

**THE SOUTH INDIA TEXTILE RESEARCH ASSOCIATION (SITRA)
COIMBATORE-641 014**

Notice Inviting Tender

Short term sealed tenders are invited from reputed manufacturers / suppliers by the Director, The South India Textile Research Association (SITRA), Coimbatore-641014, for supply of Machinery / Equipment / Instruments for the Centre of Excellence for Medical Textiles at SITRA, Coimbatore.

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|-----|---|---|------------------------|
| (1) | Tender No. | : | SITRA/COE/MEDITECH-01 |
| (2) | Cost of Tender Document | : | Rs.250/- |
| (3) | Estimated Value of Machinery /
Equipment / Instruments | : | Rs.500 lakhs |
| (4) | Last Date for Sale of Tender Forms | : | 21.12.2009 (5.00 P.M.) |
| (5) | Last Date for Receipt of Tender | : | 26.12.2009 (4.00 P.M.) |

Requirement:

(1) Scanning Electron Microscope; (2) Gas Chromatography and Mass Spectrum Detector (GC-MS); (3) Atomic Absorption Spectrophotometer (AAS); (4) High Performance Liquid Chromatography (HPLC); (5) Freeze Drier; (6) UV-Vis Spectrophotometer; (7) Thermo Gravimetric Analyser; (8) Preparatory Machines, Drier and Winders for Non-Woven Plant; (9) Machineries for Water Treatment Plant for Non-Woven; (10) High Speed Shuttleless Narrow Fabric Needle Weaving Loom – 2 Heads; (11) Ultrasonic Fabric Sealing System; (12) Ultrasonic Continuous Sealing and Cutting System; (13) Compact Cleaners.

The Tender Forms, Conditions of Contract including specifications and other information can be obtained from SITRA, Coimbatore during working hours on any working day before the last date for sale of tender documents on payment of Rs.250/- (Rupees Two hundred and fifty only) towards cost, which is not refundable. The tender document can also be down loaded from this website.

Tender documents down loaded from website should be accompanied by demand draft of Rs.250/- towards the cost of the tender document. The cost of tender document should be remitted by demand draft in favour of 'SITRA' payable at Coimbatore. The tenders may be cancelled, withdrawn or postponed at any time by SITRA without assigning any reason.

**The South India Textile Research Association (SITRA),
P.B.No.3205, Coimbatore Aerodrome Post,
Coimbatore-641 014, Tamil Nadu.
Phone : (0422) 2574367-8-9, 6544188, 4215333
Fax: (0422) 2571896; E-mail: sitraindia@dataone.in**

TENDER DOCUMENT

**Centre of Excellence for Medical Textiles at
The South India Textile Research Association (SITRA), Coimbatore.**

Tender No. : SITRA/COE/MEDITECH-01
Last Date for Sale of Tender Forms : 21.12.2009 (5.00 P.M.)
Last Date for Receipt of Tender : 26.12.2009 (4.00 P.M.)

**The South India Textile Research Association (SITRA),
P.B.No.3205, Coimbatore Aerodrome Post,
Coimbatore-641 014, Tamil Nadu.
Phone : (0422) 2574367-8-9, 6544188, 4215333
Fax: (0422) 2571896; E-mail: sitraindia@dataone.in**

Encl: Tender Forms

Terms and Conditions for supply of Equipment/Machinery to SITRA for the Centre of Excellence, Medical Textile, SITRA, Coimbatore

1.0. Background :

The South India Textile Research Association (SITRA) was established in the year 1956. SITRA is a link in the chain of national laboratories in the country, sponsored by the textile industry and supported by the Ministry of Textiles, Government of India. SITRA is registered under Societies Registration Act 1860. SITRA is governed by council of Administration consisting of members from the textile industry, Representatives from Ministry of Textiles, Government of India, Representative from Government of Tamil Nadu, scientists from reputed institutions and Directors of other cooperative cotton Textile Research Associations.

SITRA has seven divisions which offer a wide range of services like Textile Testing, Man Power Training, Consultancy, Inter firm studies, Energy Audits etc. to the textile industry. The various services offered by SITRA are available at SITRA's web site (www.sitra.org.in)

2.0. Objectives :

- World class testing and R & D facilities for a selected number of 'Meditech' products will be established at SITRA together with a reference library.
- Development of resource centre with I.T. infrastructure
- To provide training services to textile professionals across the country on a regular basis.

3.0. Terms and Conditions :

The Tender Forms, conditions of contract including specifications and other information can be obtained from SITRA, Coimbatore during working hours on any working day before the last date for sale of tender documents on payment of Rs.250/- (Rupees Two hundred and fifty only) towards cost of tender documents, which is not refundable. The tender document can also be down loaded from SITRA web site www.sitra.org.in

Tender documents down loaded from website should be accompanied by demand draft of Rs.250 towards the cost of the tender document. The cost of tender document should be remitted by demand draft in favour of 'SITRA' payable at Coimbatore.

Offers are to be submitted in a sealed cover containing two separate sealed covers addressed to the Director, SITRA at the address given in the notice on or before 26th December 2009 (4.00 PM).

The two sealed covers within the main cover should contain

- (i) Technical bid clearly subscribed "Packet-A" and
- (ii) Financial bid clearly subscribed "Packet -B"

The technical bid should provide the following information:

- The Instrument/Machinery supplier is a manufacturer or authorised sales and service agency and their correct address, telephone, fax no. and e-mail, etc. along with the name of contact person.
- Complete specification of the equipment/machinery.
- Requirement of essential accessories and optional items
- Reference clients.
- No. of equipment/machinery working in India.

The financial bid should contain the following:

- The basic price of the equipment/machinery.
- Details of additional cost such as freight, insurance, taxes, erection/ installation charges etc.
- Cost of minimum required consumables if any, accessories required such as voltage stabilizer, UPS, compressor, etc.
- The bid must remain valid for a period of 60 days from the last date of submission.
- Mode and schedule of payment.

SITRA reserves the right to accept or to reject any offer without assigning any reasons whatsoever.

TENDER FORM

Sender's Name, Address and Seal :

To
The Director,
The South India Textile Research Association,
Coimbatore-641 014.

(1) Scanning Electron Microscope:

- Low and High Vacuum Mode : 3.0 nm – 15 nm
- Upto 300000 Magnification
- Wider Specimen Rang upto 150 mm Dia.
- Suitable Power Supply for Indian Condition
- Complete Accessories and Tools
- With Sputter Coater

S.No.	Machine / Description	Make	Model	Rate / Unit Rs.	Quantity	Amount Rs.	Remarks

Note: Terms and conditions such as payment schedule, if agent, original manufacturer / supplier details, if its imported, bankers details and other related information for opening L.C., price validity, delivery schedule etc. need to be furnished.

TENDER FORM

Sender's Name, Address and Seal :

To
The Director,
The South India Textile Research Association,
Coimbatore-641 014.

(2) Gas Chromatography and Mass Spectrum Detector (GC-MS):

- Mass Range Above 1000
- Scan Rate Above 10000 amu/sec
- Higher S/N Ratio to Establish the Sensitivity of the Machine
- Facility for Column Change without De-vacuuming the Machine
- Automatic Control of Gas Pressure
- Reliable and Less Maintenance Vacuum System

S.No.	Particulars	Description	Rate Rs.	Quantity (Nos.)	Amount Rs.	Remarks

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TENDER FORM

Sender's Name, Address and Seal :

To
The Director,
The South India Textile Research Association,
Coimbatore-641 014.

(3) Atomic Absorption Spectrophotometer (AAS)

- High Sensitivity
- System Controlled Flame and Gas Pressure
- Double Beam Optics
- Monochromator Focul Length – Minimum 300 nm
- Background Correction System
- Support of Various Measurement Mode
- Safety Measures for Flame and Gas Control
- Provision of HC Lamps for Maximum Life of Elements

S.No.	Particulars	Description	Rate Rs.	Quantity (Nos.)	Amount Rs.	Remarks

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TENDER FORM

Sender's Name, Address and Seal :

To
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The South India Textile Research Association,
Coimbatore-641 014.

(4) High Performance Liquid Chromatography (HPLC)

- High sensitivity
- Compatible with Other Company Column
- High Resolution and Low Base Line Noise
- System Designed Low or Nil Carry Over
- Software Compliance with All Requirements with In-built Data Base
- Optimisation of Lamp Energy for Repeatability of Results
- Flow Cell Design to Eliminate Refractive Index Effect
- DAD / PAD Detector with More than 5 Nos. 2D Channel
- Automatic and Continuous Solvent Compressibility Compensation
- Data Acquisition Rate upto 80 Hz

S.No.	Particulars	Description	Rate Rs.	Quantity (Nos.)	Amount Rs.	Remarks

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TENDER FORM

Sender's Name, Address and Seal :

To
The Director,
The South India Textile Research Association,
Coimbatore-641 014.

(5) Freeze Drier

- Upright stainless steel collector coil condenser with capacity 2.51
- Facility capable of removing >1.5 of water in 24 h
- Ice holding capacity of 2.5 l before defrosting
- LCD display system for operating parameters, set parameters (vacuum and temperature), alarm messages (both sound and flash)
- Appropriate safety system for power failure, temperature rise and moisture collector / moisture sensor.
- Vacuum control valve to maintain set point vacuum level
- Vacuum break valve for protection of system from oil back-streaming
- Standard drying chambers with 12 ports
- Chemical resistant Rotary vane vacuum pump with minimum displacement capacity of – 165 l/min with at least 0.002 mbar ultimate pressure
- Liquid nitrogen trap
- One set of adapters (Glass adapters – straight and 45° and straight stainless steel adapters)
- One set of flasks (40, 80, 120, 150, 300, 600, 1200 and 2000 ml) with silicone rubber tops made from borosilicate glass

Contd. 2

- RS-232 port for transmitting data to computer along with compatible Laptop / Personal computer
- Vacuum pump oil for the Rotary vane pump
- Other holders for test tubes etc.
- Other types of traps
- UPS support for the machine

S.No.	Particulars	Description	Rate Rs.	Quantity (Nos.)	Amount Rs.	Remarks

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Sender's Name, Address and Seal :

To
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(6) UV-Vis Spectrophotometer:

- Diffraction grating with single monochromator with highly efficient detector
- Wave length rang atleast from 190 to 900 nm
- Wave length accuracy of $\leq \pm 0.2$ nm at 656.1 nm
- Variable spectral band pass atleast from 0.1 to 5 nm
- Wave length setting repeatability ± 0.05 nm
- Photometric mode: Absorbance and % transmittance
- Photometric range: atleast – 3.8 to 3.8 Abs and atleast 0 to 300% Transmittance
- Photometric accuracy: $\pm 0.3\%$ T
- Photometric accuracy: Between ± 0.002 Abs to ± 0.006 Abs for different ranges of 0 to 2 Abs, $\pm 0.1\%$ T
- Wave length scan speed: Slow, Medium and High
- Light source: Adjustment free sources for UV and visible regions with automatic changeover
- Cuvettes: 10 ml for both the regions, each two pairs
- Stray light: ≤ 0.015 at 220 nm NaI and 340 nm NaNO_2
- Necessary software to carryout various instrument / data processing operations with compatible PC and laser printer
- A suitable UPS to protect the instrument from power fluctuations
- Instrument working with 230 V, 50 Hz power supply

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Sender's Name, Address and Seal :

To
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Coimbatore-641 014.

(7) Thermo Gravimetric Analyser:

- Temperature range 15°C to 1000°C
- Corrosion Resistant Furnace with sample pan
- Heating rate in the range 0.1° to 200°C/min
- Temperature Resistance $\leq \pm 0.8^\circ\text{C}$
- Integrated mass flow controller for monitoring and controlling purge flow rates must be included as standard
- The balance should be protected from the reactive sample purge gas as well as materials evolved by the sample
- Temperature precision needs to be $\pm 0.8^\circ\text{C}$
- Balance measurement range up to 1500 mg
- Balance Accuracy to be better than 0.2% of total sample and pan weight
- Cooling times : 1000° to 100°C in less than 8 minutes or better and 1000° to 30°C in under 15 min or better
- System should have the necessary data analysis and instrument control software based on windows operating system
- Comprehensive accessory kit to be included

- Atmosphere can be static or dynamic, including nitrogen, argon, helium, carbon dioxide, air, oxygen or other inert or active gases over full temp range.
- Nitrogen and Aargon Gas cylinders, 2 No. each with suitable regulators and outlet pressure of 2-3 bar and gas filled with purity 99.995%
- Chiller with required coolant to maintain min. temperature control of $\pm 0.1^{\circ}\text{C}$
- Automated auto sampler with a minimum f 40 positions as an option
- A compatible PC with 19" TFT monitor Laser printer and UPS having latest configuration CD writer

S.No.	Particulars	Description	Rate Rs.	Quantity (Nos.)	Amount Rs.	Remarks

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Sender's Name, Address and Seal :

To
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Coimbatore-641 014.

(8) Preparatory Machines Drier and Winders for Non-Woven Plant

Sl. No.	Machinery	Specifications	
1.	Pneumatic Hopper	Delivery width	600 mm
		Capacity	50 kgs/hr
2.	Carding Machine	Delivery width	600 mm
		Roller Clearers	8 pairs
		Capacity	25 kgs/hr
		Single layer web (Gsm)	10 – 50 g/m ²
3.	Cross Lapper	Output Width	600 mm
		Capacity	20 – 30 m/min
		To and fro device controlled by inverter	
4.	Drafter	Width	600 mm
		No. of Rollers	7 (Up 3 and down 4)
		Diameter of Roller	200 mm
		Linear Speed	20 – 30 m/min
		Draft ratio	2.0 - 2.5
5.	Round Mesh Drier	Working Width	600 mm
		Speed	10 – 20 m/min
		Oven Temperature	100 – 200°C (Thermo Oil Circling)
		Circling Blower	Centrifugal type, 1 set
6.	Pneumatic Winder	Working Width	600 mm
		Speed	20 - 30 m/min

S.No.	Particulars	Description	Rate Rs.	Quantity (Nos.)	Amount Rs.	Remarks

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Sender's Name, Address and Seal :

To
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(9) Machineries for Water Treatment Plant for Non-Woven

Sl. No.	Machinery	System Requirement	
1.	Water Treatment Plant including Pre-treatment System (Reverse Osmosis System)	Water supply : 8 to 10 m ³ /hour	
		Chemical Specifications for Water	
		Total hardness (CaCO ₃ + MgCO ₃)	< 210 mg/l
		PH	6.5 to 7.5
		Chloride	< 100 mg/l
		Iron (Fe)	< 0.10 mg/l
		Sulphate	< 250 mg/l
		Manganese	< 0.050 mg/l
		Suspended Solid	< 2 mg/l
		Biological Specifications for Water	
		Total fungi count	0 unit/ml
		Total bacteria count	Less than 1000 unit/ml
		2.	Water Recycling Plant

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S.No.	Particulars	Description	Rate Rs.	Quantity (Nos.)	Amount Rs.	Remarks

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To
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(10) High Speed Shuttleless Narrow Fabric Needle Weaving Loom – 2 Heads

No. of head	:	2 Heads
Maximum width	:	175 mm
Weaving fabric width	:	150 mm

Complete needle loom with all standard accessories.

- Digital length count – metres and RPM
- Cone holder for weft and catch threads
- Tension arrangement for elastane yarn
- 1000 drop wires
- 1000 heald wires
- Full set of chain links and pins for weaving all pattern.
- Back rack for beams
- Beam shafts
- 12 Aluminum beams of size 300 mm x 300 mm
- One set of tools
- Operation manual, training, erection and commissioning etc.

S.No.	Particulars	Description	Rate Rs.	Quantity (Nos.)	Amount Rs.	Remarks

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TENDER FORM

Sender's Name, Address and Seal :

To
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Coimbatore-641 014.

(11) Ultrasonic Fabric Sealing System

- Generator 1000 W – 36 KHz
- Converter – 36 KHz (HF)
- Sealing speed – 20 metres / min.
- Booster 1 : 1.5
- Sealing (or) cutting wheel
- Titanium horn
- RF Co-Axial Cable
- Servo motor with variable speed drive
- Foot switch
- Provision for compressed air supply
- Suitable for all types of non-woven fabrics of various GSM upto 100 .
- SS working table
- Drive motor
- Operation manual, training, erection and commissioning etc.

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S.No.	Particulars	Description	Rate Rs.	Quantity (Nos.)	Amount Rs.	Remarks

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TENDER FORM

Sender's Name, Address and Seal :

To
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(12) Ultrasonic Continuous Sealing and Cutting System

- Converter – sprig loaded
- Generator – 500 W – 36 KHz
- Titanium Booster
- Titanium horn
- Fixture
- Roller anvil.
- Connecting cable
- Cooling attachment
- Mounting arrangement for cooling air
- Suitable for all synthetic materials polyester, polypropylene, nylon etc.
- Operation manual, training, erection and commissioning etc.

S.No.	Particulars	Description	Rate Rs.	Quantity (Nos.)	Amount Rs.	Remarks

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Sender's Name, Address and Seal :

To
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(13) Compact Cleaners

- Main voltage – 230 V
- Current consumption including heater – 5 Amps
- Ultrasonic output eff./peak – 300 / 600
- Operating frequency – 30
- Digital adjustable thermostats
- Digital timer
- Heating power – 800 W
- Tank capacity – 12 litres
- Internal Dimensions in mm. (L x W x D) - 300 x 250 x 200
- External Dimensions in mm (L x W x D) – 350 x 300 x 350
- Outlet valve
- Operation manual, tool kits, complete erection and running
- Weight approximately 10 kg.
- Operation manual, training, erection and commissioning etc.

S.No.	Particulars	Description	Rate Rs.	Quantity (Nos.)	Amount Rs.	Remarks

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