

BOSE INSTITUTE
KOLKATA

Tender No.	:	R/MC/Chem/823/13
Tender date	:	1 st August 2013
Type of Tender	:	Open

Tender Title	:	Ultrasonic Homogenizer, Benchtop Refrigerated Shaker, Gradient ThermoCycler, Tabletop Refrigerated Centrifuge
Specification	:	Attached
Quantity	:	One each

Last date & time for submission	:	19 th August 2013 upto 2.00PM
Date & time for opening of bids	:	19 th August 2013 at 3.00PM
Submission of Tender (Address)	:	Department of Chemistry, Main Campus, Bose institute, 93/1, A.P.C. Road, Kolkata 700 009
Venue of bid opening	:	As above
For any query the interested bidders may contact (Dept./Section/Div./Unit)	:	Ph: 033-2303-1143

General Terms & Conditions ::		
Warranty	:	At least 1 year
Payment terms	:	Payment will be made after complete delivery of the instrument in good condition and satisfactorily installation.
Delivery schedule	:	Within 4 weeks from date of order & if any defect of the supplied item is found, it should be replaced immediately from your side.
Bid security (earnest money deposit), if applicable	:	Nil
Submission of Performance Bank Guarantee (PBG), if applicable	:	Nil
Any other information (if applicable)	:	

Name of the instrument and submission of tender should be mentioned on the envelope positively.

Director, Bose Institute reserves the right to accept or reject any or all tenders either in part or in full. The reasons for rejecting the tender of a prospective bidder will be disclosed only when enquiries are made.

Specifications of Ultrasonic Homogenizer

- power > 100 watts,
- ultrasonic frequency > 20kHz,
- automatic frequency tuning system,
- amplitude adjustable from 20 to 100%,
- pulse adjustable from 0 to 100%,
- tip (probe) should be made of titanium, No of tips required: 2
- tip one: approx diameter 2mm, length 80mm, should be able to work with sample volume upto 40 ml
- tip two: approx diameter 7mm, length 80mm, should be able to work with sample volume upto 200 ml
- stand and clamp should be included
- voltage 220-240 V, 50-Hz
- should have service center at Kolkata

Optional item:

- sound protection box
- timer 0-100 min

Specification for Benchtop Refrigerated Shaker Incubator

- Temperature Range must be ambient -10° C to 50° C
- Temperature Accuracy: $\pm 0.25^{\circ}$ C
- Shaking Range must be 30 to 500 rpm with ~2.5 cm orbit
- Solid state brushless DC motor or better
- Setpoints and operating status must be retained by memory.
- Must be able to restart automatically after power is restored.
- System must accompany universal platform with clamps or sticky platform to run 4 Nos of 2.8 L Fernbach Flask.
- Must have options for 10ml,25ml, 50ml,125ml,250ml,1L,2L Erlenmeyer Clamp, sticky platform, non skid platform, test tube racks, microplate racks
- Multistep programmable (with constant or variable time and speed) option is preferable
- Option for photosynthetic and UV germicidal light is preferable
- Option for a fixed shelf for static incubation is preferable
- Dimension should be space saving 65x80x65cm (WxDxH)
- Operating voltage: 220 -240V 50Hz
- Warranty : At least one year
- Must have installed the above or similar model in and around Kolkata
- Must have service center at Kolkata

Optional Items

- In case of universal platform with clamps, include the price Clamps of Erlenmeyer flask below:
4 Nos x 1 L, 4 Nos x 250 ml, 4 Nos x 50 ml, 1 No x test tube rack

In case of sticky platform, please include a full set for sticky staff replacement.

Specification for Gradient Thermocycler

- Block: single block with 96 x 0.2ml PCR Tube, or dual block each with 48 x 0.2 ml PCR tube
- System should be authorized for gradient function
- Capable of testing at least 12 different temperatures
- Average (heating + cooling) ramp should be 4 °C/s
- Ramp rates should be identical in both gradient and normal operation
- Ramp rate should be adjustable to meet critical amplification conditions
- Gradient temperature range from 35 – 99°C with 0.1°C minimum gradient spread
- Block temperature control range: 4°C to 99°C
- Temperature Control Mode should be adjustable for different sample volume
- Lid Temperature range: 40 - 110 °C
- Block Temperature Accuracy: $\pm 0.2^{\circ}\text{C}$
- Block Homogeneity: $\pm 0.3^{\circ}\text{C}$ (20°C to 72°C);
- Lid height should be adjusted automatically to accommodate dome or flat PCR tubes
- Should have administrator and user login facility with or without PIN
- Preferable to have preprogrammed templates almost all kind protocols
- Time or Temperature increment with cycles in PCR program
- Auto Restart facility with user defined time interval when power fails and resumes
- System should display the remaining runtime
- Must have at least two USB ports: for Protocol transfer, Self-test, USB, printer / mouse
- Log book function for error messages and new calibration
- Preferable to have power save standby function and E-mail notification
- Preferable to have ability to control additional blocks for up-gradation
- Operating voltage: 220-240 V, 50 Hz
- Must have service center at Kolkata
- Warranty at least two year

Specification for Table Top Refrigerated Centrifuge

- Operating Voltage: 220 - 240 V 50-60 Hz
- RPM range: 200 to 14,000
- Max rcf >20,000 x g
- Max Capacity : 4 x 250 ml,
- Rotor and lid must be of metal (not carbon and polypropylene)
- Temperature range -9°C to +40°C
- Timer: 1min to 99min and continuous.
- Short spin key should run at desired rotational speed
- Should have plate rotor option to centrifugate MTP/DWP plates.
- Should have fixed angle rotor option for 15ml & 50ml conical tubes with speed > 14000 x g
- Standby refrigeration for maintaining temperature when not in use
- Must have full digit display of time, temperature and rpm and g-force
- Dimensions should be space saving 60x40x30cm (WxDxH)
- Must have built in condensation drain to eliminate condensed water
- At least 20 programmes should be stored and recalled
- Noise Level < 60dB
- Must have installed the above or similar model in and around Kolkata
- Must have service center at Kolkata

Rotors:

- Swing-bucket rotor with speed up to $3,000 \times g$ (4,000 rpm) with adapter for 15ml falcon and 50ml falcon tube.
Buckets and adapters must be autoclavable
- Fixed angle rotor for 30x1.5ml with speed upto 20,000 x g. Rotor should be autoclavable
- Warranty: at least one year

Optional item

- Fixed angle rotor for 85ml with 15 ml conical tubes adaptor with speed > 14000 x g