THIRUVANANTHAPURAM REGIONAL COOPERATIVE MILK PRODUCERS' UNION LTD.

(Affiliated to Kerala Cooperative Milk Marketing Federation Ltd.)

Head Office: "Ksheera Bhavan", Pattom, Thiruvananthapuram – 695 004.

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TRU/PPM/52/2023-24 25.04.2023

EXPRESSION OF INTEREST FOR SUPPLY OF LAB EQUIPMENT FOR DAIRIES UNDER TRCMPU

Expression of Interest (EOI) is invited from experienced &reputed manufacturers/dealers for supply of lab equipment for various Dairies under TRCMPU. Please refer to the website of TRCMPU www.milmatrcmpu.com for further details.

GENERAL TERMS AND CONDITIONDS OF THE EOI

EOI reference & date	TRU/PPM/52/2022-23 dated 25.04.2023
Description of EOI	Supply of various lab equipments
Last Date and Time for receipt of EOI	05.05.2023, 12:00 PM
Date and Time of opening of EOI	05.05.2023, 03:30 PM

The specifications of lab equipments are mentioned below.

The detailed address of the manufacturer along with place of manufacturing location, facilities available etc. shall be indicated.

The details of the previous orders executed, orders now in hand etc. shall be specified.

The tentative price of the equipments shall be indicated in the EOI in Indian rupee with taxes.

Submission of EOI does not mean as a bid submission and so no claim or preference shall be entertained in the event of placement of order after inviting bids at a later stage.

LETTER OF INVITATION

Sir/Madam,

Thiruvananthapuram Regional Co operative Milk Producer's Union (TRCMPU) invites sealed Expression of Interest (EOI) from experienced & reputed manufactures/dealers for supply of lab equipment for various Dairies under TRCMPU.

The EOI Document is also available on the TRCMPU website www.milmatrcmpu.com

You may submit your responses in sealed envelopes in prescribed format to the undersigned latest by 05.05.2023, 12:00 PM.

Managing Director
TRCMPU, Ksheera Bhavan
Pattom, Thiruvananthapuram 695004

Queries if any may be referred in writing to the Managing Director, TRCMPU, at the above mentioned address or E-mail: ppm.trcmpu@gmail.com , mdtrcmpu@gmail.com

Yours faithfully,

Sd/-
Managing Director

EQUIPMENT SPECIFICATION

1. ***HOT AIR OVEN:***

- ➔ Chamber Volume: approximately 170 Litres
- ➔ The ovens should have high precision Mechanical convection
- ➔ Temperature Range in between 50°C to 330°C
- ➔ The Inner and Outer chamber should be made of Stainless
- ➔ Steel
- ➔ The Ovens should have an automatic over temperature alarm
- ➔ The ovens interior should have rounded corner for ease of clean and better contamination control
- ➔ The system should have shelving system that can be fitted inside the Chamber.
- ➔ The ovens interface should be microprocessor controlled and should be a vacuum fluorescent display or LCD with touch button control.
- ➔ The controller should be programmable for temperature ramps and dwells.
- ➔ The oven should be provided with min 2 shelves as standard and should be capable of accommodating a maximum of 19 shelves.
- ➔ The mechanical convection oven should have electronics fan speed adjustment and control.
- ➔ The oven should have a electronically controlled damper opening for venting out the chamber air
- ➔ The oven should have RS 232 interface providing data logging capability.
- ➔ The ovens should be stackable with optionally available stacking kit.
- ➔ The ovens should have the choice of daily / weekly on/off timer with choice of real time clock or hours of operation display.
- ➔ Instrument should be internationally accepted brand

- ➔ The door should be able to open at 180° angle for complete access to chamber interior.
- ➔ The ovens should be provided with an access port for independent monitoring of sample temperature.
- ➔ The ovens should have a boost function for rapid heat up of chamber interior.

- ➔ The oven should have an option (factory installed) of incorporating a viewing window & light inside with limiting temperature of 330°C and coated exterior.
- ➔ The oven should have dry alarm contact to connection of alarm device.
- ➔ The ovens should have 2 Years on Site Warranty with periodic preventive inspection every 3 months during the Warranty Period.
- ➔ Certification: CE (International Certificate)
- ➔ Instrument should have IEC EN 61010 - 1, IEC EN 61010 - 2 – 010 Standards & regulations.

2. ***BIOSAFETY CABINET:***

- ➔ The Bio safety cabinet is Class II Type A2 in which 70% Air is re-circulated and 30% of the air should be exhausted
- ➔ Preferably with two DC motors.
- ➔ The motor shall automatically adjust the airflow speed without the use of a damper to ensure continuous safe working conditions, even without maintenance adjustments.
- ➔ In order to preserve safety to the user and the environment, the exhaust blower on the cabinet shall continue operating when the supply blower stops working.
- ➔ The microprocessor will 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.

- ➔ The front window shall have min 10" sash opening and be made of laminated safety glass to ensure containment of potentially hazardous samples in the case of accidental glass breakage.
- ➔ All interior and exterior parts shall be painted or smooth to ensure no risk of cuts to users or maintenance personnel.
- ➔ The Biosafety Cabinet shall have microprocessor controller and shall located on a slanted front panel so it is easy to see and reach from a seated working position in front of the cabinet.
- ➔ The interior of the front window shall accessible for cleaning without requiring the user remove or support the window.
- ➔ The cabinet shall automatically reduces fan/blower motor speed when the front window sash is in closed position to ensure reduced energy consumption when the cabinet is not is use.
- ➔ The Cabinet should have provisions to fit taps for Vacuum, Water and Non-Combustible Gas.
- ➔ The Bio safety Cabinet must be NSF certified with listing on NSF website.
- ➔ The Bio safety cabinet must be incorporated with HEPA filter of the class H 14 EN 1822 and having minimum efficiency of 99.995% at 0.3 µm particle size.
- ➔ Approximate Dimension Interior 800 H x 1200 W x 500 D
- ➔ Ventilation System Exhaust and Inflow air volume approx 300-350 CFM
- ➔ Heat Emissions at 25ºC should be approx. 0.2 KW.
- ➔ Certification: NSF, CE, EN
- ➔ The Bio safety cabinet shall have dual side wall with negatively pressurized interstitial space.

3. ***B.O.D INCUBATOR***

- ➔ Temperature range Should be +5 to +70°C
- ➔ Instrument should be bench top model and capacity should be min 175 ltrs or More
- ➔ Temperature uniformity should be +/-0.3°C (20°C) and ≤0.5°C at 37°C
- ➔ stability as low as +/-0.1°C
- ➔ PID control with automated fault analysis at start-up to ensure correct control at all times
- ➔ Energy consumption as low as 80Wh/h
- ➔ CFC free / HFC free polyurethane insulation foam for outstanding temperature performance and condensation prevention

- ➔ Heating and cooling option should be No refrigerant ,Peltier technology
- ➔ Heated door with intelligent energy control to ensure no condensation – even at low temperatures
- ➔ Sophisticated timer function with weekly, daily or real time mode
- ➔ Intuitive programmability function for defined temperature ramping, soak/cool and dwell: store up to 10 programs
- ➔ Easy push-button calibration
- ➔ Bench top model with leveling feet,
- ➔ Table-top unit stackable without need for tools or stacking devices
- ➔ Adjustable over temperature shut-off for protocols that require setting of over temperature for protection – (class 2 according to norm DIN12880)
- ➔ Safe viewing of samples through internal glass door with limited impact on temperature
- ➔ Safe containment with automatic over and under temperature alarm
- ➔ Standard access port for data monitoring
- ➔ Flexible shelf system for optimal loading, easy to remove for cleaning, with non-tip protection
- ➔ Stainless steel interior and rounded corners for easy cleaning
- ➔ Dimension of exterior should be approx 738 x 640 x 920 mm (LXWXH) or More
- ➔ Display should be Large Vacuum Fluorescent/LCD
- ➔ Number of shelves should be min 2
- ➔ Certification: CE
- ➔ Warranty: 2 Years with periodic preventive inspection every 3 months during the warranty period.

4. ***Electronic milkotester***

- ➔ Auto zero facility
- ➔ Quick and instant read- out
- ➔ Easy to read digital LED display
- ➔ Runs on mains or battery
- ➔ Measures upto 13% fat
- ➔ Accepts small sample volume
- ➔ Performs 120-150 test per hour
- ➔ Built –in battery charger
- ➔ Close correlation to accepted standard methods
- ➔ Automatic switch-over to battery in case of power failure

- ➔ Inexpensive method of milk testing
- ➔ Measuring range : 0-13% fat
- ➔ Capacity : 120-150 samples /hour
- ➔ Accuracy (sd) : 0.06 for 0-5% fat
  0.10 for 5-8% fat
  0.20 for 8-13% fat
- ➔ Repeatability (sd): 0.03 for 0-5% fat
  0.04 for 5-8% fat
  0.08 for 8-13% fat
- ➔ Sample volume : 0.5 ml/test
- ➔ Diluent volume : 6.5 ml/test
- ➔ Power supply : AC 230-240V
- ➔ Ambient temperature : 5-45°C
- ➔ Dimensions (HxWxD) : 23x31x53 cm.
- ➔ Space requirement : 60 x 80 cm
- ➔ Weight (without diluents) : 16 kg

Sd/-
Managing Director