



SIKKIM STATE COUNCIL OF SCIENCE & TECHNOLOGY

An autonomous organization of Department of Science & Technology, Government of Sikkim, Vigyan Bhawan, Deorali, Gangtok-737102

NOTICE INVITING TENDER (NIT)

Sikkim State Council of Science & Technology (SSCST), an autonomous organization of the Department of Science & Technology, Government of Sikkim invites 'Sealed Tenders' from the interested authorized distributor, manufacturer, importer, Indian/foreign manufacturer/Indian agent/partner on behalf of their foreign principles for the supply and installation of the scientific instruments. The bidder should have minimum Rs. 25.00 lakh of business turnover in last financial year and business experience of 3 minimum years.

The interested firms as stated above should collect the tender document from the office of the Additional Director (Biotechnology) or Assistant Scientific Officer (Biotechnology), Department of Science & Technology, Government of Sikkim, Vigyan Bhawan, Deorali, Gangtok-737102 from 16th -17th October, 2014 during office hours i. e 10 am to 4 pm (IST) on payment of Rs. 500/- (Rupees five hundred) only by Demand Draft drawn in favor of Member Secretary, Sikkim State Council of Science & Technology payable at Gangtok, which is non-refundable. The NIT along with the tender document can also be downloaded from our website www.bioinformaticssikkim.gov.in. In case the downloaded tender document is used for submission of bids, the bid should also include the cost of tender document viz. Rs. 500/- (Rupees five hundred) only.

Technical and financial bids should be prepared and labeled separately and sealed in different envelopes and placed inside a single cover scribing "Tender for supply and installation of scientific instrument" & "Do not open before 21st October, 2014". The bidder should also submit compliance report along with the bid indicating the matching of technical specifications.

The bids addressed to the SSCST should reach the above address on or before 20th October, 2014 at 4 P.M. The technical bids followed by financial bid would be opened on the next day i.e. on 21st October, 2014 in presence of tenders, who choose to attend the opening of bids. Any tender received after the scheduled date and time shall not be entertained. The successful bidder whose technical specifications get matched with the required technical specifications and quoted lowest rate is required to submit Earnest Money Deposit (EMD) @ 2.5% of the total amount of supply order awarded. The money will be refunded after complete supply and installations of instruments and completion of warranty period.

SSCST reserves the right to accept or reject all or any of the bids without assigning any reason. All legal disputes arising out of the tender/work shall be subject to the jurisdiction of the High Court of Sikkim only.

Sikkim State Council of Science & Technology

TENDER DOCUMENT

Supply and Installation of Scientific Instruments

Issue of Tender form: 16th – 17th October, 2014

Last Date Receipt of Tenders: 20th October, 2014

Date Opening of Tenders: 21st October, 2014

Price: Rs.500/-

Invitation for Bids

From: Sikkim State Council of Science & Technology, Department of Science & Technology,
Government of Sikkim, Vigyan Bhawan, Deorali-737102

To:

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Sikkim State Council of Science & Technology (SSCST) is inviting the sealed bids from the authorized distributor, manufacturer, importer, Indian/foreign manufacturer/Indian agent/partner on behalf of their foreign principles for the supply and installation of the scientific instruments. Tender details and the list of instrument with technical specifications are available with the office of the undersigned or can be downloaded from the website: www.bioinformaticssikkim.gov.in.

Technical and Financial proposals should be submitted separately in two sealed envelopes, placed in the common sealed cover marked:

“Do not open before 21st October, 2014” “Tender on procurement of scientific instruments”

Bids should reach Sikkim State Council of Science & Technology, Vgyan Bhawan, Gangtok-737101, Sikkim (India) on or before 20th October, 2014. The envelope would be opened next day at 11 a.m. (IST) by tender committee in the presence of bidders, who choose to attend the bid opening. The tender fee is non-refundable. Incomplete bids will not be included for consideration.

SSCST reserves the right to accept or reject any bid in the bidding process without assigning any reason thereof.

Yours faithfully,

Additional Director
Biotechnology

Terms and conditions:

1. Supply and installation should be completed within one month from the date of issue of the supply order.
2. Proper demonstration or training if needed should be provided at the expense of supplier/company.
3. Technical guidance should be provided even after the completion of warranty period.

II. Instructions to Bidders

1. Evaluation of Bids

For evaluating the bids, Technical Bids shall be evaluated first and financial bids of only those who qualify technically shall be opened.

2. Technical bid

A comparative statement of the technical specifications of instruments for which the rates has been quoted and the technical specifications of instruments provided by the institution should be submitted along with the soft copy in the form of CD. Compliance report is also required to be submitted. Bidders should produce valid trade license, Income Tax clearance, Professional tax clearance, authorized distributorship of the manufacturer/company, supported by authorized distributorship document.

3. Financial Proposal

The rates should be quoted in the Indian Rupee excluding the custom and central excise duty but inclusive of all other taxes and levies. The price should be quoted for the FOR destination. DSIR certificate will be provided for custom and central excise duty exemption as an when required.

4. Submission of Bids

All bids must be sealed separately and enclosed in one envelope, labeled "Do not open before 21st October, 2014", "Tender on supply and installation of scientific instrument" and addressed to Additional Director, Sikkim State Council of Science & Technology, Vigyan Bhawan, Deorali, Gangtok-737102, Sikkim (India).

5. Late Bids

Bids received after the deadline for submission of bids (20th October, 2014), will be rejected.

6. Award of supply and installation work

SSCST will notify the successful bidder through committee that its bid has been accepted. A contract shall be signed between SSCST and the successful bidder within 7 days of receipt of letter of award by the successful bidder. Successful bidder should supply and install the equipments within one month of issue of supply order.

7. Incomplete bids

Bids/Tenders found incomplete in any form shall be rejected.

8. Payment

The payment shall be made on complete supply, installation of instruments and complete paper works duly following the state financial rule.

9. Earnest Money Deposit (EMD)

Successful bidders are required to deposit EMD @ 2.5% of the total amount for which supply order is issued. The EMD will be forfeited in case bidder fails to sign the contract with STCST within 7 days from the date of notification of award or fails to execute/undertake the scope of work indicated in the contract.

List of instrument with technical specifications placed for tender:

Sr. no.	Name of the instrument.	Technical specification.
1	Refrigerated Centrifuge.	<ul style="list-style-type: none"> a. Maximum RPM- 21000. b. Maximum RCF- 30,700xg. c. Maximum capacity- 4x750ml (swing rotor). d. Temp. range- -20 to +40 degree cel. e. Timer- 99 hrs, 59 mnts, 59 sec. f. Speed Accuracy- +/- 20 r per min. g. Temp. Accuracy- +/- 1 degree cel. h. Microprocessor controlled i. Short spin facility j. RCF/RPM calculator k. Noise- <65Db. l. LED display- rotor no., rcf, temp, time, accel/decl rates & programs. m. Manual rotor recognition by inputting the rotor NO. n. Interlocking door for safety o. Display of abnormality : imbalance, over temperature, speed, motor failure/system failure p. Drive motor- AC induction. q. Dimension- 800x700x400mm. r. Power- 220 volt, 50 Hz, 15 AMP. s. Weight- 110kg. t. CE marked u. Accessories : <ul style="list-style-type: none"> 0.5 ml. capacity adaptor for 2 ml angle rotor, 1.5ml / 2ml x32 angle rotor and 50 ml round bottom angle rotor.
2	Liquid N2 Canister.	<p>LN2 capacity 20.5 liters, static evaporation rate: 0.09 liters/day Outer dimensions (Diameter x Height):37cmx65cm Inner dimension (Diameter x Height):27.9 inchesx3.8inches Neck size:5cm Vial capacity: 150 Shipping weight- 29kgs.</p>
3	Real time PCR.	<ul style="list-style-type: none"> • System should be a standalone or PC operated with the additional feature of operating through a USB stick only. System should also possess feature of uploading & downloading programs, results & log files via a USB stick.. • System should be fastest with highest ramping rate of > 5 °C/sec heating & 4.5 °C/sec cooling • System should have a backlit LCD. • System should have a thermal block of formats 24 well with a sample volume of 10-50ul per well & 96 well with a sample volume of 5 – 20 ul per well • The system should also have a heating lid temperature range of 30-110°C with automatic Temperature control and pressure settings • System should have a block temperature range of 4-99 °C/SEC with temperature accuracy of ± 0.2 °C and a temperature uniformity of ±

		<p>0.3⁰C at 95⁰C, ± 0.15⁰C at 60⁰C, ± 0.2⁰C at 72⁰C</p> <ul style="list-style-type: none"> • System should have the ability of adjusting the ramp rate & a Touchdown. • System should have five LEDs excitation filters with a excitation range of 475- 640nm & detection range of 520-740nm with a CCD. • System should have separate detection filters in order to avoid overlapping of signals or crosstalk • System should be capable of multiplexing upto 4 targets with a dynamic range of 11 order of magnitude and sensitivity of 1 copy. • System should have a scanning time of less than 13 sec for all channels (5) and less than 3sec for a single channel. • System should have a user friendly software with the ability to do Absolute quantification, Relative quantification, melt curve analysis , allelic discrimination with scatter plot analysis and High resolution melting. • The system should have a virtual pipetting tool. • System should have a colour calibration software utility for addition of a new dye. • System should be a High-resolution melting (HRM) upgraded version. • System should be capable of communicating to Windos XP and Windows 7 with an ability to connect to PC with an Ethernet connection. Upto 10 instruments should be operated from a single PC. System should have a USB port for operating instrument. • System should have a power failure recovery for 24hrs. • System should have a dimension (Wx D x H) of 330 x 230 x310mm with a weight of 9.2kg inclusive. • System should have a power usage of 200W maximum • System has 2 years warranty and CE-conform. • Must include 250 reaction plant DNA extraction kit along with the required mastermix and 96 well PCR plates. • Must be a USA or EUROPE make.
4	Gradient PCR.	<ul style="list-style-type: none"> • System should have 96 well PCR block with capacity 96 x 0.2 ml PCR tube & 0.2ml 96 well PCR plates • Intuitive user interface for rapid programming and runs • Ramping rate of heating and cooling should be 2.5⁰C • System should have Gradient block with selectable temperature gradient from 1⁰ to 24⁰ C, possible at any step of the PCR program • PCR should have 8 or more Peltier for uniform gradient distribution of temperature across the block • Freely programmable temperature gradient over 12 rows; • Sample Accuracy (C) :+0.25C of set temperature , 1 minute after clock start • Temperature uniformity: +-0.5C , 30 seconds after clock start. • Heated lid temperature should be 105⁰C or more to avoid evaporation; • System should have an option for auto restart in the event of power failure • Temperature control range of the system should be between 4⁰ to 99⁰ C with 0.1⁰C increment or decrement in set point resolution. • No. of programs should be 1000 on device with an expandable memory space. • Maximum no. of cycles should be 99

		<ul style="list-style-type: none"> • should have touch screen control system for simple programming, gradient function, adjustable ramp rate, time and temperature increment, incubation mode, pause function; System should be upgradeable to 384/60 wells. • Software should be capable of performing long range, touch down application, logging function, thermal calibration, real time thermo profile graphs and should include auto calibration wizard to enable dynamic recalibration by the user • System should be user friendly & must have installed in minimum two places in Sikkim.
5	UV /Multiband transilluminator	<p>System should be ideal for RNA/ DNA samples visualization through UV Light. Two working area : minimum 20 cm X 20 cm independent for UV light. Six UV tubes of 365 nm wavelength and five UV tubes of 254nm fitted individually in tube holder. Eight watt UV light tube fitted independently in tube holder. Intensity required minimum 7600/5200 uW/cm². Availability of local service engineers and service facility would be preferred. List of installations of Trans illuminator in India must be provided. The compliance statement of specifications offered by the quoted model vis-à-vis the above specification must be submitted with the deviations clearly marked and mentioned towards its non-compliance. Warranty minimum 1 Years.</p>
6	Homogenizer.	<p>High speed, high quality and low noise at max 5,000 - 33,000 rpm. Speed and power control optimized for the sample, The dispensing probes made up of stainless steel/ autoclavable , System working range should be flexible from 0.03ml to 1 lit., Speed Range should be max 33,000 rpm, System speed control should be Analog phase control, System should have safety device- over load protector with stand assembly and vessel holder, Electric power should be 220V ac, 50/60 Hz, Easy installation and start up Easy grinding probes in flexible volumes for 1.5/2ml tube, 5 ml tube, 15 ml tube 50 ml sample capacity, Easy collection of Plant samples, Literature conforming to above parameters to accompany, List of installations of Homogenizer in India must be provided, Warranty minimum 1 Years, Only imported make acceptable.</p>
7	Rotary evaporator.	<ul style="list-style-type: none"> v. Motorised lift with manual by-pass in case of power failure available as standard. w. Digital RPM indication with AC drive. x. Rotation speed: 30 to 270 rpm y. Digital water cum oil Bath: Temp range ambient + 5°C to 180°C. z. Vertical Glass Set - consisting of: Flask Adapter B-29 Pear shaped aa. evaporating flask cap. 1 lit B-29. bb. Round bottom receiver flask cap. 1 lit S-35 cc. Vertical Condenser with 1200cm² cooling area. dd. PTFE Feed Tube with PTFE feed stop cock. Power supply: 230 V, 50 Hz, single phase. <p>Optional Accessories-</p> <ol style="list-style-type: none"> 1. Vapour temperature indicator – digital.. Range: 0 to 99 °C, Readability : 0.1 °C, supplied with glass embedded PT-100 sensor with screw cap and PTFE ferrule. 2. Vacuum Controller - Digital Vacuum control / display range: 0 to 1013 mbar, Resolution: 1 mbar, Control accuracy: ± 3 mbar. 3. Chiller temp. range 200 degree cel. to Rt. 4. Chiller bath volumes 3 ltrs. 5. Chiller refrigerant CFC free. <p>Note- optional accessories price have to quote separately. Minimum 10 customer</p>

		list have to submit.
8	Gel electrophoresis (Horizontal) With power supply.	<p>System must come with three gel size option: Gel Size (W x L) should be 13 X 13, 7.8 X 10, 4.8 x 7.5 cm</p> <p>System should be single piece acrylic molded tank, high temperature/ corrosion proof & assures no leaking points;</p> <p>System should have Dimension (LxWxH) 27X18X9 cm</p> <p>System should be flexible to accommodate 15well or 26 wells per gel</p> <p>System should have 600ml buffer capacity</p> <p>Automatically cuts off electric field when the lid is opened</p> <p>The largest gel tray should have UV transparent trays with fluorescent ruler, special gel caster, with the level as regulatory function</p> <p>Following accessories should be provided-</p> <p>Body Tank (includes electrodes) (1), Gel Tray (130 X 130mm)(1), Gel Tray (78 X 100mm)(1), Gel Tray (48 X 75mm) (2), Gel Caster (1), Comb (1mm, 13 wells) (2),</p> <p>Comb (1.5mm, 13 wells) (2), Comb (1.5mm, 26 wells) (2) ,Comb (1mm, 10 wells) (2),</p> <p>Comb (1mm, 15 wells) (2) ,Comb (1mm, 5 wells) (2) ,Comb (1.5mm, 3 wells) (2).</p> <p>Level adjustment legs (4), Electrical Cables (1).</p> <p>All the necessary accessories to run the system should be provided.</p> <p>System should be CE and ISO certified</p> <p>System should have one year warranty.</p> <p>Power Supply :-</p> <p>Light, Smart & Simple to operate, Automatic memory & can share ten most common electrophoresis programs, Use the microprocessor for control, Automatic Memory, Automatic switch off on overload or no load, Touch keypad, Optional function of recovering after power cut off, Type of Output: Constant - Voltage, Current, power Output Range : 10-600V, 1-500mA, 1-300W, Resolution : Volt 1V, Current 1mA, Power 1W, Time Range : 1min – 9hr 9min. , Display : LCD, Dimension: 28 x 24 x 11cm, Weight : 5kg, Output Pack : 4.</p> <p>(must have some existing customers in Sikkim)</p>
9	Ice flaking machine.	Capacity- 20kg./hour, ice storage capacity 10 kg, water cons.(L/H)<0.8,wind cooling condensation,R134 C refrigerant,180W input power, net weight 32kg,Gw.Weight 36 kg, Unit dimen.(mm) 300x493x547
10	BOD incubator.	<p>Construction:</p> <p>Chamber capacity of 250 ltrs. Exterior construction of MS with heat cured epoxy coating, Chamber gauge 0.8 ~1mm. Interior construction of stainless steel (304), Double door construction.</p> <p>6. Magnetic packing lock system for outer door, Internal circulating fan for air circulation through forced convection method, Tempered & frame-less safety glass inner door enables end users to easily monitor without variation in temperature, Supplied with wire mesh shelves. Shelf height adjustable in 25mm steps, Seamless round cornered internal chamber ensures easy cleaning, Eye level door mounted controller for easy access and check operating status.</p> <p>• Controllingsystem:</p> <p>Digital PID temperature controller with PT100 sensor for precise monitoring & control, Equipped with settable temperature, time and high temp. alarm. Seven segment LED display, Control</p>

		<p>accuracy $\pm 0.2^{\circ}\text{C}$ @ 37°C.•</p> <p><u>Safety Features:</u> Over temperature protection, Over current protection, High tempered safety glass of 5mm. <u>CE marked.</u></p> <p>• <u>Others specs:</u> Temperature range: ambient $+5^{\circ}\text{C}$ to 70°C, Internal circulating fan, Supply Voltage: 230 V AC, 50 HZ, Single phase, User manual provided along with relevant test reports & calibration certificate along with traceability, Inner Dimensions- W x D x H (mm)- 450x450x450, outer Dimensions -W x D x H (mm)- 640x690x800, Heater-300W.</p> <p>Note- The origin of the product must be from an ISO 13485 accredited organization.</p> <p>Mfgs must have at least two installations of their products in Sikkim (list have to submit).</p>
11	Hot plate with stirrer.	<p>Voltage (VAC)/Frequency (Hz)/Power (W) : 85 ~ 265/50-60/450 (220V Power Supply), Max. Stirring quantity (H O) [l] : 20 , Max. magnetic bar [mm] : 80 Motor type : Disk type-motor with exterior rotor brushless motor, Speed range [rpm] : 0 ~ 1500, Dimensions (mm) : 280 x 160 x 85, Weight [kg] : 2.8 RS232 interface: OK, Rotary speed display / Temperature Display (C) : LCD Speed display accuracy (rpm) : 1, Heating plate material : Stainless steel (porcelain enamel), Heating rate : (1L water) [K/min] 6, Temperature range (C) : RT ~ 340, Temperature display accuracy (C) : 0.1, Control accuracy of heating temperature (C) : 1, Adjustable safety circuit (heating plate) / : 50 ~ 350, Temperature sensor in medium : PT1000. (Must have a existing customer in Sikkim)</p>
12	Laminar air flow (vertical).	<p>STANDARD FEATURES- Cabinet made from CRCA PU coated, Pre-Filter - 10 microns, HEPA Filter – 0.3 microns, Fluorescent lamp, UV- light, stainless Steel Work table, Polycarbonate Front Door, Gas cock, Castor wheels, Extra power outlet switch. Model- VERTICAL, Dimension- Inner Dimension: 2' x 2' x 2', Overall dimension: 2.5' x 2.5' x 7.5'.</p> <p><u>TECHNICAL FEATURES-</u> AIR FLOW Designed for 0.45m/s to 0.65 m/s. <u>PRE-FILTERS:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Size : 500 x 400 x 50 mm – 1 no <input type="checkbox"/> Type : Flange type <input type="checkbox"/> Media : Synthetic, Non-oven Polyester fibre, <input type="checkbox"/> Casing : M.S. Powder coated <input type="checkbox"/> Gasket : Neoprene <input type="checkbox"/> Retention : 10 Micron <input type="checkbox"/> Efficiency : 90% <input type="checkbox"/> Pressure drop : 6 to 8 mm <p><u>HEPA FILTER:-</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Size : 610 x 610 x 100 mm – 1 no <input type="checkbox"/> Type : Box type, <input type="checkbox"/> Media : Ultra clean glass fibre paper-imported <input type="checkbox"/> Casing : M.S. Powder coated <input type="checkbox"/> Gasket : Neoprene <input type="checkbox"/> Retention : 0.3 Micron <input type="checkbox"/> Efficiency : 99.97%

		<input type="checkbox"/> Pressure drop : 25 mm of W.c. IMPELLERS:- High performance noise abated statically and dynamically balanced. MOTOR – BLOWERS:- <input type="checkbox"/> Volts : 230 V <input type="checkbox"/> Hz : 50 <input type="checkbox"/> HP : 1/5 <input type="checkbox"/> Amps : 3.5 <input type="checkbox"/> Watts : 250 <input type="checkbox"/> RPM : 1440 <input type="checkbox"/> Qty : 1 no <u>HOUR METER:-</u> <input type="checkbox"/> Range : 9999 hrs <input type="checkbox"/> Weight : 75 gram <input type="checkbox"/> Size : 2” x 2” CLEANLINESS LEVEL : Class 100 ILLUMINATION : 18 watts Fluorescent tubes NOISE LEVEL : 65 +/- 5 db POWER SUPPLY : 230 V ,AC, 50Hz, <u>STANDARDS:-</u> <input type="checkbox"/> US FED STD 209 E <input type="checkbox"/> ISO 14644-1 <input type="checkbox"/> IEST- RP-CC-002-2 <input type="checkbox"/> BSI <u>SPECIAL FEATURES</u> <input type="checkbox"/> HEPA Protection grill <input type="checkbox"/> Hour meter for monitoring UV life <input type="checkbox"/> Magnahelic gauge instead of manometer. Note- Minimum 10 customer list of research base institute of eastern zone have to submit with full address.
13	EC/TDS/ Temperature tester.	Range EC 0 to 3999µS/cm 0.00 to 20.00 ms/cm TDS 0 to 2000mg/L(ppm), 0.00 to 10.00 g/L (ppt) Temperature 0.0 to 60.0°C/32.0 to 140.0°F Resolution EC 1 µS/cm 0.01 ms/cm.TDS 1 mg/L (ppm) 0.01g/L(ppt). Temperature 0.1°C /0.1°F, Accuracy @20°C, EC +- 2% F.S, TDS +- 2% F.S. Temperature +- 0.5 °C / +- 1°F, Battery type 4x1.5V.
14	GPS	With all required features.
15	Heating mantle	For heating of round bottom flask of 500ml.
16	Colony counter.	Circular tube for excellent all round illumination. Powerful magnifying lens reduces operator fatigue. Fully stainless steel GMP model, with last count error decrement switch. Must be from ISO 13485 accredited company.
17	HPLC	HPLC Quaternary Pump ---- Qty 1 A maximum pressure of 600 Bar to utilize smaller particle size columns for higher resolution and faster separations. (Documents should be given in support.)

This power range should allow the usage of longer columns and/or higher viscous solvents as an alternative to acetonitrile.

A wide flow range up to 10 mL/min perfectly supports standard up to semi-preparative applications. The perfect choice for 4.6 and 3.0 mm id columns.

Should speed up the method development, preparation of mobile phases and flushing the HPLC system by offering convenient access of up to four solvents for isocratic or gradient analysis. Easy, fast and secure transfer of methods from HPLC to sub-2-micron columns. Should have Integrated 4-channel degassing unit. Keeps maintenance to a minimum for lower operation costs by using robust materials such as stainless steel, titanium, gold, ruby, sapphire, ceramics, PEEK and PTFE. Should have Optional active seal wash option for high salt mobile phases to prevent corrosion.

Hydraulic system: Dual pistons in series, with variable stroke drive, floating pistons.

Settable Flow range: Set points from 0.001 to 10.0 ml/min, in 0.001 ml/min increments.

Gradient formation: Quaternary (Four Solvents) mixing and gradient capability using high-speed proportioning valve. Delay volume 600– 900 µl. Composition precision : < 0.2 % RSD or < 0.04 min SD, whatever is greater, at 1 mL/min; based on retention time at constant room temperature. **Flow Accuracy:** ± 1 % or 10 µL/min whatever is greater

Flow precision: ≤ 0.07 % RSD or ≤ 0.02 min SD, whatever is greater; Based on retention time at constant room temperature.

Compressibility compensation: User-selectable, based: on mobile phase compressibility.

pH range: 1.0–12.5 recommended. **Control:** Control by Software for HPLC. Safety and maintenance aids: Extensive diagnostics, Error detection and display, Leak detection and safe Leak handling, low voltages in major maintenance areas. GLP features: Maintenance feed-back for continuous tracking of instrument usage in terms of solvent usage with user-settable limits and feedback messages. HPLC System Tool

2. Multiple Wavelength UV/Visible Detector --- Qty 1

Simultaneous acquisition of up to 8 compound-specific wavelengths for increased sensitivity and selectivity. Low noise front-end electronics flow cell design delivers very low detection limits resulting from minimized short-term noise ($< \pm 7 \mu\text{AU}$). Should be up to 100% resolution gain in fast LC by at max. 80 Hz data acquisition rate. Electronic temperature control – Should have maximum baseline stability and practical sensitivity under fluctuating ambient temperature and humidity conditions. Wide linear range – for reliable, simultaneous quantification of primary compounds, by-products and impurities. Must have Programmable slit (1 to 16 nm) for rapid optimization of sensitivity and linearity. Should have Data recovery card and Radio frequency identification should provide new levels of data security and traceability. Automatic wavelength verification by built-in holmium oxide filter. Detector type 1024-element diode array Light source Deuterium and tungsten. Number of signals : 8. Maximum sampling rate : 80 Hz. Short-term noise $< \pm 0.7 \times 10^{-5}$ AU at 254/4 nm and at 750 nm, TC 2 sec. cell. Drift $< 0.9 \times 10^{-3}$ AU/hr at 254 nm

Linearity > 2.0 AU (5 %) at 265 nm. Wavelength range : 190-950 nm
Wavelength accuracy ± 1 nm, self-calibration with deuterium lines.
Verification with holmium oxide filter. Slit width Programmable: 1, 2, 4, 8, 16 nm. Diode width < 1 nm. Wavelength bunching Programmable, 1 - 400 nm, in steps of 1 nm. Flow cells : Standard. Time programmable Wavelength, polarity, peak width, lamp bandwidth, autobalance, wavelength range, threshold, spectra storage mode. Analog output Recorder/integrator: 100 mV or 1 V, 2 outputs. Communications LAN, Controller-area network (CAN), RS-232C, APG Remote: ready, Start, stop and shut-down signals. Should have early maintenance feedback for continuous tracking of instrument usage in

terms of lamp burn time with user settable limits and feedback messages. Electronic records of maintenance and errors. Verification of wavelength accuracy with built-in holmium oxide filter. Leak detection, safe leak handling, and leak output signal for shutdown of pumping system. Low voltages in major maintenance areas.

MUST HAVE THE CAPABILITY OF FIELD UPGRADABLE TO DIODE ARRAY DETECTOR.

3. Manual Injector : -- Qty 1

Should have 600 Bar Manual Injection Valve. 20 ul sample loop & mounting stand should also be provided.

4. Thermostatted Column Compartment -- Qty 1

Temperature range 10 degrees below ambient to 80 °C. Temperature stability ± 0.15 °C. Temperature accuracy ± 0.8 °C with calibration ± 0.5 °C. Column capacity Three 30 cm columns. Heat-up/cool-down time : 5 min from ambient to 40 °C, 10 min from 40 °C to 20 °C. Internal volume : 3 μ L left heat exchanger, 6 μ L right heat exchanger. GLP Column identification module for GLP documentation of column type. **Windows based software for complete control, acquisition, data processing for HPLC is required.** C18 Column 4.6x150mm - Qty 1, .C8 Colum 4.6x150mm - Qty 1, Normal Phase column - Qty 1, Installation Accessories : Necessary Data management/PC, Printer, Sample & Solvent Filtration kit with Pump. Solid Phase Extraction kit should also be given.

5. Fluorescence Detector ---- Qty 1

Should have the below facilities:

- Detection type: Programmable single wavelength (excitation and emission) fluorescence detector
- Performance: Raman (H₂O) > 3000 (noise reference measured at dark value)
Ex 350 nm, Em 397 nm, dark value 450 nm, standard flow cell
- Light source : Xenon flash lamp, normal mode (20 W), economy mode (5 W), lifetime 4000 hours
- Pulse frequency : 296 Hz for signal mode, 74 Hz for economy mode
- Excitation monochromator : Concave holographic grating, F/1.6, blaze 300 nm, Range 200– 1200 nm and zero- order, bandwidth 20 nm
- Emission monochromator : Concave holographic grating, F/1.6, blaze 400 nm, Range 280– 1200 nm and zero- order, bandwidth 20 nm
- Reference system : Inline excitation measurement
- Time programming : Response time, PMT gain, baseline behavior (append, free, zero)
- Step size : 1-20 nm
- Spectra storage : Limited only by disk space
- Wavelength repeatability : ± 0.2 nm
- Wavelength accuracy : ± 3 nm
- Data rate : 74 Hz
- Flow cells Standard: 8 μ L volume, 20 bar (2 MPa) pressure maximum, quartz.
- Environment : 0 - 40 °C constant temperature at <95% humidity (non-condensing)
- Analog outputs Recorder/integrator: 100 mV or 1 V,
- Output range selectable from 0.2 to 400 LU, 2 outputs
- Remote: ready, start, stop and shut-down-signals
- Safety and maintenance Extensive diagnostics, error detection and display , leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas

		<p><input type="checkbox"/> GLP Early maintenance feedback for continuous tracking of instrument usage, display of feedback messages in terms of lamp burn time with user-settable limits and feedback messages. Electronic records of maintenance and errors. Verification of wavelength accuracy using Raman band (H2O) lines.</p> <p style="text-align: center;">06. <u>Refractive Index Detector</u> ---- q t y - 1</p> <p style="text-align: center;">Should have the below facilities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Detection type: Deflection method. <input type="checkbox"/> Short-term noise : $\pm 2.5 \times 10^{-9}$ RIU <input type="checkbox"/> Drift : $< 200 \times 10^{-9}$ RIU/h <input type="checkbox"/> Refractive index range : 1.00–1.75, calibrated <input type="checkbox"/> Flow cell: 8 μL, 5 bar pressure maximum <input type="checkbox"/> Temperature control: Ambient +5 °C to 55 °C <input type="checkbox"/> pH range: 2.3–9.5 <input type="checkbox"/> Time programmable : Polarity, peak width <input type="checkbox"/> Zero adjustment : Automatic zero <input type="checkbox"/> Valves : Automatic purge and automatic solvent recycle. <input type="checkbox"/> Data rate : Up to 37 Hz <input type="checkbox"/> Analog output : Recorder/integrator: 100 mV or 1 V, with offset adjustment, RIU range selectable. <p>Note- rate must be quoted as per the serial no. 1 to 6.</p>																																		
18	Micromanipulator photometer.	Measures nutrient commonly present in fertilizer enriched solutions such as ammonia, phosphorus, nitrate and potassium in three distinct ranges of low, medium and high concentrations. Maximized for each nutrient and for every concentration. PC compatible via USB, User friendly prompts and autodiagnostic messages on LCD, Powered by 9V batteries or 12 V DC.																																		
19	Double distillation water plant (quartz).	<p>Output capacity- 2 ltrs/Hour.</p> <p>Distillate Quality Specifications-</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Specific Conductivity at 25 0C</td> <td>less than 0.4×10^{-6} S/cm</td> </tr> <tr> <td>PH at 25 0C</td> <td>*Not applicable</td> </tr> <tr> <td>Total Organic Carbon (TOC) mg/lit</td> <td>**Not detected</td> </tr> <tr> <td>Organic Matter mg/lit</td> <td>NIL</td> </tr> <tr> <td>Total Solids (mg/lit)</td> <td>0.1 mg/lit</td> </tr> <tr> <td>Silica (mg/lit)</td> <td>less than 0.01 mg/lit</td> </tr> <tr> <td>KMnO 4 color retention</td> <td>60 mins</td> </tr> <tr> <td>UV absorbance at 254 nm</td> <td>0.007</td> </tr> <tr> <td>Distillate Quality</td> <td>Pyrogen Free</td> </tr> <tr> <td>Total Plate Count</td> <td>Zero</td> </tr> <tr> <td>Standard Plate Count</td> <td>Zero</td> </tr> <tr> <td>Endotoxin</td> <td>less than 0.25 EU/ml</td> </tr> <tr> <td>Yeast and mould</td> <td>Zero</td> </tr> <tr> <td>Distillate Temperature</td> <td>65 - 75 oC</td> </tr> </table> <p>Feed water analysis-</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Conductivity</td> <td>1110×10^{-6} S/cm</td> </tr> <tr> <td>Total Dissolved Solids</td> <td>700 mg/lit</td> </tr> <tr> <td>Hardness</td> <td>Less than 5 ppm as CaCO 3</td> </tr> </table> <p>The equipment must produce Grade 1 reagent quality water.</p>	Specific Conductivity at 25 0C	less than 0.4×10^{-6} S/cm	PH at 25 0C	*Not applicable	Total Organic Carbon (TOC) mg/lit	**Not detected	Organic Matter mg/lit	NIL	Total Solids (mg/lit)	0.1 mg/lit	Silica (mg/lit)	less than 0.01 mg/lit	KMnO 4 color retention	60 mins	UV absorbance at 254 nm	0.007	Distillate Quality	Pyrogen Free	Total Plate Count	Zero	Standard Plate Count	Zero	Endotoxin	less than 0.25 EU/ml	Yeast and mould	Zero	Distillate Temperature	65 - 75 oC	Conductivity	1110×10^{-6} S/cm	Total Dissolved Solids	700 mg/lit	Hardness	Less than 5 ppm as CaCO 3
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20	Water bath.	<p>Stirred Water baths (SS body)</p> <p>CE Certified product</p> <p>Inner as well as outer body made from Stainless steel</p> <p>Stirring achieved by an efficient, continuously rated, self Cooling motor with SS shaft & propeller of anticorrosive material.</p> <p>Seamless vessel</p> <p>Water level / over temp cut off</p> <p>Temp range - + 05 to 90 degree</p> <p>Accuracy at - 37 degree +/-0.1°C</p> <p>Uniformity - +/- 0.1°C at 37°C</p>																																		

		<p>Resolution - 0.1°C Rate - 26,000/- Capacity-28 ltrs. Have to supply weight rings for conical flask for 200-1000ml and test tube holder for 16-20 tubes. Mfg. must be a ISO 13485 accredited and they must have 2-3 satisfied customers in Sikkim.</p>
21	Dry bath	<ul style="list-style-type: none"> • Programmable for up to 5 sequential steps of different temperature and duration. • Automatically adjusting (PID) control for temperature stability. • Wide temperature setting range. • Light-weight design for portability. • Sample block design is easily removed for cleaning or replacement. • Optional water bath block for added application flexibility. • Peltier design provides thermal efficiency, reliability and compact size • Temp. Setting Range - 10oC~105oC • Temp. Control Range - RT +5oC~100oC Timing • Range -1min! 99h 59min • Block Temp. - Uncertainty <_0.5oC • Block Temp. - Accuracy <+0.5oC • Block Temp. - Uniformity <+0.5oC • Heating Time - <12min (from 20oC to 100oC) • Heating Parts- Heater • Size (mm) - 300 x 200 x 150 (L x W x H) • Net Weight - 2.8kg • Power Supply AC- 220V 50Hz 120W • Accessories: 2 ml adaptor,0 .5 ml PCR tube adapter 15 ml adaptor.
22	-80 degree deep freezer.	<p>Ultra low deep freeze (-80 DEGREE C.) - VERTICAL 200 LTRS. WITH SERVO STABILIZER. MFG. MUST HAVE ISO9001-2008, ISO 14001-2004,WHO- GMP ,CE.</p> <p>Temperature range of Ultra Low Freezer from -70°C to - 80°C with micro controller based temperature controller includes digital temperature display of set value and process value Ultra Low Freezer.</p> <ol style="list-style-type: none"> 1. The cabinet of MEDITECH Ultra Low Freezer is insulated with high density CFC free Poly Urethane Foam 120 mm thick insulation. 2.Interior chamber of Ultra Low Freezer is finished resistant stainless Steel (304, 0.8 mm thick). 3.The exterior is Sky Blue/white Pure Polyster powder coated (1.0 mm thick) Mild Steel and the door has a magnetic gasket with a keyed lock. 4.Stainless steel trays are provided for storage inside Ultra low freezer 5. The Ultra Low Freezer are provided with handle and lock for safety and security <p>Refrigeration</p> <ol style="list-style-type: none"> 1. Ultra Low Freezer has Heavy-duty, air-cooled refrigeration system 2.Non-CFC, commercially available refrigerant is used in Ultra Low Freezer. <p>Temp Controller</p> <p>Micro processor based temperature control with accuracy of ±0.1°C Ultra Low Freezer</p> <p>Audio Visual Alarm Ultra Low Freezer</p> <ol style="list-style-type: none"> 1.Audio Visual Alarm when the door is opened 2. Audio Visual Alarm when temperature deviates from preset temperature <p>Chart Recorder</p> <p>7 days circular Chart recorder is provided Ultra Low Freezer</p> <p>Note- The mfg. must have minimum one installation in Sikkim.</p>

23	-20 degree deep freezer.	<p>Temperature Range : Ambient to -20°C.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Temperature Accuracy : ±1°C <input type="checkbox"/> High density foamed insulation for minimal cooling losses. <input type="checkbox"/> Evenly spread evaporator accounts for higher temperature uniformities throughout the cooling chamber. <input type="checkbox"/> Specially designed Deep Freezer to keep the door tightly locked eliminating chances of any cooling loss. <input type="checkbox"/> Outer made of powder coated Mild Steel Sheet, 1.0 MM THICK. <input type="checkbox"/> Inner chamber and trays made of Stainless Steel 304, 0.8 MM THICK. <input type="checkbox"/> Caster wheel mounted for easy mobility. <input type="checkbox"/> Eco Friendly Compressor, CFC FREE. <input type="checkbox"/> Fitted with Microprocessor Based Digital Temperature Indicator cum Controller WITH AUDIO VISUAL ALARM. <p>MFG. MUST HAVE ISO9001-2008, ISO 14001-2004, WHO- GMP ,CE and minimum one installation in Sikkim.</p>
24	UV VIS spectrophotometer.	<ul style="list-style-type: none"> • Cuvette free Spectrophotometer with microvolume based measurements and should be well suited for many UV-Vis applications as well as for protein and nucleic acids quantification. • For micro-volume mode <ol style="list-style-type: none"> 2. Minimum Sample Size: 0.5 µL 3. Pathlength: 0.5 mm (auto ranging to 0.03 mm) 4. Light Source: Pulsed Xenon flash lamp 5. Detector Type: 2048 element CCD 6. Wavelength Range: 190-840 nm 7. Wavelength Accuracy: 1 nm 8. Absorbance Precision: 0.001 AU or 1%, whichever is greater 9. Absorbance Accuracy: 2% at 0.75 AU at 260 nm 10. Absorbance Range: 0.04 – 500 (1 cm equivalent) 11. Detection limit: 0.10 mg/ml BSA; 2.0 ng/µl dsDNA 12. Maximum Concentration: 750 mg/ml BSA; 25,000 ng/µl dsDNA 13. Measurement Time: <4 seconds 14. Footprint: 20 cm X 33 cm 15. Weight: 2kg 16. Lower Sample Surface Material of Construction: 303 stainless steel and sapphire window 17. Upper Sample Surface Material of Construction: 303 stainless steel and quartz fiber • General <ol style="list-style-type: none"> 1. Should have Onboard Controller and should not require PC for operation. 2. Operating Voltage: 12 VDC 3. Operating Power Consumption: 10 W; (max 45 W) 4. Approvals: CE, UL/CSA and FCC 5. Manufacture Location: USA 6. Operating System: Custom Android OS 7. CPU: TI OMAP ARM Processor 8. Display: 1280 X 800 high definition color display 9. User Input: Touch screen with swipe and pinch motion; glove compatible 10. Internal Storage: 8GB flash drive 11. Connectivity: USB ports for printer, barcode reader and USB drive 12. Networking: Ethernet and Wi-Fi <p>Must be from USA or Europe make.</p>
25	Rota spin	Table top, 6000 rpm, 100-240 volt, 50-60 hz.
26.	VERTICAL	Automatic purging for efficient sterilization.

	AUTOCLAVE.	<p>Preset (at 121°C) Digital temperature indicator cum Controller have to linked to a preset (20 min) timer.</p> <p>Low water level cut off. End of cycle buzzer. Fitted with a Safety Valve for added safety.</p> <p>Material have to Supply with traceable certificate for Pressure Gauge and Temperature Indicator.</p> <p>Inside and outside chamber must be fully stainless steel made. Hydraulically die pressed lid from stainless steel plate. Flange, fly screw, cross pin, heater cover stand must be fully stainless steel. All internal joints have to argon welded, ground and polished to give crevice free internals.</p> <p>Preset Digital Temperature Indicator cum Controller has to link to a preset timer with 1°C resolution and ±1°C accuracy. Pt100 Sensor for precise control and monitoring.</p> <p>Low Water Level cut off. Industrial grade energy efficient ring type heater, custom made for Autoclaves, for reducing power bills by 16 to 40%.</p> <p>Lid has to be fitted with pressure gauge, safety valve/safety fusible plug, manual exhaust valve & vacuum breaker cum purge valve. Moulded rubber gasket. Drain valve on side at bottom for easy cleaning. Stainless Steel wire mesh carrier and heater cover stand.</p> <p>Working Chamber Size - (Ø x D in cm / Lt)- 30 x 50 cm (12x20'') / 35</p> <p>Heater-1.80 kW</p> <p>CAPACITY- 35 ltrs.</p> <p>Mfg. must have some installation of their products in Sikkim. List have to submit with complete details.</p>
27.	Vortex mixture	<p>Speed max3,000 rpm (variable)</p> <p>Electrical 220 VAC, 50/60 Hz, Insulation Class B, UL approved</p> <p>Control Modes Continuous and touch start/stop</p> <p>Weight 7 lbs</p> <p>Dimensions 5.75" x 5" x 5.5" (d x w x h) without table</p> <p>Accessories :</p> <p>platform head for single tube cap</p> <p>60-place Multi-Microtube Adapter</p> <p>10-place Multi-Microtube Adapter</p> <p>Micro-plate Adapter</p>
28.	Laboratory table	Standard laboratory table or 3'x4.5'x2.5'with kota stone/granite or chemical and fire proof material on the working space, drawers below the table