

**KERALA AGRICULTURAL UNIVERSITY**  
**Radiotracer Laboratory, College of Horticulture**  
**KAU, P.O., Vellanikkara, Thrissur – 680 656**

**No. RTL/ATMA/08/2017**

**Dated 01-01-2018**

**Quotation Notice**

Sealed quotations are invited by the Professor and Head, Radiotracer Laboratory, College of Horticulture, Kerala Agricultural University for the supply of the following equipments for the **ATMA project ATMA Project entitled “Strengthening Facilities for quality assessment of Organic manures”**

**1 pH meter**

**Specifications**

Type: Microprocessor based with digital display

Electrode: Combination electrode with integrated temperature sensor

Display: pH, mV and Temperature.

pH range: 0 to 14.

mV range: ±1500 mV

Temp range: - 5 to + 99.9 °C.

pH accuracy: ± 0.001

mV accuracy: ± 1 mV

Temp accuracy: ± 0.1 °C

Repeatability: ± 0.01

Temperature compensation: automatic/manual

Data output: digital display with RS 232 interface

Power source: 220 V AC

Warranty: Not less than 3 years

Programmable three point calibration

**2 EC meter**

**Specifications**

Microprocessor based bench type with digital display

Electrode – High precision & linearity, large measuring range 1µS/m to 200 dS/m, chemical resistant electrode surface with long term cell constant stability, built in temperature sensor, nil cable influence, breakage resistant with robust epoxy casing.

Range: 0-200 dS/m. The measurement should be possible in milli and micro Siemens mode

Temp. Indication: 10°C-200°C

Accuracy: ± 1 % FSD + 1 digit.

Resolution :0.01 Micro Siemens (µS)

Temp. compensation: Automatic with PT -100 probe

Temp coefficient: by default 1.00, adjustable from 0-4.00%

Reference temp.: 25°C

Cell constant: Manual as well as auto

Cell constant: by default 1.00, adjustable from 0.050-2.000

Power supply: 230V +-10%, 50Hz AC

Standard accessories: Electrode, stand and cable, conductivity standards should be provided

### **3. Spectrophotometer (visible)**

#### **Specifications**

Visible Range (mini spec) with two optical glass cuvettes 5mm

**Wavelength:** 320 To 990 nm (Visible Range) – User Selectable

**Resolution:** 0.2 nm

**Accuracy:** ± 1 nm

**Repeatability:** ± 0.5 nm

**Bandwidth:** < 2 nm

**Measuring mode:** % Transmittance(% T), Absorbance (ABS),

Concentration (CONC) by K-Factor and Multi standards

**Operating Modes:** Single Wavelength measuring %T, ABS and CONC,

Spectrum Scan measuring % T and ABS

Time Scan, measuring % T and ABS

**Source:** Tungsten Halogen Lamp

**POWER:** 230 V ± 10 %, 50 / 60 Hz

**Standard Accessories:** 10 mm path length, Four (4) cuvettes matched within ± 0.3%

Optional facility for Print Out and Data transfer to Computer through RS-232 (PC-Link)

### **4. Electronic balance**

#### **Specifications**

Capacity: 600 g

Accuracy: 0.01 g

Readability: 0.01g

Pan Size (mm): 115

With Inbuilt rechargeable battery for continuous use

### **5. Muffle furnace**

#### **Specifications**

Light weight construction, insulated with ceramic wool to reduce heat loss fitted with thermal fuse and thermocouple with ceramic wool insulation.

Chamber size – 15 x15 x23 cm

Should have Digital temperature controller

Maximum temperature 1000<sup>0</sup>C working temperature 900<sup>0</sup>C controlled by energy regulator

### **6. End over End shaker**

#### **Specifications**

Should be able to rotate two glass jars at approximately 50 rpm.

Glass jar is 1 litre in capacity with rubber bung.

Power. : 220 V, 50 Hz.

Weight. : 13 to 20 kg.

Dimensions. : 400 x 870 x 330 mm

### Terms and conditions

1. Quotations in sealed covers shall be addressed to the **Prof and Head, Radiotracer Laboratory, College of Horticulture, Vellanikkara, Thrissur, Kerala- 680 656**. The envelope containing the quotation should be super scribed 'Quotation for the supply of equipments for the ATMA Project entitled "Strengthening Facilities for quality assessment of Organic manures" not to be opened before 3. P M 15.01.2018
2. The rate quoted should be inclusive of all taxes and any other charges for its installation.
4. Guarantee / Warranty and after sales service should be specified.
5. Nearest service centre and response time for service call should be mentioned.
6. Brand names and specifications should be mentioned. Brochures are to be provided.
7. Last date of receipt of quotation is **15-01-2018, 2.00 P.M.** Late quotations will not be accepted.
8. Quotations will be **opened at 3.00 P.M.** on the same day in the presence of those present at that time.
9. The undersigned reserves the right to accept or reject any or all the offers without assigning any reason whatsoever.
10. The decision of the undersigned in finalizing the quotations shall be final and binding.
11. All other Government rules of quotations for purchase and supply of goods are applicable in this case also.
12. Further information can be had from the Prof and Head, Radiotracer Laboratory, College of Horticulture, Vellanikkara, Thrissur, during office hours on all working days (Ph 0487-2438670, mob: 9447992507)

*Sd/-*  
Prof and Head  
Radiotracer Laboratory

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