

DEPARTMENT OF BIOCHEMISTRY
DST-FIST & UGC-SAP Sponsored Department
UNIVERSITY OF KERALA



(Established as University of Travancore by the Travancore University act in 1937 and reconstituted as University of Kerala by the Kerala University act of 1957 and presently governed by the Kerala university act of 1974 passed by the Kerala state Legislative assembly No. 3878-F1/72/Law dated 27th July 1974 of the government of Kerala)

(Re – accredited by NAAC with ‘A’ Grade)

Kariavattom

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QUOTATION NOTICE

Competitive quotations are invited from various firms for the following laboratory equipments as per the specifications mentioned towards the purchase of equipments for the Advanced Centre for Tissue Engineering. The quotations in the sealed covers addressed to the Professor & Head, Department of Biochemistry, University of Kerala, Kariavattom, 695581 should reach the department on or before 25.01.2016, 11.A.M.

List of Equipments

1. Biological Safety Cabinet

Class II, Type A2, Stainless steel interior and GI powder coated exterior. Size 3'× 2'. UV/ Visible lighting, Gas inlet, Vertical Airflow and HEPA filters. With min 2 year warranty.

2. CO₂ incubator

Interior Volume – 180 L or more with stainless steel interior of 5°C above ambient to 50°C with uniformity of ± 0.3 °C at 37 °C, water jacketed, cut off alarm, CO₂ range of 0-20%. Shelves –four or more. With min 2 year warranty.

3. Thermocycler

Block size of 48x2 with 0.2ml tube capacity. Heated lid with temperature accuracy of ± 0.25 °C. Temperature of 4 °C to 99 °C with temperature uniformity of ± 0.5 °C. Should be supplied with UPS of min 2 hours backup. With min 2 year warranty.

4. Refrigerator Centrifuge

Fixed angle rotors for 2 ml, 10 ml and 50 ml tubes. Cooling capacity of upto -10 °C, centrifugation speed of minimum 15,000 g, lid lock option while in operation, user programmable operation feature.

5. Freezer -20°C

Minimum capacity of 340 L, should be vertical, single door model with minimum six shelves, non-auto defrost mechanism and operating temperature of -18 to -22 °C with min 2 year warranty.

6. Freezer -80°C

Temperature range -50 °C to -80 °C. Capacity 410 L, Five compartments, Polyurethane foam Insulation, Non-volatile memory, Plunger assembly to release the vacuum. Two stage cascade compressor system. With min 2year warranty.

7. Electrospinning apparatus

An electrospinning apparatus containing all the necessary components with inbuilt hood resistant to chemical vapours.

1. High Voltage Power Supply - 1 to 30kV Single Output, 0.5mA max Current with digital Voltmeter and Current meter. Facility for constant V or A settings. Charge discharge safety unit.

2. Collector

Stationary collecting unit made of stainless steel or suitable metals with size ranging 12 x 12 inch. Rotating mandrel with speed control from 500 rpm to 3000 rpm or better. Size of mandrel 10 cm diameter or 5 cm diameter.

3. Syringe Pump - Single or multiple syringe loading pump capable of accommodating standard syringes (2 ml to 20 ml) to dispense solutions at flow rate of 5 μ l / hr to 15 ml / min and accuracy of $\pm 2\%$ or better. Microprocessor controlled with digital display and programmable with multiple steps. Adjustable platform to align pump and collector height.

4. Computer interface and suitable software.

Computer interface to control the individual components using common software. All parameters of electrospinning has to be operational through software with data back up. The settings should be saved for retrieval or re-do.

5. Safety Hood within built power supply, lighting and exhaust.

Minimum 1 m length with 1.5 m height or better, inside hood for comfortable working. Protective measures to avoid electrical shock, solvent vapour and flying nanofibers.. With min 2 year warranty.

8. Liquid Nitrogen Storage System

Tank volume 120- 150 L, average daily loss less than 1 L static holding capacity of more than 100 days. Capacity to hold 4 and above racks of 6 cryoboxes each. Digital level display with audible alarm. Roller base platform. With min 2 year warranty.

9. Water purification system

Tap water to ultrapure output capability. Output resistivity- 18.2 megaOhm. Conductivity less than 0.055uS/cm. Flow rate more than 30 L/hr. Multistage purification process with particulates less than 1 p/ml. Built-in reservoir of above 5 L.

10. Sonicator

Ultrahigh intensity sonication, tapered micro tips of options 3 mm and 5 mm probes. Sample handling range of 0.5 to 20 ml. Acoustic insulation hood with transparent door. Multiple modes of operation for continuous, pulsed and timer controlled operation. With min 2year warranty.

11. UV/Visible Spectrophotometer

200-900nm- double beam with capacity to read 96 well plate format. Option for computer connectivity and data out put. To be supplied with branded computer. With min 2 year warranty.

12. Microscope-Phase contrast, inverted with camera

Inverted microscope with LED illumination. Options for bright field and phase contrast Imaging. Objective: 4X, 10X, 20X and 40X, Bidirectional stage movement. Option for connectivity to computer and digital camera.

13. Electricity Backup System

5KVA with battery backup. Warranty min 2 years.

14. Shaker incubator with cooling facility -

Refrigerator model with temperature range of +4 °C- 50 °C, digital display and brushless motor operations, revolution of 20-200 rpm, clamps for 50ml, 250 ml, 500 ml and 100 ml conical flask. Warranty min 2 years.

Note: Please send separate quotations for each item

Terms and conditions

1. The price quoted should be for supply, installation, demonstration and testing at the University campus, Kariavattom.
2. The supplier should be fully equipped to render us after sale service during warranty and thereafter.
3. The University of Kerala reserves the right to accept or reject any or all tenders without assigning any reason thereof.

Sd/-

Professor and Head