



**THIRUVANANTHAPURAM REGIONAL CO.OPERATIVE MILK
PRODUCERS' UNION LTD. KSHEERA BHAVAN, PATTOM,
THIRUVANANTHAPURAM -695 004**

**Bid Ref. No.TRU/PPM/52/2023-24
Tender ID: 2023_KCMMF_604392_1**

RETENDER FOR

**Supply, installation, testing and commissioning
various lab equipments at TRCMPU**

2023

BID FORM

1. Registered Name of Bidder :

2. Address :

3.Contact details

i) Land phone :

ii) Mobile :

iii) E-mail :

iv) Fax :

THIRUVANANTHAPURAM REGIONAL CO-OPERATIVE MILKPRODUCERS' UNION LTD.
KSHEERA BHAVAN, PATTOM, THIRUVANANTHAPURAM -695 004
Phone Nos. 2558850, 2446845 Fax: 2449567, E-mail [ID – ppm.trcmpu@gmail.com](mailto:ppm.trcmpu@gmail.com)

NOTICE INVITING TENDER

The Managing Director, Thiruvananthapuram Regional Co-operative Milk Producers Union Ltd (TRCMPU Ltd) invites online bids from reputed Manufacturers / Authorized dealers for the Supply, installation, testing and commissioning of various lab equipments at TRCMPU under NPDD 2021-22 scheme

1.	Tender No. & Date	TRU/PPM/52/2023-24 Dated 20.09.2023
2.	Item of Work	Supply, installation, testing and commissioning various lab equipments at TRCMPU
3.	Quantity Required	Annexure I
4.	Specification	Annexure II
5.	Estimated Amount	Rs.79 Lakhs (Approx.)
6.	Bid Submission Fee	Rs.1500/- (Rupees One Thousand five hundred Only)
7.	Earnest Money Deposit	Rs.10000/- (Rupees Ten Thousand Only)
8.	Date and Time of Publication of e- tender.	20/09/2023, 10:00 AM
9.	Date of Submission of e-tender	20/09/2023, 10:00 AM to 30/09/2023, 12:30 PM
10.	Date and time of opening of e-tender	03/10/2023, 10.00 AM
11.	Place of Opening	TRCMPU Ltd., Ksheera Bhavan, Pattom Thiruvananthapuram-695004.
12.	Bid Validity	90 Days
13.	Warranty	12 months warranty from the date of commissioning.
14.	Delivery time	Within 90 days from the date of Confirmed order.

Sd/-
MANAGING DIRECTOR

Terms & Conditions for e-Procurement

This tender is an e-Tender and is being published online for work / supplying of equipment as mentioned in the Invitation to bid. The tender is invited in two cover system from the registered and eligible manufacturers / suppliers through e-procurement portal of Government of Kerala (<http://www.etenders.kerala.gov.in>). Prospective bidders willing to participate in this tender shall necessarily register themselves with above mentioned e-procurement portal.

The tender timeline is available in the critical date section of this tender published in www.etenders.kerala.gov.in.

A. Online Bidders registration process:

Bidders should have a Class II or above Digital Signature Certificate (DSC) to be procured from any Registration Authorities (RA) under the Certifying Agency of India. Details of RAs will be available on www.cca.gov.in. Once, the DSC is obtained, bidders have to register on www.etenders.kerala.gov.in website for participating in this tender. Website registration is a one-time process without any registration fees. However, bidders have to procure DSC at their own cost.

Bidders may contact e-Procurement support desk of Kerala State IT Mission over telephone at 0471-2577088/188/388 or 0484-2336006, 2332262 or 0497-2764788, 2764188 or 0483-273294 or through e-mail: etendershelp@kerala.gov.in or helptender@gmail.com for assistance in this regard.

B. Online Tender Process:

The tender process shall consist of the following stages:

- i) **Downloading of tender document:** Tender document will be available for free download on www.etenders.kerala.gov.in from the date & time of publication of e-tender, till the last date & time for online submission of e-tender. However, tender document fees shall be payable at the time of bid submission as stipulated in this tender document. Downloading of tender documents will not be possible after the date specified above.
- ii) **Pre-bid meeting:** Refer page 3 of the tender document
- iii) **Publishing of Corrigendum:** All corrigenda shall be published on www.etenders.kerala.gov.in and shall not be available elsewhere.
- iv) **Bid submission:** Bidders have to submit their bids along with supporting documents to support their eligibility, as required in this tender document to www.etenders.kerala.gov.in. No manual submission of bid is allowed and manual bids shall not be accepted under any circumstances.
- iv) **Opening of Technical bid and bidder short-listing:** Technical bids will be opened, evaluated and shortlisted as per the eligibility and technical qualification. All documents in support of technical qualification shall be submitted online as well as offline within the due date and time. Failure to submit the documents will attract disqualification. Bids shortlisted by this process will be taken up for opening the financial bid.
- v) **Opening of financial bids:** Bids of the qualified bidders shall only be considered for opening and evaluation of the financial bid on the date and time mentioned in the critical date section

C. Documents comprising bid:

- i) **First Stage (Pre qualification or Technical cover based on 1 cover or 2 cover tender system):**
Pre-Qualification or Technical proposal shall contain the scanned copies of the following documents which every bidder has to upload.
 - A. Copies of original documents defining the constitution or legal status, place of registration and principal place of business of the company or firm or partnership or if a joint venture, of each party there to constituting the bidder.
 - B. Copies of Sales tax & service tax registration certificate.
 - C. Details of experience and past performance of the bidder (or of each party to a joint venture) on works of similar nature, and details of current work in hand and other contractual commitments shall be submitted. Customer's full address, contact persons, contact telephone number and e-mail ID are to be furnished.
 - D. The bidder should be in same business as Supplier / manufacturer for which the bid is invited for a minimum period of five years at the time of bid opening. If an authorized dealer participates in the bid they should

produce documentary evidence for establishing that their principal supplier should be in the same business for a minimum period of 5 years. Copy of authorized dealership certificate issued by the principal supplier or manufacturer should also be uploaded along with bid document.

- E. The bidder's annual financial turnover during any one of the last two years shall not be less than twice the estimated cost as specified in the Invitation to Bid.
- F. The bidder shall have completed at least 4 number of similar installations for which this invitation to bid is issued during the last five years.
- G. The bidder shall furnish a copy of the Income tax Returns for the previous year in original or certified true copies.

The department doesn't take any responsibility for any technical snag or failure that has taken place during document upload.

ii) **The Second Stage (Financial Cover or as per tender cover system):**

The Bidder shall complete the Price bid as per format given for download along with this tender.

Note: - The blank price bid should be downloaded and saved on bidder's computer without changing file-name otherwise price bid will not get uploaded. The bidder should fill in the details in the same file and upload the same back to the website.

Fixed price: Prices quoted by the Bidder shall be fixed during the bidder's performance of the contract and not subject to variation on any account. A bid submitted with an adjustable/variable price quotation will be treated as non-responsive and rejected.

D. Tender Document Fees and Earnest Money Deposit (EMD)

The Bidder shall pay a tender document fee and Earnest Money Deposit or Bid Security as given in the Tender Inviting Notice. The Bid security is required to protect the purchaser against risk of Bidder's conduct, which would warrant the forfeiture of security.

Online Payment modes: The tender document fees and EMD can be paid in the following manner through e-Payment facility provided by the e-Procurement system:

State Bank of India Multi Option Payment System (SBI MOPS Gateway): Bidder are required to avail Internet banking facility in any of the below banks for making tender remittances in e-Procurement system.

A) Internet Banking Options (Retail)			
1	Allahabad Bank	29	Janata Sahakari Bank
2	Axis Bank	30	Karnataka Bank
3	Andhra Bank	31	Karur Vysya Bank
4	Bandan Bank	32	Kodak Mahindra Bank
5	Bank of Bahrain and Kuwait	33	Lakshmi Vilas Bank
6	Bank of Baroda	34	Mehasana urban Co-op Bank
7	Bank of India	35	NKGSB Co-operative Bank
8	Bank of Maharashtra	36	Oriental Bank of Commerce
9	Bassein Catholic Co-operative Bank	37	Punjab and Maharastra Co-operative Bank
10	BNP Paribas	38	Punjab National Bank
11	Canara Bank	39	Punjab and Sind Bank
12	Catholic Syrian Bank	40	RBL Bank
13	Central Bank of India	41	Saraswat Cooperative Bank
14	City Union Bank	42	Shamrao Vithal Cooperative Bank
15	Corporation Bank	43	South Indian Bank
16	Cosmos Bank	44	Standard Chartered Bank
17	DCB Bank	45	State Bank of India
18	Dena Bank	46	Syndicate Bank
19	Deutsche Bank	47	Tamilnadu Mercantile Bank
20	Dhanalaxmi Bank	48	Tamilnadu Cooperative Bank
21	Federal Bank	49	The Kalyan Janatha Sahakari Bank
22	HDFC Bank	50	TJSB Bank(Erstwhile Thane Janata Sahakari Bank)

23	ICICI Bank	51	UCO Bank
24	IDBI Bank	52	Union Bank of India
25	Indian Bank	53	Vijaya Bank
26	Indian Overseas Bank	54	YES Bank
27	Indus Ind Bank	55	United Bank of India
28	Jammu & Kashmir Bank		
B) Internet Banking Options (Corporate)			
1	Bank of Baroda	19	Karur Vysya Bank
2	Bank of India	20	Kodak Bank
3	Bank of Maharashtra	21	Lakshmi Vilas Bank
4	BNP Paribas	22	Oriental Bank of Commerce
5	Canara Bank	23	Punjab and Maharastra Coop Bank
6	Catholic Syrian Bank	24	Punjab and Sind Bank
7	City Union Bank	25	Punjab National Bank
8	Corporation Bank	26	RBL Bank
9	Cosmos Bank	27	Shamrao Vithal Cooperative Bank
10	Deutsche Bank	28	South Indian Bank
11	Development Credit Bank	29	State Bank of India
12	Dhanalaxmi Bank	30	Syndicate Bank
13	Federal Bank	31	UCO Bank
14	HDFC Bank	32	Union Bank of India
15	ICICI Bank	33	UPPCL
16	Indian Overseas Bank	34	Vijaya Bank
17	Janata Sahakari Bank	35	Axis Bank
18	Jammu & Kashmir Bank		

During the online bid submission process, bidder shall select SBI MOPS option and submit the page, to view the **terms and condition** page. On furtherer submitting the same, the e-Procurement system will redirect the bidder to MOPS Gateway, where two options, mainly **SBI and other banks*** will be shown. Here, bidder may proceed as per below.

(a). SBI Account holders shall click **SBI** option to with its Net banking facility, where bidder can enter their internet banking credentials and transfer the tender fee and EMD amount.

(b). Other bank account holders may click **other banks** option t view the bank selection page. Here bidder can select from any of the 54 banks to proceed with its net banking facility, for remitting the tender payments.

*Transaction charges for other banks vide SBI Letter No. LHO/TVM/AC/2016-17/47- 1% of transaction value subject a minimum of Rs.50/- and maximum of Rs.150/-

Any transaction charges levied while using any of the above modes of online payment has to be borne by the bidder. The supplier/contractor's bid will be evaluated only if payment status against bidder is showing "Success" during bid opening.

E. SUBMISSION PROCESS:

For submission of bids, all interested bidders have to register online as explained above in this document. After registration, bidders shall submit their Technical bid and financial bid online on www.etenders.kerala.gov.in along with online payment of tender document fees and EMD. For page-by-page instructions on bid submission process, please visit www.etenders.kerala.gov.in and click "Bidders Manual Kit" link on the home page.

It is necessary to click on "Freeze bid" link/icon to complete the process of bid submission otherwise the bid will not get submitted online and the same shall not be available for viewing/opening during bid opening process.

SPECIAL TERMS & CONDITIONS

Tender for Supply, installation, testing and Commissioning of various lab equipments at TRCMPU

Thiruvananthapuram Regional Co-op Milk Producers Union Ltd invites competitive rates for the supply, installation, testing and commissioning of various lab equipments at TRCMPU, subject to the following terms and conditions.

1. Eligibility and qualification requirements:

1.1 To be eligible for the award of contract, bidder shall provide satisfactory evidence to the Thiruvananthapuram Regional Co-op Milk producers Union Ltd regarding their eligibility, capacity and adequacy of resources to carry out the contract effectively. To this end all bids submitted shall include the following information.

- A. Copies of original documents defining the constitution or legal status, place of registration and principal place of business of the company or firm or partnership or if a joint venture, of each party there to constituting the bidder.
- B. Copies of Sales tax & service tax registration certificate.
- C. Details of experience and past performance of the bidder on works of similar nature, and details of current work in hand and other contractual commitments shall be submitted. Customer's full address, contact persons, contact telephone number and e-mail ID are to be furnished.
- D. Copy of bank details.

1.2 For the purpose of this particular contract, bidder should meet the following qualifying criteria as minimum:

- A. The bidder should be in business as Manufacturer / Supplier of lab equipments for a minimum period of Five years at the time of bid opening. If an authorized dealer participates in the bid they should produce documentary evidence for establishing that their principal supplier should be in the same business for a minimum period of 5 years. Copy of authorized dealership certificate issued by the principal supplier or manufacturer should also be uploaded along with bid document.
- B. The bidder shall furnish documentary evidence for the above including copy of Income Tax Returns (certified true copies) for the previous two years' failure of which will lead to disqualification.
- C. The Bidder should setup service arrangement in Kerala / South India to attend the units within 48 hours in case of failure / breakdown of the equipment
- D. **The bidder shall provide all technical details of the equipments along with the tender document.**

2. Tender Fee & Earnest Money Deposit

- a) The Tender fee and EMD as given in the invitation to bid shall be accepted through online NEFT transaction through the site www.etenders.kerala.gov.in.
- b) The EMD of the successful bidder shall be released after the signing of the agreement and submission of performance security.
- c) EMD of the unsuccessful tenderer shall be released after the award of the contract and execution of agreement by the successful tenderer.

d) No interest shall be paid for the EMD for the period for which it lies in deposit.

3. **Agreement:** - The successful bidder has to execute a contract agreement on a stamp paper worth Rs.200/- within 15 days of receipt of work order.

4. **Delivery Address:** -

- Thiruvananthapuram Dairy, Ambalathara, Poonthura P.O, Thiruvananthapuram Dist.
Pin 695026
GST No.32 AAAAT9795J3ZV
- The Senior Manager, Kollam Dairy, Thevally .P.O, Kollam 691 009
GSTIN- 32AAAAT9795J4ZU
- The Manager, Pathanamthitta Dairy, Thatta, Pathanamthitta
GST No 32AAAAT9795J5ZT

5. **Terms of payment : Payment shall be made from TRCMPU as follows**

- 40 % of the order value shall be released as advance against submission of Bank Guarantee issued from any Nationalized Bank for an equal amount valid till completion of supply (not less than six months).
- 30% of the order value shall be released on supply of the equipment at the Dairy.
- 20 % of the order value shall be released on completion of installation, testing and commissioning of the equipment at the Dairy.
- 10% of the total value will be released on satisfactory completion of guarantee period of twelve months from the date of commissioning in all respect. However the said amount will be paid against a Bank guarantee valid for twelve months from the date of commissioning.

6. **The Tender should be submitted as follows**

Online Cover I

1. Details of Tender fee and EMD details.
2. Documents to prove the qualifying criteria as mentioned in clause 1 above.
 - Scanned copy of Sales Tax & Service Tax registration certificates.
 - Scanned copy Income Tax returns filed for last two years.
 - Details of previous executed orders along with address of clients, contact person, contact no, e-mail ID etc.
 - Details of contracts on hand and other contractual commitments.
3. Full technical specifications of the machine.

Online Cover – II

Price bid in the prescribed form available as BOQ in the website www.etenders.kerala.gov.in

E. Note to Bidders:

- i. Bidders are advised to note the Tender Id and Tender No. & Date for reference.
- ii. All uploaded documents should contain the signature and the office seal of the bidder/authorized persons.
- iii. The Managing Director, TRCMPU Ltd., is empowered to reject any or all the bids without assigning any reason.
- iv. The TRCMPU does not blind itself to accept the lowest offer and reserve the right to accept any offer without assigning any reason. The bidders shall not have any claim in this regard.
- v. Hard copies of the documents mentioned under cover 1 and copy of this tender document duly signed on all pages to be submitted within a day or two from the date of opening. Non submission of hard copies in time by the bidder shall lead to rejection of their offer.

Sd/-
Managing Director

ANNEXURE-I

SI NO	ITEM	QTY	Location
1	Pathogen Detector	1	Pathanamthitta dairy
2	Hot air oven	3	Thiruvananthapuram dairy & Alappuzha
3	Digital Brixmetre	1	Pathanamthitta dairy
4	Texture analyser	1	Pathanamthitta dairy
5	Digital pH metre	2	Thiruvananthapuram dairy & Alappuzha
6	Somatic cell analyser	1	Pathanamthitta dairy

Sd/-
Managing Director

ANNEXURE-II

SPECIFICATIONS

1. HOT AIR OVEN:

- Chamber Volume: approximately 170 Litres
- Footprint should not exceed: 0.56 / 6.0(m² / sqft)
- The ovens should have high precision Mechanical convection
- Temperature Range 50°C to 330°C
- Special Temperature Deviation at 150°C: 1.8°C
- Temperature Deviation over Time at 150°C: ±0.3°C
- The Inner and Outer chamber should be made of AISI 304 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 with just one click
- The ovens interface should be microprocessor controlled and should be a vacuum fluorescent display with touch button control.
- The controller should be programmable for temperature ramps and dwells with up to 10 programs with 10 discrete steps.
- **The oven should be provided with 2 shelves as standard and should be capable of accommodating a maximum of 19 shelves.**
- Maximum shelf load should be 25/55
- 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 the option of providing stainless steel (factory installed).
- 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. REAL TIME PCR FOR PATHOGEN DETECTION IN DAIRY

Automated pathogen detection system for Dairy & Dairy Products		
1	Hardware Specifications	The automated pathogen detection system should be based on Real Time PCR technology with user friendly interface, maximum dye versatility and security options
2		The system should be capable of testing 90 samples/run and capable of processing multiple assays/parameters in the same run. The test results from enrichment to final result interpretation should not exceed 30 hours for the detection of food borne pathogens
3		The system should have Open platform with 6-channels, can handle sample volume of 10-30µl with 96-wells, 0.1 ml block
4		The built-in emission filters to support a broader range of fluorophores with a higher sensitivity for longer wave length (red dyes). The system should be configured and calibrated to use any of the following dyes or a combination thereof: FAM™, SYBR® Green, VIC®, JOE™, HEX, TET, ABY®, NED™, TAMRA™, Cy3®, JUN®, ROX™, TEXAS RED®, and capability of multiplexing for five targets or better.
5		The system should have Touch Screen LCD feature with real time visuals of amplification plots etc to avoid dependency on computer for operation with USB port
6		System must have Veriflex block technology capable of providing 3 or 6 independent temperature zones for flexibility to run multiple experiments simultaneously.
7		Detect differences in target quantity as small as 1.5 – fold in singleplex reactions and obtain 10 logs of linear dynamic range.

8		The system should have peak block ramp rate of 9.0 °C/second with temperature uniformity of 0.4 °C or better and 0.25 °C Temperature Accuracy.
9		The system should have white LED optics to enable powerful and sensitive data collection which improves well-to-well and instrument-to-instrument accuracy. Excitation & detection limit: 450–680 nm and 500–730 nm for 96-well system
10	Assay Specifications	The system should be capable of performing the following food parameters 1. Pathogen Detection: Salmonella, Listeria Species, Listeria monocytogenes, E.coli 157:H7, STEC, Cronobacter Species 2. Should be capable of detecting SARS COVID -19 test from environmental & food packaging material 3. Should be capable of Vegan & Halal testing, Meat ID testing for different animal species which includes Sheep, Pork, Goat, Beef, Equine, Chicken, Fish, Multi meat specification testing. 4. Should be capable of Checking GMO
11		The pathogen detection assays should have international validation of AOAC/ AFNOR/ISO and FSSAI validated
12		The pathogen detection kit should have Pre-filled lysis tubes and tableted PCR reagents to minimize hands-on time and reduce pipetting errors.
13		The pathogen detection assay should incorporate an Internal Amplification Control (IAC) to prevent false negative results that might be caused by PCR inhibitors thereby providing reliable results and confident reporting.
14	Software Specifications	The software should have User Friendly interfaces with security feature with Sensitive, interactive touch screen with stand-alone capabilities, and dye calibration/RNases P functionality. It should have PIN protected user accounts and 21 CFR Part 11 compliance, increased security to help ensure run and data are protected.
15		The software should have automated data interpretation with traceability of storage: Enables rapid, straightforward PCR set-up, automatic data interpretation, and traceability of results.
16		The software should have a Cloud-based platform which helps to stay connected to the data online.
17	Calibration	The system should be delivered as factory (pre)-calibrated for optical and thermal accuracy and delivered in a user-friendly package for quick installation and immediate use with minimal calibration recommended every two years.
18	Computer Specification	A business line computer (either notebook or tower) for system control, with minimum 4 GB RAM and 500 GB HDD for operation, analysis, net-working of multiple systems and a USB port for data export must be provided along with the system.

19	Warranty	1 year warranty from the date of installation to be provided by the supplier
20	Training	The supplier will have to carry out successful installation at the laboratory premises (where ever the system has to be installed) and provide on-site comprehensive training for a minimum of two scientific personnel operating the system till customer satisfaction
21	IQ/OQ	On site IQ, OQ of instrument along with document to be provided by the supplier

Accessories to be quoted along with RT-PCR

- 1. Ultrapure Water Purification System; Make: Merck Millipore, Model: Direct Q3 should be quoted along with the instrument.**

3. TEXTURE ANALYSER

Tester Load Capacity		Max. 500 N
		The load cell type can be selected from 9 types; 1 N, 2 N, 5 N, 10 N, 20 N, 50 N, 100 N, 200 N & 500 N
Load Method		High-precision constant-speed strain measurement using backlash-free ball screw drive
Test Force Measurement	High-Precision Type	±0.5 % of indicated value (within 1/500 to 1/1 of load cell rated capacity)
		Conforms to JIS B 7721 class 0.5, ISO 7500-1 class 0.5, EN 10002-2 grade 0.5, and ASTM E4
	Standard-Precision Type	±1 % of indicated value (within 1/500 to 1/1 of load cell rated capacity)
		Conforms to JIS B 7721 class 1, ISO 7500-1 class 1, EN 10002-2 grade 1, and ASTM E4..
	Range	1 range (rangeless)
	Test Force Calibration	Automatic calibration using calibration cable
Crosshead Speed Range		0.001 to 1000 mm/min
Maximum Return Speed		1500 mm/min
Crosshead Speed Accuracy		Within ±0.1% of test speed
Crosshead Speed and Allowable Test Force		Up to the capacity of the load cell used at all speeds
Distance Between Crosshead and Jig Mounting Surface		500 mm
Maximum Grip Space		395 mm (500 N max. load cell + tensile Jig)
Depth of Test Space		100 mm (table section)

Crosshead Position Detection	Measurement & Display	Optical encoder measurement, digital display (display resolution: 1 μ m)
	Accuracy	0.1% of indicated value or 0.01 mm, whichever is greater
Crosshead Control		Single test control (single-direction tension or compression test), cycle test control (repetitive tension or compression test)
Sampling Speed		1 ms MAX

- The instrument should be supplied as per the above mentioned features with the following accessories
- High-Precision Load cell 200N/20kg, accuracy +/- 100g, , Lower Joint, Bolt Software ,Base Table
- software
- Suitable probes , Fixtures & Jigs for various Test (Dairy products) should be provided along with the instruments
 - 1)Cylindrical Probes
 - 2) Conical probe and Spherical Probes
 - 3) Needle Probe/jig
 - 4) knife edge
 - 5)Wire cutting
- Warranty minimum 12 months from the date installation
- Demonstration and Training to be provided at free of cost

4. **SOMATIC CELL ANALYSER**

- Measuring range : 10000 – 4000000 somatic cells/ml
- Operational temperature : + 10pC to 40 pC
- Storage temperature range : -20 pC to 70 pC
- Humidity range : 10% to 85% RH
- Milk sample volumes : Approx 60 μ l in the cassette
- Measuring volume : Approx 1 μ l in the cassette measuring window
- Repeatability : 12% at 100000 cells/ml
: 8% at 400000 cells/ml
: 7% at 1000000 cells/ml

5. **DIGITAL BRIX METRE**

Scales	Brix	Refractive Index
Range	0 - 55%	1.3330 - 1.4098
Divisions	0.1	0.0001
Accuracy	±0.2%	±0.0003
Temperature Measurement Range	50°F to 122°F (10°C to 50°C)	
	Automatic Temperature Compensation	
Temperature Accuracy	±1°F (±0.5°C)	
Measurement Temperature Resolution	0.1°C	
Measurement Response Time	≤ 3 seconds	
Minimum Sample Volume	0.3 ml	
Dimensions	5.5in x 2.4in x 0.9in	
	(140mm x 62mm x 23mm)	
Weight	6.17oz (175g)	
Power Supply	3 x AAA Batteries	
Battery Life	≥ 10,000 Readings	
Waterproof Rating	IP65	
Automatic Temperature Compensation	41°F to 104°F (5°C to 40°C)	
Automatic Shut Off	3 minutes	

6. **DIGITAL pH METRE**

Parameter	pH
Channel	Single-channel
pH measuring range	0 – 14
pH resolution	0.01
pH accuracy (±)	0.01
Languages	English
mV measuring range	0 – 0
mV resolution	1
mV accuracy (±)	1
Temperature Range	0 °C – 100 °C
Temperature resolution	0.1 °C
Temperature accuracy (±)	0.5 °C

Ease of Use	Calibration support
Sensor Included	None
Dimensions	227 x 147 x 70 mm
Weight	0.63 kg
Connectors	BNC
	Cinch/RCA
	2 mm Ref
	analog mV signal output
Compatible with Intelligent sensor management (ISM)	No
Display Type	4.3" segmented LCD
Meter Type	Benchtop Single-Channel
Portable Meter	No
mV measuring range	-2,000.000–2,000.000

**Sd/-
Managing Director**

GENERAL TERMS & CONDITIONS

1. Inspection:

The equipment under the purview of your supply should be inspected by your own technical experts at your works, and such Inspection Report should be forwarded to us in triplicate. However the TRCMPU reserves its right to inspect at any stage of fabrication / manufacture of the equipment / material. You should intimate TRCMPU without fail when the equipment is ready for inspection, including the stage wise inspection. You should not proceed with further manufacture and / or dispatch of equipment, without obtaining a clearance certificate after inspection or our written permission. You should forward to us the Test Certificates wherever applicable, obtained from concerned authorities / principal manufacturers either regarding quality of any other details of the items utilized in the process of manufacture / fabrication.

2. Dispatch Instructions:

The materials are to be dispatched to the project site by the mode of transport specified in the order under intimation to us. Depending on the type of material, you shall have to carry out proper packing / crating to avoid breakages in transit. Other details of dispatch such as marking consignee's particulars etc. are mentioned in the Purchase Order. For using any mode of transport other than the specified one, prior concurrence from us in writing should be obtained. All consignments should be dispatched on freight paid basis irrespective of price basis. In the event of freight payable extra by us, you shall have to obtain our prior approval and produce necessary documentary evidence in support of your claims. Unless otherwise stated, the original RR/LR should be sent by Registered Post directly to the consignee along with a copy of invoice and 2 copies of Delivery Challan / Packing List.

3. Insurance

You shall have to arrange all transit risk insurance, warehouse to warehouse basis including storage risk coverage for a period of 6 months from the date of arrival of goods at destination for the items to be supplied by you. In cases where orders are placed on ex-works basis, the premium shall be paid by us at actual to you against production of documentary evidence. In the event of any damage to / loss of consignment in transit, it will be your responsibility to lodge necessary claims with the carriers / underwriters and pursue them till settlement. Since the insurance policy will be obtained in our name, we shall, if required, give you necessary authorization letter authorizing you to lodge and pursue claims on our behalf with the carriers / under writers. You shall also have to make good the losses / damages occurring in transit by making replacement / payment to us in the first instance; if claims are settled by the underwriters and any amounts are realized by us, the amounts thus realized in settlement of claims shall be reimbursed to you. In other words, the prima facie responsibility for getting compensation for the damages / losses incurred, due to all transit hazards, if any, rests with you.

In cases where the purchase order is placed on "free delivery at site" basis, no insurance premium will be paid by us. However in such cases also, all transit risk insurance policy must be obtained to safeguard your own interest and to protect the material against transit hazards.

4. Delivery

The stipulated delivery time given in the Purchase Order is the essence of this contract. You must therefore, strictly adhere to the delivery schedule mentioned in the Order.

5. Demurrage

You shall bear and reimburse to us full demurrage if any, paid by reason of delay on your part in forwarding the original dispatch documents at the destination mentioned in the Purchase Order.

6. Rejection:

We reserve the right to reject the goods either in part or full if at the time of delivery, if it is noticed that the goods supplied do not conform to the specifications / description given in the Purchase Order. The rejection, if any, will be intimated to you in writing within a reasonable time. You will be liable to repair / replace the rejected goods within the stipulated time. Till the repair / replacement is made, the rejected goods shall be lying at your risk, cost and responsibility. If you do not arrange to repair / replace the rejected goods within the period stipulated by us, we may dispose of such goods at your risk and in the manner which we think fit. We shall be entitled to retain the proceeds of disposal either in part or full towards the expenses incurred on storage, handling and disposal of the rejected goods. We shall also be entitled to recover the expenses made by us on storage and handling of such rejected goods till the goods are removed from our premises/stores.

7. Liquidated Damages and Recovery of Advance:

The accepted delivery schedule of supply and/or installation shall be governed by the Liquidated Damages and Recovery of Advance clause. Each unit of an item shall be delivered to destination and ready for operation not later than the delivery date specified in the purchase order. If you fail to deliver any of the goods or perform the services within the time period(s) specified in the purchase order, TRCMPU shall without prejudice to its other remedies under this purchase order, deduct from the order price as liquidated damages, a sum equivalent to 0.5% of the full Purchase order value for each week of delay. The total amount so deducted shall not exceed 5% of the purchase order value. Once the maximum is reached the TRCMPU may consider cancellation / termination of purchase order.

In case you fail to supply the equipment within the stipulated delivery period plus 20% of the same as grace period, subject to a minimum of 15 days, the purchase order shall stand cancelled and the supplier shall refund the advance, if paid, along with interest at the rate of 18% per annum compounded quarterly on the last day of March, June, September and December, on the advance paid, for the entire period for which the advance was retained by the supplier. This will be without prejudice to other remedies like risk purchase etc. Any incremental taxes, duties and levies on account of the delay in the execution of the purchase order by you will be to your account.

8. Guarantee

The supply of equipment as well as installation, if entrusted, shall have to be carried out by you to the entire satisfaction of TRCMPU. You shall also guarantee to repair / replace without any extra cost, the items or parts thereof, if found defective due to bad designing, workmanship or substandard material brought to your attention within 12 months from the date of putting on use / commissioning or 18 months from the date of receipt of material at site whichever is earlier. If it is necessary to send the defective equipment or parts thereof to your works for repair / replacement, without forming any precedence, the cost of repacking, loading, unloading, transportation from the site to your works and back to site shall have to be borne by you.

The guarantee however does not cover any damage resulting from normal wear and tear or improper attendance or mishandling of the equipment during repairs by personnel other than the supplier or his authorized agents.

In case of installation jobs you shall have to guarantee the complete installation for satisfactory performance for a minimum period of 12 months from the date of commissioning of the plant / equipment. Any defect arising out of faulty erection / installation or use of substandard material or workmanship shall have to be rectified by you at your cost.

9. Warranty

You must provide a warranty for a minimum period of 12 months from the date of commissioning of the equipment for satisfactory performance of the supplied equipment according to the designed / rated / installed capacity or any other norms fixed by TRCMPU.

10. Specifications & Manuals:

Operation and maintenance manuals and service instructions along with the drawings showing details of part list against each item of your supply be sent to us in triplicate. **You should also furnish us service requirements like water, electricity, lubricant, air etc., for each equipment wherever applicable.**

You shall provide a list of spare parts, which will be required for the equipments supplied by you for at least one year of normal operation with the names and the addresses of the manufacturers from whom they can be procured. The list should contain the code numbers of the parts which are required to be procured, in addition to the machine number, models etc.

11. Submission of Bills :

Bills in triplicate under Registered Post, stating therein our Purchase Order reference along with necessary copies of Dispatch documents are to be sent to the respective Office. Unless otherwise stated the payment shall be made to you by Crossed Account Payee cheque by post according to the terms of payment mentioned in the Purchase Order.

12. Cancellation of Contract

We shall be free to cancel our order either in part or full, in the case of non-delivery of material / non-completion of installation within the stipulated delivery period or breach of any of the clauses mentioned herein. Consequential losses if any, on account of our getting installation done or obtaining supplies from alternative sources besides payment of higher price shall be recovered from you.

13. Sub- Contract

In the event of awarding sub contract to any party / parties by you for the manufacture / supply /erection of any parts / spares / components that will be used in the ordered equipment, you must furnish us details about your sub signature of bidders, their experience, specialization etc. The sub-contract can be awarded by you only after obtaining written approval from us. In the event of sub-contract also the prima facie responsibility rests on you regarding quality, quantity, guarantee / warranty of the materials supplied by the sub-signature of bidders.

14. Force Majeure

The terms and conditions mutually agreed upon shall be subject to Force Majeure Clause. Neither the supplier nor the purchaser shall be considered in default in performance of his / their obligations here under if such performance is prevented or delayed because of war, hostilities, revolution, civil commotion, strike, epidemic accident, fire, wind, flood, earthquake or because of any law order proclamation, regulation or ordinance of any Government or of any act of God or any other cause whether of similar or dissimilar nature, beyond the reasonable control of the party affected. Should one or both the parties be prevented from fulfilling his / their contractual obligations by a state of Force Majeure

lasting continuously for a period of six months, the two parties should consult each other regarding the future implementation of the contract / purchase order.

15. Power

Power will be supplied free of cost at one point. The bidder shall make his own arrangements to provide necessary cables isolators etc to tap the power to the point of requirement during erection work, as per standards.

16. Arbitration

In case of any dispute, the Registrar of Co-operative Societies of Kerala State shall be the sole Arbitrator as per the provisions of Kerala Co-operative Societies Act 1969.

17. Employees state insurance

The contractor shall arrange for insurance etc. of his people employed for erection and installation work as per ESIC act workman compensation and any other provision to meet statutory requirement of various labour Act / Rules. In case of accident to any of the workers during the period of installation, TRCMPU shall not bear any liability what so ever, the entire responsibility primary and final in this respect will be that of contractor.

18. Jurisdiction

THIRUVANANTHAPURAM (KERALA) Only

FORM OF AGREEMENT
(On Non-Judicial Stamp Paper of Rs.200/-)

THIS AGREEMENT made on the ____day of ____, 20__ between the Thiruvananthapuram Regional Co-operative Milk Producers' TRCMPU Ltd., Thiruvananthapuram - 695 004 (hereinafter referred to as "the TRCMPU ") of the one part and of _____ (hereinafter referred to as "the Contractor") of the other part:

WHEREAS the TRCMPU is desirous that certain goods and ancillary Services should be provided by the Contractor, viz. _____ and has accepted a bid submitted by the Contractor in response to the TRCMPU 's Bidding Document Reference No. _____ for the supply of those goods and services in the sum of Rs. _____ (Rupees _____ only) hereinafter referred to as "the Contract Price")
NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- In this agreement words and expressions shall have the same meaning as in the Terms & Conditions in the above-referred Tender Document.
- The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:

The offer and the price schedule(BOQ) submitted by the Contractor:

- (a) The schedule of requirement and the technical specifications in Bidding Document.
 - (b) The terms and conditions in Bidding Document :
 - (c) The TRCMPU 's Order No. _____ dated _____.
- In consideration of the payments to be made by the TRCMPU to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the TRCMPU to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the TRCMPU's Order and Bidding Document.
 - The TRCMPU hereby covenants to pay the Contractor in consideration of the provision of the Goods and Services and the remedying of defects therein, the contract price or such other sum as may become payable under the provisions of the Order at the times and in the manner prescribed in the order and Bidding Document.

IN WITNESS whereof the parties hereto have caused this agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, sealed and delivered
for and on behalf of the within
named contractor of the other part

Signed, sealed and delivered
for and on behalf of the within
named TRCMPU

CONTRACTOR.

MANAGING DIRECTOR.
TRCMPU Ltd.,

In the presence of witness

In the presence of witness

1. Signature
Name and address

1. Signature
Name and address

2. Signature
Name and address

2. Signature
Name and address