45° C  
 Operating RH: 0-90% non-condensing  
 Power Supply: 7.2 VDC, 4400 mAh for 5 hours continuous use, extended hours of use with additional batteries.  
 AC Adapter / Battery Charger supplied.  
 Weight: 1.5 Kg (3 Lbs) with Battery  
 Dimensions: 44 cm x 5.5 cm x 5 cm

**CO2 Analyzer**

Sensor: Low power Non-Dispersive Infrared Gas Analyzer  
 Chopping Frequency: 1Hz  
 Sensors Response Time: 35 seconds  
 Source Life: 5,000 hours  
 Measuring Range: 0 to 2000 ppm (Standard) - 0 to 3000 ppm (Optional)  
 Resolution: 0.1ppm  
 Repeatability: ±0.1 ppm (short term)  
 Accuracy: < ± 2% up to 2000 ppm  
 Sample Cell: 100 mm x 10.2 mm (3.94" L x 0.40" Dia)

**H<sub>2</sub>O Analyzer**

Sensor Type: Humidity Sensitive Capacitor  
 Stability: Stable  
 Analyzer for accurate H<sub>2</sub>O measurements

		<p>Measuring Range: 0 to 100%</p> <p>Resolution: 0.1%</p> <p>Accuracy: <math>\pm 2\%</math> at 10% RH, <math>\pm 3.5\%</math> at 95% RH</p> <p><b>PAR Measurement</b></p> <p>Sensor Type: Filtered GaAsP - Photodiode</p> <p>Measuring Range: 0 ~ 2500 <math>\mu\text{mol m}^{-2}\text{s}^{-1}</math></p> <p>Accuracy: <math>\pm 5 \mu\text{mol m}^{-2} / \text{sec}</math></p> <p><b>Chamber Temperature Measurement</b></p> <p>Sensor Type: Thermocouple</p> <p>Display: LCD 40x64 characters 320x64 pixel</p> <p>Measuring Range: -15 ~ 50°C</p> <p>Accuracy: <math>\pm 0.1^\circ\text{C}</math></p> <p><b>Leaf Temperature Measurement</b></p> <p>Sensor Type: Infrared Sensor</p> <p>Measuring Range: -10 ~ 50°C</p> <p>Accuracy: <math>\pm 0.3^\circ\text{C}</math></p>	
17.	Autoclave Vertical Fully Automatic Digital	<p>Chamber Volume (L): 50</p> <p>Temperature Sterilization Temp. (<math>^\circ\text{C}</math>): 110 to 123</p> <p>Temperature Melting Temp. (<math>^\circ\text{C}</math>): 60 to 100</p> <p>Pressure Sterilization at 121<math>^\circ</math> (kg/cm<math>^2</math>): 1.1 to 1.2</p> <p>Pressure Gauge range in analog (Mpa): - 0.1 to 0.6</p> <p>Load per baskets (Kg): 10</p> <p>Basket dimension (O x H) (mm): 380 x 180</p> <p>Pro programs: Standard modes (Decontamination, Solids Sterilization, Liquids Sterilization, Melting): Program modes</p> <p>Door delivery and warranty + Maintenance for 5yrs</p>	1

		<p>Optional  Local make, Chamber Volume (L): 50  Temperature Sterilization Temp. (°C): 110 to 123  Temperature Melting Temp. (°C): 60 to 100  Pressure Sterilization at 121° (kg/cm<sup>2</sup>): 1.1 to 1.2  Pressure Gauge range in analog (Mpa): - 0.1 to 0.6  Door delivery and warranty + Maintenance for 5yrs</p>	
18.	Oven	<p>Hot air oven ( size: 14 x 14 x14 “)  Temp: ambient + 5 to 250C,  accuracy +/- 1C, double wall .outer MS power coated inner SS, 3 side heating element, solid door with lock . size: 14 x 14 x14 inch,  capacity : 45L , with timer : 0 – 24 Hrs , digital temperature indicator and controller and micro presser based PID controller</p>	1
19.	Air Drier	<p>All internal parts S.S 304 quality;  Drying Chamber: Doubled walled construction with insulation in between; Outside and inside body fully welded; heating and air circulation system; Control panel with digital temperature indicator cum controller starter.</p>	
20.	Microprocessor- based Flame Photometer	<p>For measurement of Sodium, Potassium and Calcium. Sensitivity: Na: 2ppm,K: 1ppm, ca: 30 ppm  Range: Na: 1-100ppm, K: 1-100ppm, Ca: 15-100ppm, Accuracy and reproducibility:=2%</p>	1
21.	Digital Balance	<p>Capacity 100 kg &amp; 60 kg (2 No.);  Max Sensitivity figure/ division: 100mg(platform type)</p>	1