

www.fabkeralagov.in
email.director@fabkerala.gov.in

Fax: .00471-2441741

Telephone: 04712-441597,2440974

DEPARTMENT OF FACTORIES & BOILERS

No.A3/2937/2011/F&B

**SURAKSHA BHAVAN,
DIRECTORATE OF
FACTORIES AND BOILERS,
KUMARAPURAM,
THIRUVANANTHAPURAM - 11
DATED: 18-11-2014**

TENDER NOTICE

Sealed tenders are invited from the manufactures and authorized dealers for the supply and installation of the following high quality branded equipments for the Occupational Health and Research Centre, Assramam, Kollam.

The tender should be superscribed "Tender for the supply of equipments for" "Occupational Health and Research Centre, Assramam, Kollam." and addressed to the Director, Suraksha Bhavan, Directorate of Factories & Boilers, Kumarapuram, Thiruvananthapuram - 11

Sl. No.	Item	Quantity	Estimate amount	EMD	Cost of Tender form
1	Audio Visual Equipments	2 sets	3,00,000	1% of cost of item	Rs.600 +vat
2.	Generator 125 KVA (with acoustic chamber	1	4,00,000	"	Rs.800+vat
3.	Air Conditioners (Split)	10	3,00,000	"	Rs.600+vat
4.	5 KVA UPS with Accessories	4	5,50,000	"	Rs.1100+vat
5	Other Lab Items	--	10,00,000	"	Rs.1500 +vat
6	Computer	10	3,50,000	"	Rs.700+vat

Last date for the receipt of filled up tenders: 1 pm on 22-12-2014

Opening tender: 2 pm on 22-12-2014

Tenders and other details can be had from the Directorate of Factories & Boilers, Thiruvananthapuram on all working days till 22-12-2014, 1 pm. The under signed reserves the right to reject the tender without assigning any reason there of. The tender notification is also available in the official Website: www.fabkerala.gov.in.

Sd/-
DIRECTOR OF FACTORIES AND BOILERS

SPECIFICATION

Other Lab Items for Hospital Purpose (Branded Items Only)

Sl.No	Name of the items with specification	QTY
1.	<p>Semi Auto Analyser <u>Specification</u></p> <ul style="list-style-type: none"> • The system should be capable of doing the substrates, Enzymes, Immuno Turbidimetry, TDA's, Electrolytes, Hormonal and Coagulation chemistries. • Should be having capability to do tests in 8 modes like— Rate 1 pt linear, 2 pt linear, Rate A linear, 1 and 2 pt non linear, rate A non-linear, Absorbance, 1 pt sample blank linear and 1 pt sample blank non-linear. • Capable of storing more than 150 user defined tests in its memory and should be a completely "Open system". • Should have more than 50 direct test keys on the test menu for greater convenience in test selection and with very user-friendly programming and help menu • Should offer a choice of 8 photo static Interference filters 340,405,450,505,546,578,600 and 678 nm.it should not have a filter wheel. • Aspiration should be through a peristaltic pump programmable from 200 µl to 999 µl sipping volume. • Analysis and measurement could be done using any one of the triple mode of a flow cell, or cuvettes with an adapter. The flow cell capacity should not be more than 20µl. • Should be able to check reagent stability on line, prompt substrate depletion etc and also store reagent blank in memory. • Should have exhaustive and comprehensive L-J graphs to monitor daily or monthly QC for 2 level controls per test. • Should be capable of storing 1000 results in memory both by patient id or data recall or both. • Should be able to connect an external printer for reporting complete patient result besides having an integrated thermal printer. 	1 No
2.	<p>Elisa Reader <u>specification</u></p> <ul style="list-style-type: none"> • The system should be 8 channel Measuring System. • The system should work with Touch Screen And Should not have a keypad • It should be able to read U-, V- or flat bottom 96- well plate. • The Photometer should have filter wheel based. • omatic Measurements. • The entire Microwell Plate should be measured within 	1 No

	<p>5 seconds in the Monochromatic measurements mode.</p> <ul style="list-style-type: none"> • The result ie. Abs, Sample No, and interpretation must be seen on the screen in matrix form. Graphs should be display on the screen. • System should have lamp off mode when not in use to enhance the life of the lamp. • System should be provided with 405 nm, 450 nm, 492nm and 630 nm standard filters. There should be at least 3 extra blank filter positions. • System shold have facility for up to 42 user defined test protocols. • System should have large LCD display, with user friendly Touch screen for software operation. • System should have variable speed liner shaking facility for the Microwell plates for removal of microbubbles and mixing of the well solution. The time and speed should be user definable. • The Microwell plate position should have aerosol cover facility to prevent external contaminants and stray light. • It should have the measurements range up to 2.5 Abs. • The On- doard software should have capability of storing the calibration curve data for at least 8 standard in all the 42 test programs. The Curve should be displayed on screen. • The system must accept external dot matrix printer and must print result s in preformatted matrix form giving details such as Sample No. Value, Abs and interpretation. • The On board software should have QC data storage facility for up to 31 points, with the Levy-Jennings curve. • It should have ports for external printer and for transmission of data to the host computer • It should have optional host computer software for extensive data management capability. 												
3.	<p>Sodium Potasium Analyser <u>Specification</u></p> <ul style="list-style-type: none"> • Should be capable of measuring sodium , Potassium and chloride electrolyte tests from Whole Blood, Serum, Plasma or Urine • Should be base on ISE technology. • Following parameters must be measured directly: <table border="0" data-bbox="422 1711 990 1875"> <thead> <tr> <th colspan="3" style="text-align: center;">Required Range</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Na</td> <td>Blood</td> <td>20-200 mmol/L</td> </tr> <tr> <td>Urine</td> <td>25-1000mmol/L</td> </tr> <tr> <td>K</td> <td>Blood</td> <td>0.2- 40mmol/L</td> </tr> </tbody> </table>	Required Range			Na	Blood	20-200 mmol/L	Urine	25-1000mmol/L	K	Blood	0.2- 40mmol/L	1 No
Required Range													
Na	Blood	20-200 mmol/L											
	Urine	25-1000mmol/L											
K	Blood	0.2- 40mmol/L											

	<p>Urine 1.0-500 mmol/L</p> <p>Cl Blood 25-200mmol/L</p> <p>Urine 25-500mmol/L</p> <ul style="list-style-type: none"> • Should operate on sample size of 100 µl for whole blood serum or plasma sample 400 µl for Pre-diluted urine samples. • Should measure results in 55 seconds. • Should have automatic probe wiping facility. • Should have facility for automatic calibration. • The sample and Reagent handling module should be such that they are totally enclosed • Should have sigle plug on disposable reagent and waste module system. • Should be able to store results of at least 128 patients • Should have facility to be interfaced to an auto sampler • Should have an in built printer and a RS232 port for interfacing • Should perform one point calibration with every sample run to ensure accurate and precise results. • Should have internal sample counter to know No. of samples performed along with the Lot of the reagent pack. • Concentration of sodium, potassium / Chloride in calibrant A & calibrant B Should be specified on the reagent pack 	
4.	<p>URINE ANALYSER</p> <p><u>Specification:-</u></p> <ul style="list-style-type: none"> • The unit should work on reflectance photometer to evaluate the color intensity of each test zone. • The unit should have three wavelengths viz 470 nm, 525 nm and 625 nm • The unit should have through put of around 600 samples / hr. • The unit should have strip position check system and automatic dry strip detection. • The unit should be concealed waste container for used strips disposal • The unit should give results in SI, conventional and arbitrary units. • Company should provide two levels (positive and negative) ready to use liquid stable urine controls. • Company should provide tri-level grey control strips for instrument QC • Instrument should be touch screen with colour L C D display • The unit should have built in printing capability • Instrument should have option to connect to bar code 	1 No

	<p>reader via U S B Port</p> <ul style="list-style-type: none"> • Unit should have memory capacity for 2000 measurements with all details like data by date and sample I D • Unit should have external ports Rs. 232 and also 2 USB ports for LIS connection. <p>Power supply: 220-240 V; 50-60 HZ.</p>	
5.	<p>Hot Air Oven <u>Specification</u></p> <ul style="list-style-type: none"> • Size : 450x450x450 • 1000 watts • Capacity : Approx 90 ltrs • Inner chamber made of SS and Outer made of mild steel with powder coating. Gap between the walls filled with glass wool Insulation to avoid Heat loses. • Microprocessor based digital temperature controller Temperature range: 50°C to 250°C. • Accuracy: +/- 1°C. • Air ventilation are placed on top of both sides remove hot gases / fumes. 	1 No
6.	<p>INCUBATOR <u>Specification:-</u></p> <ul style="list-style-type: none"> • Double wall chamber inner made of S S and outer M S Sheet duly powder coated with 2.5 thickness glass wool insulation. • Microprocessed based digital temperature controller and working temperature ambient + 5⁰C to 8 0⁰C with an accuracy of +/- 1⁰C and without thermometer. 	1 No
7.	<p>Water Bath <u>Specification:-</u></p> <p>Size: 350 x 400 x 100 (12 holes of 75 mm dia- 15 L capacity- 2000Watts</p> <ul style="list-style-type: none"> • Double walled construction outer made of M S duly powder coated and inner chamber with Top Lid made of S S. • The gap between the walls insulated with glass wool and supplied without thermometer. • Microprocessed based with a Digital Temperature controller and working temperature from ambient +5⁰C to 80⁰C having an accuracy of +/- 1⁰C with concentric rings. 	1 No
8.	<p>Needle Destroyer <u>Specification:-</u></p> <ul style="list-style-type: none"> • Full stainless steel cabinet • Equipment Size: (W x Dx H) : 175 * 195* 105 mm • Weight : 5 kg. • Needle burning Process : Electrical resistance 	1 No

	burning <ul style="list-style-type: none"> • Peak power consumption : 70 watts for less than 2 seconds • During heating • Time taken for burning : less than 2 seconds. • Easily removable Waste collection tray • Built in imported hand operated Syringe hub cutter. • Fuse for general protection. 	
9.	VDRL Shaker <u>Specification :-</u> <ul style="list-style-type: none"> • Made of M S body duly powder coated with platform size of 300 mm x 300 mm for handling small flasks or reactor trays. • The shaker platform rotates in a horizontal plane and allows a wide variety of rotary and mixing application. • Equipped with 0-15 minutes timer up to 180 RPM approx. 	1 No
10	WATER STILL (Wall Mounting) <u>Specification:-</u> <ul style="list-style-type: none"> • It is electrically operated to obtain pyrogen free distilled water, made of complete S S (Single wall) fitted with ISI marked heaters to ensure trouble free continuous service. • Wall mounting clamp is provided with the unit but without rubber tube, supplied with cord and plug to work on 220/ 230 V. • System should have a water level cut of system. 	1 No
11	MEDICAL MICROSCOPE --- BINOCULAR -- bearing ISI MARKED	1 No
12	Test tube 12 x 100 glass	200 Nos
13	Test tube 12 x75 glass	200 Nos
14	Beaker glass- -50ml	5 Nos
15	Beaker glass- 100 ml	5 Nos
16	Beaker glass- 150 ml	5 Nos
17	Beaker glass- 250 ml	5 Nos
18	Beaker glass- 500ml	3 Nos
19	Beaker glass-1000 ml	2 Nos
20	Conical flask-50 ml	5 Nos
21	Conical flask-100 ml	5 Nos
22	Conical flask-250 ml	5 Nos
23	Conical flask-500 ml	3 Nos
24	Conical flask-1000 ml	2 Nos
25	Measuring cylinder-50 ml	5 Nos
26	Measuring cylinder-100 ml	5 Nos
27	Measuring cylinder-250 ml	5 Nos
28	Measuring cylinder-500 ml	3 Nos
29	Measuring cylinder-1000 ml	2 Nos

30	Counting chamber	1 No
31	Cover glass 18 x18 mm/ 22 mm x 22 mm	10 PKT
32	Haemometer	1 No
33	Haemocytometer	1 No
34	Micro slides (pkt of 50 Nos) Size: 75 mm x 25 mm Thickness : 1.35 mm	10 pkt
35	Test tube Holder	5 Nos
36	Specimen Bottle-30 ml	100 Nos
37	Bunsen burner	1 No
38	Hot Plate -- 2000 Watts	1 No
39	Wash Bottle - 500 ml	10 Nos
40	Slide Box - for carrying 100 Nos slides	2 Nos
41	Blood Cell Counter – Manual	1 No
42	Stop watch	2 Nos
43	Micro Tip Yellow	1000 Nos
44	Micro Tip Blue	1000 Nos
45	Spirit Lamp	3 Nos
46	Coupling Jar	5 Nos
47	Petridish Small -- Glass	10 Nos
48	Petri dish Medium -- Glass	10 Nos
49	Petri dish Large -- Glass	10 Nos
50	Auto Clave --- S S 15 x 12	1 No
51	Sterilizer Large--- 16"	1 NO
52	Syringe with needle- 2 ml	2000 Nos
53	Syringe with needle- 5ml	2000 Nos
54	Syringe with needle- 10ml	1000 Nos
55	Syringe with needle- 20 ml	500 Nos
56	Examination Gloves Small	20 box
57	Examination Gloves Medium	20 box
58	Examination Gloves Large	20 box
59	Sterile Gloves Size : 6.5	250 pair
60	Sterile Gloves Size : 7	250 pair
61	Sterile Gloves Size :7.5	250 pair
62	Digital Thermometer	5 Nos
63	Tourniquet	5 Nos
64	Filter Paper - whattman	5 pkt
65	Labcoat	5 Nos
66	Revolving Stool --- S S TOP	5 Nos
67	Wheel chair --- Folding type	1 No
68	Medicine Trolley --- complete S S	1 Nos
70	P H Meter digital	1 No
71	Measuring tape	5 Nos
72	Lab furniture ETC.	

**125 KVA on line Generator (Branded Item)
(with Acoustic chamber)**

Technical Specifications of Generator Set	125kVA
Standby Power Rating, kVAe (kWe)	138 (110)
Continuous Power Rating, kVAe (kWe)	125 (100)
Maximum Load, Amperes	192
Rated Load, Amperes	174
Power Factor	0.8
Engine Specifications	
No. of Cylinders	6
Aspiration	TCI
Cooling System	Water Cooled
Displacement, litres	5.86
Bore, mm	96
Stroke, mm	135
Rated rpm	1500
Max. Engine Power, hp @ rated rpm	169
Rated Engine Power, hp @ rated rpm	154
Governor Type, Class of Governing	Electronic - A0 Class
Air Cleaner Type	Dry Type
Lube Oil Specifications	SAE,CF4 15W40
Starting System, volts	12V, Electrical
Battery Capacity, Ah	140Ah
Fuel	High Speed Diesel
Fuel Consumption, litres/hour @ 75% load	20.1
Alternator Specifications	
Make	Mahindra/Leroy Somer
Type	Brushless, Single Bearing, Self Exciting
Voltage, volts	415 (3 Phase)
Rpm / Frequency, hz	1500/50

Voltage Regulation	± 1%
Enclosure Type	IP 23
Class of Insulation	H Class
Control Panel	Standard Manual Control Panel with Digital Controller
Acoustics Specifications	
Acoustics Enclosure (Canopy)	CRCA Sheet
Noise level, dB	75dBA
Exhaust Silencer	Outside canopy
Length, mm	4000
Width, mm	1200
Height, mm	2180
Weight, kg	2460
Warranty	3 years and above

Split AC (Branded Item)

Capacity: 1 Ton(s), Type: Split, Noise Level Indoor: 35 DB, Anti Fungus, Timers, Auto Restart, Sleep Mode, Remote Control, Air Swing, Dehumidification, 3 years warranty.

Audio Visual Equipments (Branded Item)

Projector : Full HD resolution, single chip DLP projector with around 4500 ANSI lumens, 16:9 aspect ratio and HDMI

input (Make –Panasonic /Hitachi/Mitsubishi)

Ceiling Mounting Kit for Projector: Fixed type (Make –Custom)

Projection Screen (Manual): -8' x 6' (approx), wide format supported, pull down and self lock type.
(Make –Draper / Dalite)

Face plate with two 5 amp Power Point: It consists 1 VGA, 1 HDMI, 1 Audio Input. (Make –Custom / Magnum)

VGA Switcher: At least 6 input. (Make –Extron / Kramer)

HDMI Switcher: At least 6 input. (Make –Extron / Kramer)

Audio De Embedder HDMI:(Make –Extron / Kramer)

Speaker: 4" ceiling mounted speaker. (Make –JBL)

Boundary Layer Microphone :Table top type. (Make –Sennheiser / Shure)

Wireless Hand Held Microphone :(Make –Sennheiser / Shure)

Wireless Lapel Microphone: Collar type. (Make -Sennheiser / Shure)

Audio Amplifier: 8 channel audio amplifier at least 50 watt per channel.(Make –Crown / Biamp)

DSP: Digital Signal processor with at least 8 channel AEC microphone mixer with built in AEC and NC.
(Make –Biamp / Clear one)

DSP Extension: Digital extensionwith at least 8 channel AEC microphone mixer with built in AEC and NC.
(Make -Biamp / Clear one)

AV Rack: For equipment storage. (Make –Val Rack)

Blue Ray DVD Player, All Region Free (Make –Sony)

Cable & Connector: Cable manager to be provided under the table for routing all cables. HDMI, VGA and Audio cable

(Make –MX) Power Cable (Make -Havells / Phinolex) Connectors (Make -Neutric / MX)

Warranty : 3 years

Installation Charges: It is to be done by the supplier.

COMPUTER (Branded Item)

CPU	Intel Core i3@3.3 GHz or Higher
Chipset	Intel Q77 or better
Bus Architecture	3 PCI(PCI/PCI Express)
Memory	4 GB 1333 MHz DDR3 RAM with 8 GB or higher expandability
Hard Disk Drive	1TB
Monitor	18.5” or larger TFT/LED Digital Color Monitor
Keyboard	104 Keys
Mouse	Optical with USB interface
Bays	3 Nos or above
Ports	6 USB Ports (with at least 2 in front), microphone and headphone in front
Cabinet	Mini Tower
DVD Drive	DVD writer
Networking	10/100/1000 on board integrated Network port with remote booting facility
Operating System	Windows 8.1 & Professional with Media and Documental Authenticity
OS Certifications	Windows 8 OS and Linux certification
Preloaded Antivirus	Antivirus latest version software
Wifi & Graphix card	
ISO/ISI Certified Desktop having 3 year onsite warranty	

5 KVA Online UPS (Branded Items)

Sl. No.	Parameter	Requirement
1	Capacity	5KVA online UPS
2	Make	ISO 9001 & 14001 certified company
3	Type	Online Double Conversion
INPUT		
4	Normal AC Input Voltage	1 phase 230 Vac+ Neutral + Earth
5	Line low/high transfer	170 VAC to 280 VAC
6	Frequency range	50 Hz+/-6Hz
7	Power Factor	>=0.9
8	Transfer time	Zero Milli Sec for AC to DC & Inverter to bypass
OUTPUT		
9	Voltage	Single phase 220/230 VAC
10	Dynamic Regulation	<5% for 100% step load charge, correct in <4 millisecond

11	Inverter Technology	IGBT based PWM technology
12	Frequency	50 Hz+/-0.05Hz free running, 50 Hz+/-3 Hz Sync Mode
13	Output wave form	pure sine wave
14	Crest factor	4:1
15	THD at linear load	<=2%
16	THO at Non linear load	<=5%
17	Power Factor	0.8 lag (load)
18	Efficiency (AC-AC)	>90%
19	Inverter overload capacity	125% for 10 Minutes 150% for 1 minute
20	Static Bypass	To be provided
BATTERY		
21	Back Up/VAH	1 Hour at full load (4000W) – 60 Ah X12 Nos, VAH=8640
22	Battery voltage	144V
23	Battery make /Warranty	Preferred Brands Exide 6 EL/Southern Hipower with 4 years warranty from OEM
GENERAL		
ENVIRONMENTAL		
24	Operating temperature	0-55 degree
25	Relative Humidity	20-90% (non-condensing)
26	Noise Level	<50db@1Meter
27	Interface management	Smart RS232
28	Communication	SNMP Slot (optional)
29	Indications essential for operation	Mains on, Inverter On/Off/Fault, Battery Level, Bypass on load level
30	Display	LCD display
31	Audible Alarm	Built in Buzzer fault condition
32	Protections	MCB's for input and Out Put
33	Warranty	3 years onsite warranty for UPS

Sd/-

DIRECTOR OF FCYTORIES & BOILERS