

# **TENDER FOR THE INSTRUMENTS**

**Date of Advertisement: 8<sup>th</sup> June, 2018**

Project

**LFWB – TCG BIO-BANK**

**At**

**IILDS, SONARPUR**

**LIVER FOUNDATION, WEST BENGAL**

### **GENERAL CONDITIONS OF SUPPLY**

1. Quotations are hereby invited on behalf of **LIVER FOUNDATION, WEST BENGAL (LFWB)**
2. Sealed quotations should be submitted to the office of : **LIVER FOUNDATION, WEST BENGAL, 33 A J N Road, Chatterjee International Centre (near Park Street Crossing), Kolkata- 700071**
3. Physical Submission of quotations should be within 10.30 am to 4.30 pm on any working day up to 22<sup>nd</sup> June, 2018. Quotation may be submitted by post or email ([liv.fwb@gmail.com](mailto:liv.fwb@gmail.com)) within 22<sup>nd</sup> June, 2018.
4. Canvassing in any form in connection with this advertisement is strictly prohibited and the quotations submitted by the firms who resort to canvassing will be liable to rejection.
5. Unsealed quotations may be summarily rejected.
6. The submitters should read the specifications carefully before submitting the tender.
7. LFWB does not bind itself to accept the lowest quotation only.
8. Time of delivery and installation will be followed strictly; otherwise, the order may be cancelled. Deliver will be at IILDS, Sonarpur.

#### **List of Instruments:**

- 1) Ultra Low Temp Vertical type -86 deg C deep freezer
- 2) Biological Safety Cabinet
- 3) Refrigerated Table top centrifuge
- 4) Microscope
- 5) Vertical type – 20 deg C deep freezer

**1) Specification for Ultra Low Temp Vertical type -86 deg C deep freezer:**

1. Type : Vertical
2. Temp. Range : - 50 deg C to -86 deg C
3. Volume : 540 liters or more.
4. Control : Microprocessor control
5. Refrigeration system : Environmentally–friendly, CFC/HCFC free refrigeration system with 2 nos. 1 HP Compressors
6. Low peak variation cabinet : It helps ensure sample protection throughout entire cabinet
7. Door opening : Fast door opening recovery in as little as 13 minutes
8. Long warm-up time : Long warm-up time from -80°C to -50°C in 5 hours
9. Refrigerants : Natural refrigerants
10. Insulation : Water-blown foam insulation
11. Easy-to-use downloads : Set-up wizard, event log, temperature mapping and data
12. USB port : Built-in USB port for exporting data
13. Advanced security features : alarm settings, password-protected controller, padlock-compatible doors
14. Ergonomic design : Comfortable door handle, eye-level touch-screen and shelf-level placement that do not require Floor-level loading of racks
15. Inner door retrieval : 5 inner doors minimize ambient temperature during sample retrieval
16. Sound level :  $\leq 52$  dBA
17. Power requirements : 230 V, 50 Hz, single phase.

18. Warranty : Minimum 1 Year.
19. Compressor warranty : Minimum 1 Year.
20. Accessories : Racks, 2" Boxes with 100 cell dividers should be quoted.
21. Servo voltage stabilizer : Suitable servo voltage stabilizer should be quoted.
22. Partial list of user : Some User list from reputed Institutes should be provided.
23. After-sales service : Prompt and efficient after-sales service should be available from Kolkata.

## **2) Specification Vertical type – 20 deg C deep freezer**

- a) Capacity: 345 Liter
- b) Shelves : 8

## **3) Specifications of Biological Safety Cabinet**

1. The biological safety cabinet should be of Class II designed in compliance with International standards.
2. It should be certified from any internationally reputed independent accredited agency such as EN 12469, TUV Nord (Germany), HPA (UK) etc for complete safety.
3. It should have Personal protection, Sample protection, Cross contamination protection and Environmental protection.
4. It must utilize DC motor technology to ensure lower levels of energy consumption and heat emission. AC motor technologies are not acceptable.
5. It should have dual blower for independent control for inflow & down flow velocities.
6. The motor must automatically adjust the airflow speed without the use of a damper to ensure continuous safe working conditions, even without maintenance adjustments.
7. The interior dimensions: (wxhxd) 1200 x 780 x 465 mm.
8. Air flow direction: Vertical Laminar Flow & Air intake across front opening.
9. Filter: High performance particle air filter (HEPA), filtering efficiency 99.995% MPPS.

10. Pressure sensor should be in-built for exact airflow measurement for balancing Air flow.
11. It should have Independent supply and exhaust blowers automate balancing of down flow and inflow/exhaust velocity to ensure continuous safe working conditions.
12. Control Panel and Performance monitor displays inflow / down flow velocities, hours of use etc. to verify proper cabinet operation.
13. Approximately 30% of the air volume is exhausted as sterile air back into the environment and approximately 70% of the air is recirculated inside the work area.
14. The UV light must be quoted which should be programmable to shut off automatically. The settings must allow the user to program the timer from 30 min to 24 hours in 30 min increments.
15. The front window sash must be angled 10° to reduce glare for users who wear glasses and allow for more comfortable posture for users.
16. The cabinet noise level must be less than 55 dB (A) as measured in a sound proof room. to promote more comfortable and safer working habits of the user.
17. The microprocessor controller must be located on a slanted front panel so it is easy to see from a seated working position in front of the cabinet.
18. The microprocessor must display the inflow and down flow air velocities in real-time on an LED display to ensure the user knows whether or not the cabinet is working under safe operating conditions.
19. The microprocessor must display the number of hours of use on the HEPA filters to ensure user knows when to replace the HEPA filters to achieve safe working conditions.
20. The interior of the front window must be accessible for cleaning without requiring the user to manually hold the window.
21. The drain pan beneath the work surface must be negatively pressurized to ensure that any contaminants are quickly trapped and pushed into the HEPA filters.
22. Arm rest should be provided for operator's comfort without disturbing the Air Flow.
23. The Work Area should be illuminated with switchable fluorescent lamp of lighting power greater than 1100 lx.
24. In built Access ports (23 mm) 4 (2 on each side) should be available.
25. It has 4 pieces stainless steel work tray for easy autoclave able and decontamination.
26. It should be quoted with Floor stand.
27. Warranty for one year.
28. Electrical supply available: 230V A.C, single phase, 50 Hz.
29. Prompt & efficient after sales service should be available from Kolkata.
30. Some User list from reputed Institutes should be provided.
31. Suitable servo voltage stabilizer should be quoted.

#### **4) Refrigerated Table top centrifuge**

1. Maximum Speed of 20,000xg /14000-15000 rpm, with a brushless motor
2. Temperature range should be from -9°C to 40°C, should be able to maintain 4°C at maximum  
Speed
3. It should be possible to use aerosol tight rotor, aerosol tightness of rotor should be certified by a  
third party agency
4. Instrument should have facility to accommodate 30 number of 1.5/2ml tubes, 6x 70-85 ml in fixed  
angle rotor, swing out rotor 4 x 250-400 ml with adapters for 15/50ml – 8nos in swing out rotor , 2x5  
MTP/2x2 DWP
5. Instrument must have an in-built condensate drain to prevent water accumulation
6. It should be possible to perform a fast pre-cooling of the instrument using a dedicated Fast  
Temp function
7. It should be possible to store 30 programs or more
8. Speed setting should be possible in both rpm and rcf (no knobs)
9. Should possess a separate short spin key for brief spin
10. It should be possible to program compressor shut off after 8 hrs of non usage of the centrifuge
11. Low access height for easy loading and unloading of samples.
12. Instrument should have automatic rotor recognition facility to automatically recognize and set  
maximum speeds upon rotor change
13. Metallic but light weight rotors will be preferred.
14. It should be possible to perform gentle acceleration and deceleration using 10/10 steps
15. Noise levels should be <54 db (A)
16. It should be possible to operate the centrifuge at set rpm, for short spin protocols
17. Instrument should be CE Certified and also have an IVD Conformity
18. Instrument should be supplied with Swing bucket rotor to hold,4 to 8 numbers of 50 ml conical tubes  
&16 numbers of 15 no conical tubes, or 4 x 100 ml capacity swing out bucket rotor, maximum speed  
should be 5000 rpm / 4500xg, Buckets and adaptors must have to autoclavable.

19. Must have a Kolkata based service team direct from the company

20. Warranty 12 months.

### **5) Technical Specification: DM 500**

The Microscope should have the following specification:

#### Tube:

Preset diopters for corrected vision 45 degree viewing angle 10x/18 (18 mm field of view)  
Eyepieces are integrated into tube. Interpupillary distance range 52 mm – 75 mm

Stand: Stand shape protects controls Knurled nosepiece 4 or 5 position nosepiece should be available.

#### Objectives:

Infinity platform Plan optics for objective

Plan 4X/0.10NA, 26.2mm W.D

Plan 10X/0.22 NA, 7.8mm W.D

Plan 40X/0.65 NA, 0.31MM W.D

Plan 100x/1.25 NA, 0.10MM W.D., Oil

#### Stage:

Stage surface 185 mm (150 mm front) wide x 140 mm deep Rounded stage edges Non extending rack Verniers for X/Y coordinates Wear resistant stage surface

#### Condenser

Prefocused and precentered condenser, Centerable and focusable condenser mount, Slot in condenser for contrast sliders (phase, darkfield, compensator).

#### Focus

Low position focus controls, Self adjusting focus mechanism, 300 microns per fine focus rotation, Calibrated in 3 micron increments.

#### Transmitted Light Source:

Preset field aperture only Available with or without adjustable Koehler field diaphragm

LED illumination – 6000 K temp, 25,000 h life at full intensity Continuous intensity adjustment  
Illumination enough for viewing at lowest intensity Simple polarizing kit available 2 hour Auto  
Off (can be disabled or enabled). Auto Off default: 4 hole stands enabled, 5 hole stands disabled