RFQ 15/2021 - Equipment

No.	Item Specifications	Fill Your Specifications
1	**Ultra Plasma freezer (-20 °C)**	
	Description of Function	
	Deep Freezers are required to preserve blood and blood products, vaccinations etc at specified temperature.	
	Operational Requirements	
	Microprocessor Vertical Freezer, at least double door with adjustable 4 to 6 shelves (frost free)	
	Separate Chamber racks to be pulled out for easy handling	
	Non-CFC refrigerant	
	Technical Specifications	
	Capacity within 250 to 300 L	
	Digital display of set and actual temperature, with audiovisual alarm	
	No condensation on storing material with automatic electric defrost	
	Construction:	
	Solid rust free cabinet to prevent corrosion and lockable castor wheels.	
	Refrigeration System	
	Heavy Duty refrigeration system, maintenance free, below -20 deg C (+ 10 C) cascaded connection with hermetically sealed refrigeration compressors and reliable refrigeration to minimize noise and vibration, air cooled with security lock to prevent unintentional switch off shall be supplied. It should have cooling time within hours at maximum ambient temperature of 33deg C.	
	The equipment should be of continuous duty and frost free.	
	Alarm	
	It should also have audio visual Electronic Alarm System independent of power supply.	
	Insulation High density polyurethane or equivalent Gaskets - Double seal silicon.	
	System Configuration Accessories, spares and consumables	
	As specified	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Standards, Safety and Training	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA approved product certificate.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period During warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	Supplier must accomplish proper installation & commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
2	**Colony Couner**	
	Full Stainless steel fabricated body with duly heat cured epoxy coating with dimensions 41x32x30 cm 2. Unit It should consist of Digital dispay upto 4 digits. count range from 0 to >9000 It should consist of Magnifying lens (more than 2X magnification. with digital marking pen(1) Accepts petridish upto size 120mm diameter with a centering adaptor for standard 90mm petri dish Fluorescent LED lamp Zero reset button	
3	**Full Automated Hormone analyzer (min. 200 test/hr)**	
	Technical Specifications	
	Fully automated, sample selective analyzer for heterogeneous immunoassays, continuous loading, self contained Min. throughput 200 results/hr Serum, Plasma	
	Specify Load/unload capacity	
	Specify Number of Rack positions, RD standard	
	Specify Number of Tray (racks/ samples)	
	processed with priority	
	Primary tubes: 5 to 10ml; 16x100, 16x75, 13x100, 13x75mm	
	Sample cup: 2.5ml Cup on tube:	
	Cup on tube: Cup on top o a 16x75/100mm 5 to 50µl	
	Ready to use Rack Packs with 2-D barcode temperature controlled reagent compartment	

No.	Item Specifications	Fill Your Specifications
	(20°C) onboard capacity max. 15 tests 180 disposable cups	
	360 disposable tips (Assay Tip), liquid level and clot detection, sample and test specific dilution	
	Colored touch-screen monitor, customized keyboard and computer	
	RS 232 serial interface, bi-directional, query and batch mode	
	Running cost details important and all start up kits neede for operation and calibration	
	Running cost details important and all start up kits neede for operation and calibration	
	Operating Environment	
	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%	
	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%	
	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
	Suitable UPS with maintenance free batteries for minimum 30 min. back-up shall be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	Should be FDA/CE/BIS approved product.	
	Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electromedical equipment: 61326-1.	
	Certified to be compliant with IEC 61010-1, IEC 61010-2-281, 61010-2- 101 for safety.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years from acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure planned preventive maintenance (PPM) and corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.	
	Documentation	
	User (Operating) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	Service (Technical / Maintenance) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	List of important spare parts and accessories with their part number and costing.	
	Certificate of calibration and inspection from factory.	
4	**Full Automated Hormone analyzer (min. 30 test/hr)**	
	Technical Specifications	
	Fully automated, sample selective analyzer for heterogeneous immunoassays, continuous loading, self contained Min. throughput 30 results/hr Serum, Plasma	
	Specify Load/unload capacity	
	Specify Number of Rack positions, RD standard	
	Specify Number of Tray (racks/ samples)	
	processed with priority	
	Primary tubes: 5 to 10ml; 16x100, 16x75, 13x100, 13x75mm	
	Sample cup: 2.5ml Cup on tube:	
	Cup on tube: Cup on top o a 16x75/100mm 5 to 50µl	
	Ready to use Rack Packs with 2-D barcode temperature controlled reagent compartment	
	(20°C) onboard capacity max. 15 tests 180 disposable cups	
	360 disposable tips (Assay Tip), liquid level and clot detection, sample and test specific dilution	
	Colored touch-screen monitor, customized keyboard and computer	
	RS 232 serial interface, bi-directional, query and batch mode	
	Running cost details important and all start up kits neede for operation and calibration	
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	Operating Environment	
	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%	
	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%	
	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	

No.	Item Specifications	Fill Your Specifications
	Suitable UPS with maintenance free batteries for minimum 30 min. back-up shall be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	Should be FDA/CE/BIS approved product.	
	Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electromedical equipment: 61326-1.	
	Certified to be compliant with IEC 61010-1, IEC 61010-2-281, 61010-2- 101 for safety.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years from acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure planned preventive maintenance (PPM) and corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
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	Documentation	
	User (Operating) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	Service (Technical / Maintenance) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	List of important spare parts and accessories with their part number and costing.	
	Certificate of calibration and inspection from factory.	
5	**Real Time PCR Machine**	
	Operational Requirements :	
	Real Time PCR System for measuring Real-time amplification of DNA/RNA from purified samples, application include Quantification assays, Qualitative assays, SNP,HRM, Gene Expression, Any published protocol or chemistry should be reproduced.	
	Instrument should be with standalone operation independent of Computer work station.	
	System should have a prot for USB Drive for uploading and downloading data and programs.	
	Dedicated Peltier-based Real time Thermal cycling system, Electro formed silver mount 96-well block can accomadates both 96 well PCR plates as well as 8-Tube Strips with clear caps.	
	System should have a temperature accuracy of ±0.2 ºC and well to well Temperature Uniformity of ±0.1 ºC	
	System should have Gradient function for the temperature programmable of 20 ºC gradient range.	
	System should allow Optimum reaction volumes of 5µl to 50µl or more	
	System should have sample ramp rate more than 4 ºC while heating and less than 2ºC while cooling.	
	System to provide on line Cycle by Cycle monitoring with continuous display of readings for Fluorescence, Temperature changes and progression of amplification and detection simultaneously on all 96 wells on the plate without any moving parts.	
	RT PCR system should have fiber optics for high accuracy and easy multiplexing on probed assys.	
	System should have individual well to well excitation and emission for better sensitivity for capturing the signals without any edge effects.	
	System should have broad range high-intensity white LED as a excitation source	
	Working Programmable range 37 to 99 ºC, Sensitivity from 1 copy detection and dynamic range of 10 orders of magnitude.	
	System should be compatible with all kind of chemistry Syber green and Hydrolysis probe and compatabile with all kind of kits in market. Should be open system for both reagents & disposable plastic consumables.	
	System should use cooled CCD camera for detection without any moving detectors or scanning detectors	
	Instrument filters should be divided based on the wavelength starting from 400 to 700 nm	
	System should have a minimum of Eight filters, Four Excitation filters (470/533/577and 645 nm) and Four Emission filters (514/572/620 and 697 nm) to cover majority of the commercially available dyes	
	Multiplexing capacity: true 4 color multiplex analysis without any passive reference dye.	

No.	Item Specifications	Fill Your Specifications
	System should be Calibrated for Detection Dyes : SYBR, FAM, ResoLight dye, VIC, Hex, Yellow555, Red610, Texas Red, and Cy5. Any new dyes should be used with in the filter settings.	
	System should be free of passive reference dye.	
	System should be capable of Simultaneous data acquisition for all positions in 10–1000 ms (dynamic mode)	
	Fast run time, Runtime < 40 min for 3-step 40 cycles PCR	
	Should have preferably 10 inch colored LCD touch Screen display for smooth operation while standalone usage and online fluorescence display.	
	The real time PCR software should allow the user to do the analysis of all type of application like:	
	a. Absolute quantitation	
	b. Advanced Relative quantitation	
	c. Multiplex-PCR allelic discrimination (SNP)	
	d. Tm Calling (Meltcurve Anlysis – Sybr)	
	e. Endpoint Genotyping	
	f. Qualitative Gene detection	
	g. High Resolution Melting curve analysis (HRM) for mutation studies	
	h. Pathogen detection and plus/minus assay.	
	Nessessary control / QC kits for installation should be supplied along with instruments	
	Software should be compatible with Win 7 to Win 10 with future upgradation	
	RT PCR software should be of multi user installation facility and allow the user to design the experiment or plate layout conveniently..	
	Software should allow to import / export formats like Txt export, Charts: Data and image.	
	System software should support remote access for trouble shooting.	
	Software should have the provision to use barcode scanner and import / export option for plating layout to reduce the time in plating layout.	
	A laptop/ desktop PC with good configuration should be supplied	
	Should provide AMC terms and conditions	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Power supply: 220-240V/ 50/60 Hz AC Single phase with appropriate plug .The power cable must be minimum 3 Meter	
	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Covered by a two-year replacement warranty in the event of any component failure arising from defective design, materials or workmanship.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Full automated Electrophoresis Machine**	
	Capillary	
	full automated	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Power supply: 220-240V/ 50/60 Hz AC Single phase with appropriate plug .The power cable must be minimum 3 Meter	
	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	

No.	Item Specifications	Fill Your Specifications
	Installation and Commissioning	
	Supplier must accomplish proper installation and commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
7	**Full Automated Tissue processor Machine**	
	Easy loading and full process by rotating table principle	
	Up to 240 cassette	
	Up to 25 holders	
	System status monitor	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Power supply: 220-240V/ 50/60 Hz AC Single phase with appropriate plug .The power cable must be minimum 3 Meter	
	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Covered by a two-year replacement warranty in the event of any component failure arising from defective design, materials or workmanship.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	Supplier must accomplish proper installation and commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
8	**Tissue Autostainer**	
	Operational Requirements:	
	High throughput robotic stainer for Multiple staining applications and should run up to 12 racks in parallel.	
	Simultaneous staining of protocols of haematoxylin-eosin and pap stain should be available .	
	Equipment should have solvent resistant color touch screen to monitor the staining process using the graphical process representation.	
	Racks should be assigned to the correct Staining Protocol based on transponder & Color –code system.	
	The equipment should have 34 reagent stations and 6 wash stations of 450ml capacity.	
	The equipment should be programmable for 50 programs of upto 40 steps each with incubation time setting from 0 sec to 59 minutes 59 seconds.	
	Optional Integrated oven with temperature setting from 40□ to 70□C for optimal slide drying is preferred.	
	Continuous loading and unloading of slides via rack entry and exit door should be available.	
	Specimen slide throughput of at least 200 slides per hour upto 600 slides per hour is required.	
	Agitation programmable from 0 to 20 times or continuous should be available.	
	Reagent management System, Station information on touch screen & Data Logging should be available.	
	Programmable up and down movement of robotic arm should be available.	
	Fume extraction fan with charcoal filter to remove hazardous fumes should be available.	
	Gentle vibration to slide rack during lifting to reduce carry over contamination should be available.	
	Audible warning buzzer in case of any error during operation should be a feature of the equipment.	
	Operating Environment	

No.	Item Specifications	Fill Your Specifications
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Power supply: 220-240V/ 50/60 Hz AC Single phase with appropriate plug .The power cable must be minimum 3 Meter	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	Supplier must accomplish proper installation and commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
9	**Embeding Center**	
	manual lever and foot switch for paraffin dispenser	
	adjustable magnifier	
	spacious and heated paraffin collection tray	
	from 3-8 liter paraffin container	
	cooling spot	
	working area with Led light	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Power supply: 220-240V/ 50/60 Hz AC Single phase with appropriate plug .The power cable must be minimum 3 Meter	
	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Covered by a two-year replacement warranty in the event of any component failure arising from defective design, materials or workmanship.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	Supplier must accomplish proper installation and commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
10	**Floating Water Bath**	
	capacity min. 2 liter	
	capacity slide min. 30	
	over heating protection	
	microprocessor thermostatic controller	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Power supply: 220-240V/ 50/60 Hz AC Single phase with appropriate plug .The power cable must be minimum 3 Meter	

No.	Item Specifications	Fill Your Specifications
	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Covered by a two-year replacement warranty in the event of any component failure arising from defective design, materials or workmanship.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	Supplier must accomplish proper installation and commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
11	**Semi Automated Microtome**	
	Operational Requirements :	
	The instrument should have Motorised feeding system with optional motorized and manual sectioning with rocking mode facility and ability for voltage selection,2nd handwheel brake, separate control panel for display, blade holder, disposables blades , with following specifications:	
	Section thickness setting: 0.5 to 100 microns	
	Setting values:	
	0.5 to 5 micron in 0.5 micron increments	
	5 to 20 micron in 1 micron increment	
	20 to 60 micron in 5 micron increment	
	60 to 100 in 10 micron increment	
	Horizontal specimen feed: 28 mm +/- 1 mm, feed motion via step motor	
	Coarse feed: Motorised coarse feed in two steps i.e 300 micron /sec and 900 micron/sec.	
	Vertical specimen stroke length: 70 mm.	
	Specimen orientation: Horizontal 8 deg, Vertical 8 deg.	
	Trimming Section thickness: 1 to 600 micron	
	8.Specimen retraction: 5 to 100 micron in 5 micron increment, can be turned off.	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Power supply: 220-240V/ 50/60 Hz AC Single phase with appropriate plug .The power cable must be minimum 3 Meter	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	Supplier must accomplish proper installation and commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
12	**Full Automated Chemistry Analyzer (not less than 300 Test/hr)**	
	The Fully-automated Biochemistry Analyzer measures biochemical indexes by analyzing blood and other body fluid, then combines with other clinical information, to help diagnose disease, evaluate organs function, identify disease gene and determine the norm for future therapy.	

No.	Item Specifications	Fill Your Specifications
	Automatic Analyzer	
	random continuous access	
	Specify: Sample Tray , continuous loading, positive sample identification	
	Not less than 300 test / hr	
	Automatic calibration	
	Specify Sample Tray capacity	
	sample Separate access to refrigerated area for on-board calibrators and controls.	
	Reagent Storage Area:	
	Specify Refrigerated storage for one- or two-reagent chemistries plus open system capability –	
	Calibration stability more than 10 days	
	documentation on CD	
	Host interface : bidirectional	
	Auto-dilution : Automatic dilution from the original sample	
	Auto-repeat : Automatic repeat testing from the original sample	
	Automatic Clot Detection	
	Sample Volume : from 1-5 µL	
	Running cost details important and all start up kits neede for operation and calibration	
	Operating Environment	
	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%	
	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%	
	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
	Suitable UPS with maintenance free batteries for minimum 30 min. back-up shall be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	Should be FDA/CE/BIS approved product.	
	Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electromedical equipment: 61326-1.	
	Certified to be compliant with IEC 61010-1, IEC 61010-2-281, 61010-2- 101 for safety.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years from acceptance.	
	Maintenance Service During Warranty Period	
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	Installation and Commissioning	
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	Service (Technical / Maintenance) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	List of important spare parts and accessories with their part number and costing.	
	Certificate of calibration and inspection from factory.	
13	**Full Automated Chemistry Analyzer (not less than 180 Test/hr)**	
	The Fully-automated Biochemistry Analyzer measures biochemical indexes by analyzing blood and other body fluid, then combines with other clinical information, to help diagnose disease, evaluate organs function, identify disease gene and determine the norm for future therapy.	
	Automatic Analyzer	
	random continuous access	
	Specify: Sample Tray , continuous loading, positive sample identification	
	Not less than 180 test / hr	
	Automatic calibration	
	Specify Sample Tray capacity	
	sample Separate access to refrigerated area for on-board calibrators and controls.	
	Reagent Storage Area:	
	Specify Refrigerated storage for one- or two-reagent chemistries plus open system capability –	
	Calibration stability more than 10 days	
	documentation on CD	
	Host interface : bidirectional	

No.	Item Specifications	Fill Your Specifications
	Auto-dilution : Automatic dilution from the original sample	
	Auto-repeat : Automatic repeat testing from the original sample	
	Automatic Clot Detection	
	Sample Volume : from 1-5 µL	
	Running cost details important and all start up kits neede for operation and calibration	
	Operating Environment	
	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%	
	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%	
	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
	Suitable UPS with maintenance free batteries for minimum 30 min. back-up shall be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	Should be FDA/CE/BIS approved product.	
	Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electromedical equipment: 61326-1.	
	Certified to be compliant with IEC 61010-1, IEC 61010-2-281, 61010-2- 101 for safety.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years from acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure planned preventive maintenance (PPM) and corrective/breakdown maintenance whenever required.	
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	User (Operating) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	Service (Technical / Maintenance) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	List of important spare parts and accessories with their part number and costing.	
	Certificate of calibration and inspection from factory.	
14	**Fully Automated Haematology Analyser (3 Parts Differential)**	
	Description of Function	
	Automated haematology analyser or complete blood cell counter is used to count various types of blood cells in the blood.	
	Operational Requirements	
	Fully automated 3 parts differential haematology analyser.	
	System Configuration	
	Fully Automated Haematology Analyser, complete unit with all standard reagents, consumables and accessories.	
	Technical Specifications	
	Determination of 18 to 19 parameters, with 3-part differential, for routine haematology.	
	Shall have fully automatic, open system.	
	Sample volume: < 30ul.	
	Throughput: approx. 50 samples per hour, 24h power on, with dormancy and wake function.	
	Determination of: Red blood cell (RBC), White blood cell(WBC), Haemoglobin(HGB), Haematocrit(HCT), Mean cell volume(MCV), Mean cell haemoglobin(MCH), Red cell distribution(RDW-SD and RDW-CV), Platelets(PLT),Platelet distribution(PDW-SD and PDW-CV), Mean platelet volume(MPV), differential leucocytes (LYM, LYM%, MID, MID%, GRA, GRA%).	
	Method: Photometry and impedance technology, cyanide-free colorimetry for haemoglobin counting.	
	Calibration: independent automated calibration and manual calibration for minimum two test modes.	
	Typical counting time: approximately 60 seconds for differential.	
	Shall have with self-test capability.	
	Display: LCD screen.	
	Indication of self-test failures and assistance messages, sample ID, date and time are reported with test results.	
	Supplied complete with dedicated data analysis and data management software.	
	Results are reported on external laser printer.	

No.	Item Specifications	Fill Your Specifications
	Shall have built-in RS232, USB2.0 or equivalent, for allowing data transfer and network capability via LIS.	
	On board memory for about 100-150 tests records.	
	Shall quote rates for reagents & consumables, calibrators & controls, printer paper, separately and it	
	must be valid for at least 3 years.	
	Accessories, spares and consumables	
	Reagents & consumables, calibrators & controls, printer paper to be supplied for 1000 samples.	
	Shall provide compatible laser printer, 1 no.	
	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above).	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under the conditions of	
	the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.	
	Power supply: 220-240VAC, 50Hz fitted with appropriate plug type D (3 pins). The power cable must be minimum 3 meters long.	
	Suitable UPS with maintenance free batteries, voltage regulation and spike protection for minimum 30 min. back-up for the entire system including computer and printer shall be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA approved product certificate.	
	Shall meet IEC 61010-2-081 safety requirements for electrical equipment for measurement, control,and laboratory use - Part 2-081: Particular requirements for automatic and semi-automatic laboratory equipment for analysis and other purposes.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure preventive maintenance and corrective/breakdown	
	maintenance whenever required.	
	Installation and Commissioning	
	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.	
	Documentation	
	User (Operating) manual in English.	
	Service (Technical / Maintenance) manual in English.	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
15	**Fully Automated Haematology Analyser (5 Parts Differential)**	
	Description of Function	
	Automated haematology analyser or complete blood cell counter is used to count various types of blood cells in the blood.	
	Operational Requirements	
	Fully automated 5 parts differential haematology analyser.	
	System Configuration	
	Fully Automated Haematology Analyser, complete unit with all standard reagents, consumables and accessories.	
	Technical Specifications	
	Determination of 20 to 22 parameters, with 5-part differential, for routine haematology.	
	Shall have fully automatic, open system.	
	Sample volume: < 30ul.	
	Throughput: approx. 50 samples per hour, 24h power on, with dormancy and wake function.	
	Determination of: Red blood cell(RBC), White blood cell(WBC), Haemoglobin(HGB), Haematocrit(HCT), Mean cell volume(MCV), Mean cell haemoglobin(MCH), Red cell distribution(RDW-SD and RDW-CV), Platelets(PLT),Platelet distribution(PDW-SD and PDW-CV), Mean platelet volume(MPV), differential leucocytes (LYM, LYM%, MID, MID%, GRA, GRA%).	
	Method: Photometry and impedance technology, cyanide-free colorimetry for haemoglobin counting.	
	Calibration: independent automated calibration and manual calibration for minimum two test modes.	
	Typical counting time: approximately 60 seconds for differential.	

No.	Item Specifications	Fill Your Specifications
	Shall have with self-test capability.	
	Display: LCD screen.	
	Indication of self-test failures and assistance messages, sample ID, date and time are reported with test results.	
	Supplied complete with dedicated data analysis and data management software.	
	Results are reported on external laser printer.	
	Shall have built-in RS232, USB2.0 or equivalent, for allowing data transfer and network capability via LIS.	
	On board memory for about 100-150 tests records.	
	Bar code scanner included	
	LAN Connection	
	storage capacity about 200000 result minimum.	
	ability to view 5 parts differential in histogram	
	Shall quote rates for reagents & consumables, calibrators & controls, printer paper, separately and it must be valid for at least 3 years.	
	Accessories, spares and consumables	
	Reagents & consumables, calibrators & controls, printer paper to be supplied for 1000 samples.	
	Shall provide compatible laser printer, 1 no.	
	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above).	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under the conditions of Sudan. The conditions include Power Supply, Climate, Temperature, Humidity, etc.	
	Power supply: 220-240VAC, 50Hz fitted with appropriate plug type D (3 pins). The power cable must be minimum 3 meters long.	
	Suitable UPS with maintenance free batteries, voltage regulation and spike protection for minimum 30 min. back-up for the entire system including computer and printer shall be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA approved product certificate.	
	Shall meet IEC 61010-2-081 safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-081: Particular requirements for automatic and semi-automatic laboratory equipment for analysis and other purposes.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure preventive maintenance and corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.	
	Documentation	
	User (Operating) manual in English.	
	Service (Technical / Maintenance) manual in English.	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
16	**Electric Centrifuge bench top**	
	Description of Function	
	Centrifuges are required in the laboratory to separate various components of Blood for analysis.	
	Operational Requirements	
	Aerodynamic compact construction for vibration free performance.	
	System Configuration	
	Centrifuge with complete accessories, adaptors.	
	Technical Specifications	
	Volume of tube: 15 ml.	
	Rotor Type: Fixed OR swing-out to take 8x15ml - 12x15ml tubes	
	Speed Range: 4000 - 6000 rpm (or higher)	
	Drive Motor: Brushless motor.	
	Digital display and control for speed and time.	

No.	Item Specifications	Fill Your Specifications
	Stainless Steel Chamber.	
	LID Lock.	
	Line voltage: 220 ± 20 % 50 Hz.	
	Accessories, spares and consumables	
	Aerosol-resistant caps for buckets / lid for rotor	
	Adapters for 15 ml tubes	
	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA approved product certificate.	
	Must comply with IEC/TR 61010-3-020 :Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 3-020: Conformity verification report for IEC 61010-2-020:1992 Particular requirements for laboratory centrifuges"	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	Supplier must accomplish proper installation and commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
	Manufacturing Date must be less than 6 months before delivery	
17	**ESR Analyzer**	
	The equipment should be able to give results after reading of Red Cells aggregation.	
	The equipment should be able to provide automated ESR readings.	
	No specific reagent required for running the test.	
	The equipment should have a facility for calibration as well as it should be able to store Quality Control Data.	
	The equipment should be able report the result in mm/hr.	
	The equipment should have good co - relation with Westergen method.	
	The result should have any effect due to low hematocrit levels.	
	The equipment should be able to use the same sample tube with EDTA from cell counter available with the lab.	
	The equipment should have capacity of minimum 15 samples at a time.	
	The throughput should be 50-60 samples / hour.	
	The equipment should be compatible with Latex Controls and Calibrators.	
	Instrument should have two level of controls.	
	The equipment should work at 37 deg C with thermostat control.	
	The equipment should mix sample thoroughly as per CLSI requirements.	
	The equipment should be able to connect with external bar code reader if required.	
	It should be possible to perform test up to 24 hours from sample collection.	
	The equipment should have a touch screen LCD display.	
	The equipment should have internal thermal printer.	
	The equipment should have facility to interface with host computer with bi-directional data transfer. Instrument should have USB and serial port.	
18	**Fully Automated Coagulation Analyzer**	
	Fully Automated Coagulation Analysis	
	A microprocessor controlled desk top, coagulation analyzer to include PT, PTT, TT and thrombin.	
	4 measuring channels	
	Cap piercing	
	Sample throughput up to 160 tests/h (without cap piercing)	
	Sample throughput up to 120 tests/h (with cap piercing)	
	Chromogenic, immunological and coagulometric tests	
	Open system, suitable for almost all reagents	

No.	Item Specifications	Fill Your Specifications
	Derived fibrinogen	
	Positive patient identification, all commercial barcodes	
	Automatic pre-dilution	
	Automatic test repetition	
	Automatic calibration curve creation	
	Automatic level detection	
	Follow up test (reflex test)	
	Digitalised measuring results recording	
	QC programme	
	Up to 30,000 patients' data, incl. reaction curves	
	Collection tubes	
	Operating Environment	
	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%	
	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%	
	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
	Suitable UPS with maintenance free batteries for minimum 30 min. back-up shall be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	Should be FDA/CE/BIS approved product.	
	Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electromedical equipment: 61326-1.	
	Certified to be compliant with IEC 61010-1, IEC 61010-2-281, 61010-2- 101 for safety.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years from acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure planned preventive maintenance (PPM) and corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated tothe user in advance, in detail.	
	Documentation	
	User (Operating) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	Service (Technical / Maintenance) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	List of important spare parts and accessories with their part number and costing.	
	Certificate of calibration and inspection from factory.	
19	**Coagulometer**	
	Semi-automatic 4 channels	
	Twin channel coagulometer for routine tests: PT, a PTT, TT, Fibrinogen and clotting factors.	
	To have 30 sample capacities 37 deg C dry incubation block.	
	To have automatic counter, to grig off when starter reagent is added to sample and to stop when clot is formed.	
	Results to be displayed and printed.	
	To have recorder output for platelet aggregation	
	Measuring system Photometric	
	Beam source Infra-red LED	
	Incubation 37 deg C + 0.2 deg C	
	Capacity 30 cuvette and 3 reagent bottles	
	Display twin 3 digit 00.0 to 99.9 seconds.	
	Keyboard 6 keys	
	Printer 20 column, 64 characters.	
	Operating Environment	
	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%	
	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%	
	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	

No.	Item Specifications	Fill Your Specifications
	Suitable UPS with maintenance free batteries for minimum 30 min. back-up shall be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	Should be FDA/CE/BIS approved product.	
	Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electromedical equipment: 61326-1.	
	Certified to be compliant with IEC 61010-1, IEC 61010-2-281, 61010-2- 101 for safety.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years from acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure planned preventive maintenance (PPM) and corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the user in advance, in detail.	
	Documentation	
	User (Operating) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	Service (Technical / Maintenance) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	List of important spare parts and accessories with their part number and costing.	
	Certificate of calibration and inspection from factory.	
20	**Blood Samble Rolling Mixer**	
	Technical Specifications	
	Rocking and rolling action for complete mixing	
	Removable rollers to accommodate large bottles	
	Suitable for continuous operation	
	Nomber of Rollersapprox: 6 -8 rolls.	
	Speedrpm approx: 33 .	
	Amplitudeapprox: 16 mm .	
	Roller Approx Size: 340x30 mm	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Power supply: 220-240V/ 50 Hz AC Single phase with appropriate plug .The power cable must be minimum 3 Meter	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	Supplier must accomplish proper installation and commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
21	**Blood Gas Analyzer**	
	Description of Function	
	Blood gas analysers are used to measure blood gases , electrolytes , pH values and biochemical parameters of the blood	
	Technical specifications	
	Automated analyzer	
	Compact system for measuring pH, pCO2, pO2, -HCO3 in blood	
	Fast and accurate result of test made available in about 60 seconds.	

No.	Item Specifications	Fill Your Specifications
	May have provision of modular platform for further up gradation to include glucose, lactate & hemoglobin.	
	Built in printer	
	Barcode reader for reagents and other consumables, patient ID and quality control data	
	Automatic aspiration from syringe or capillary Sample size: approximate 250ul – 50ul	
	Easy-to follow computer assisted guidance for operator	
	Sample type: whole blood, serum, plasma	
	All parameters must be measured from a single sample	
	Approximate time for analysis: around 2 minutes	
	Automatic calibration, programmable 1 and 2 point calibration; in case of non-automatic calibration,	
	Please provide the calibration kit.	
	Data storage: approximate 500 patients	
	Ambient temperature:18 - 30 °C	
	Reagents and waste level detection by software	
	Save mode	
	Measurable parameters (approximate measurable ranges):	
	ph 6.5 - 7.8	
	pCO2 10 - I50 mmHg	
	pO2 10 - 700 mm Hg	
	Gluc 20 - 500 mg/dl or better	
	tHb 5 - 25 g/dL and/or Hct 15-60%	
	ctHb mmol/l 0.5 – 16.5	
	sO2 0 – 100%	
	fO2Hb 0 – 100%	
	fCOHb 0 – 100%	
	fMetHb 0 – 100%	
	fhHb 0 – 100% optionally	
	Calculated parameters (approximate calculated ranges):	
	HCO3 0 - 100mmol/L	
	BE-30 - 30 mmol/L	
	tCO2 0 - 100mmol/L	
	pH(T) 6.5 - 7.8	
	RI 0-10	
	O2SAT 15-100%	
	Connection to PC at least RS 232	
	Self diagnosis system	
	No maintenance required for the electrodes	
	Consumables:	
	Specify all Consumables for 2 year (with a usage rate of min 10 tests/day)	
	sensor cards (box)	
	Power Supply	
	Input power supply: 220/240 V AC , 50Hz single phase schuko plug	
	Suitable UPS with maintenance free batteries for minimum 30 min. shall be supplied with the system.	
	Environmental factors	
	The unit shall be capable of being stored continuously in ambient temperature of 0 -55deg C and relative humidity of 15-90%	
	The unit shall be capable of operating in ambient temperature of 20-50 deg C and relative humidity of 80%	
	Standards and safety	
	Should be FDA or CE approved product certificate.	
	User Training	
	Must provide operating and service trainings	
	Warranty	
	Comprehensive warranty for 2 years.	
	Documentation	
	User (Operating) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	Service (Technical / Maintenance) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	List of important spare parts, accessories and consumables with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
22	**Blood Bank Refrigerator**	
	Description of Function	

No.	Item Specifications	Fill Your Specifications
	Blood Bank Refrigerator is used to store blood bags under controlled temperature.	
	Operational Requirements	
	System required with weekly chart recorder and digital display.	
	System Configuration	
	Blood Bank Refrigerator with weekly chart recorder, digital display and with complete accessories.	
	Technical Specifications	
	Temperature range:	
	Must have adjustable temperature control range from +2 ℃ to +6 ℃. It shall maintain internal temp at 4 oC & the uniformity of this temperature must be maintained throughout the chamber with the maximum average temperature variation of +/- 1 oC between different chambers.	
	Capacity must accommodate 150 blood bags and size will be approximately 250 litres.	
	Blood Bank Refrigerator shall have integrated temperature monitoring system with microprocessor controls.	
	The blood bank refrigerator shall have a large LCD which displays:	
	□ Temperature.	
	□ High & Low alarm points with date & time.	
	□ Previous 24 hour temperature in graphical form.	
	□ Data of power failure/resumption in last 24 hours with date & time.	
	The blood bank refrigerator shall also have an inbuilt circular chart recorder for 7 days recording of temperature on circular chart paper.	
	The internal automatic temperature alarm system shall work if a temperature falls below 2 oC & exceeds beyond 6 oC.	
	The internal temperature alarm system shall also have a battery backup of minimum 3-4 hours.	
	Internal construction must be made up of high grade stainless steel 304 (min 22 G). External construction Corrosion resistant sheet at least 1 mm thickness.	
	It shall have lockable door. Outer door shall be made of glass to see through and inner door shall be made of acrylic sheet to ensure ease of operations, better maintenance of internal temperature.	
	Blood Bank Refrigerator shall confirm to noise level of less than 85 dBA as per IEC 61010.	
	Internal cabinet lighting to be provided with lamp illumination whenever door opens.	
	Shall come with roll out steel trays for proper storage of blood bags.	
	Blood bank refrigerator shall have in built servo controlled voltage stabilizer of suitable rating.	
	Shall have adjustments for uneven bases. The adjustments must be easy to use like rotating a screw at the legs in the base.	
	Accessories, spares and consumables	
	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Power supply: 220-240V/ 50 Hz AC Single phase with appropriate plug .The power cable must be minimum 3 Meter	
	Suitable Automatic Voltage regulator/stabilizer meeting international standards must be supplied. Broad specifications are: Automatic Type Input 150-280V, Output 220 V +/- 7 %, 50 Hz. Single phase, AC with automatic 2-4 sec Cut Off and 6-9 minutes restart delay. Quick start arrangements for bypassing the start delay. Suitable MCB on input voltmeter and indicators on Front Panel. Input Pore Cable with 15 A Plug and six way output terminal strip for two outlets	
	Standards and Safety Requirements	
	Must submit ISO 9001 or ISO13485:2003/AC:2007 AND	
	Must comply with WHO/UNICEF Specification Reference: BTS/RF.1 and DIN 58371.	
	Test and inspections as per WHO Procedure reference: Laboratory Test Procedure: Standard Test Procedure: BTS/Proc. / 3.	
	Shall meet IEC 60335-1and -2-24 General requirements of electrical safety.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure planned preventive maintenance (PPM) and corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	The supplier must accomplish proper commissioning of the item onsite.	
	Documentation	

No.	Item Specifications	Fill Your Specifications
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part number and costing.	
	Certificate of calibration and inspection from factory.	
23	**Lab Incubator**	
	Description of Function	
	Incubators are required to incubate living culture at a uniform temperature above ambient.	
	Operational Requirements	
	System with temperatures up to 50 deg C - specifically for incubating living cultures at 37 deg C and at 45 deg C as required.	
	Technical Specifications	
	Capacity: within 50L	
	Interior chamber: Stainless steel for easy cleaning and decontamination	
	Timer: 1 min. to 100 hours and hold position	
	Temp range 5 deg C above ambient to 50 deg C	
	Minimum 4 adjustable shelves should be available.	
	Internal glass door for the observation	
	Temp Accuracy +/-1% of required temp, with inbuilt Temp.Sensor	
	Adjustable safety thermostat for temp setting at 1 deg C increment	
	Minimum turbulence and no cross contamination	
	In case of total breakdown of sensor, the heating should be switched off at approx. within 3 °C above set value.	
	There should be a Membrane Keypad with LCD/LED to set and display operating parameters, current status, running	
	time and alarm conditions for time and temperature.	
	Interior lighting facility, insulated door fitted with heavy	
	System Configuration Accessories, spares and consumables	
	System as specified-	
	Environmental factors	
	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%	
	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%	
	Power Supply	
	Power input to be 220-240VAC, 50Hz fitted with Sudanese plug	
	Resettable overcurrent breaker shall be fitted for protection	
	Suaitable voltage corrector/stabilizer	
	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.	
	Standards and Safety	
	Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001	
	Should be FDA or CE or ISI approved product	
	Comprehensive training for lab staff and support services till familiarity with the system.	
	Attach original manufacturer's product catalogue	
	8 Documentation	
	Certificate of calibration and inspection from factory.	
	List of Equipments available for providing calibration and routine maintenance support as per manufacturer	
	documentation in service / technical manual.	
	User/Technical/Maintenance manuals to be supplied	
	List of important spare parts and accessories with their part number and costing.	
	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist.	
	Comprehensive warranty for 2 years after acceptance.	
24	**Hot Air Oven**	
	Description of Function	
	Hot Air Oven is required for heating a sample under controlled conditions.	
	Operational Requirements	
	Microprocessor based system with PID-temperature controller with integrated auto diagnostic system with fault indicator.	
	System Configuration	
	Microprocessor based Hot Air Oven.	
	Technical Specifications	

No.	Item Specifications	Fill Your Specifications
	External: Stainless Steel Casing: w x h x d: Approx.600 x 600 x 600 mm, insulated stainless steel door with locking and rear zinc-plated steel.	
	Interior: w x h x d: Approx. 400mm x 400mm x 400mm. Easy to clean, interior made of stainless steel, with supports on the three sides for three adjustable perforated stainless steel shelves.	
	Forced air circulation by quiet air turbine/Fan to ensure uniform temperature.	
	Fitted with load indicator and safety thermostat take over indicator lamp. LCD/LED indicator.	
	Temperature Variation +/- 1.	
	Temperature Range- ambient to 250 oC	
	Output available for data acquisition.	
	Hot Air Oven shall be mounted on suitable epoxy powder coated support stand having 4 robust 360 deg. swivel lockable castor wheels for easy movement and repositioning.	
	Accessories, spares and consumables	
	All standard accessories/consumables/parts required for the proper operation of the above item shall be included in the offer.	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Power supply: 220-240V/ 50 Hz AC Single phase fitted with appropriate plugs. The power cable must be at least 3 metres long.	
	Standards and Safety Requirements	
	Must submit ISO 9001 or ISO 13485:2003/AC: 2007 AND	
	CE or USFDA or TUV approved product certificate.	
	User Training	
	User training must be provided onsite	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	Supplier must accomplish proper installation and commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English.	
	Service (Technical / Maintenance) manual in English.	
	List of important spare parts and accessories with their part number and costing.	
	Certificate of calibration and inspection from factory.	
25	**Spectrophotometer**	
	Description of Function	
	UV/Visual spectroscopy is routinely used in the quantitative determination of solutions of transition metal ions and highly conjugated organic compounds. The instrument used in ultraviolet-visible spectroscopy is called a UV/Vis spectrophotometer. It measures the intensity of light passing through a sample (I), and compares it to the intensity of light before it passes through the sample (Io). In a double-beam instrument, the light is split into two beams before it reaches the sample. One beam is used as the reference; the other beam passes through the sample. Some double-beam instruments have two detectors (photodiodes), and the sample and reference beam are measured at the same time.	
	Operational Requirements	
	System Must provide for analysis of Protein, DNA / RNA & Enzyme kinetics etc.	
	Microprocessor controlled Double beam spectrophotometer with scanning, kinetic and multi wave length facility ,Self-check & self-diagnostic facility and Auto wavelength calibration facility	
	System Configuration	
	UV-visible Spectrophotometer, Dual Beam with complete accessories.	
	Technical Specifications	
	Single beam and double beam mode: Allow both modes	
	Wavelength range: 190nm - 1100nm	
	Photometric range :Minimum 2.0 Absorbance (Abs.) units	
	Lamp switching: Allow both modes manual or automatic	
	Band width : 0.2 nm - 4.0 nm or better, with 0.1 nm of increments	
	Must have automatic baseline corrections	
	Wavelength accuracy: Minimum of ±0.2 nm	
	Wavelength reproducibility:0.05 nm or better	
	Wavelength resolution: 0.2 nm or better	
	Photometric accuracy: ±0.003 Abs. units or better for 1.0 Abs. units	
	Photometric stability: After 2 hour Must not be more than 0.0005 Abs. units/h	

No.	Item Specifications	Fill Your Specifications
	Photometric reproducibility: Must not be more than 0.0005 Abs. units at 0.5 Abs. units	
	Photometric noise: Must not be more than 0.0003 Abs. units at 1.0 Abs. units	
	Scan speed: Must be between 0.25 nm/sec. and 8 nm/sec. or better	
	Monochromator slew rate: Must be 1500 nm/min. or better	
	Acquisition at more than one wavelength: Minimum of two	
	Must have Data acquisition and processing system	
	Must be Photometric scaling in Abs. units, %T, log Abs. units and concentration	
	Must Abscise scaling in nm, min., deg. and mm	
	Calibration at one or more levels and one or more wavelengths	
	Must Calculate and give factor for linear regression and other	
	Must Build and memorize in file form: data, method and report	
	Accessories, spares and consumables	
	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above).	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
	Suitable UPS with maintenance free batteries for minimum 30 min. back-up shall be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA approved product certificate.	
	Must be compliant with IEC 61010-1:(or any international equivalent e.g. EN/UL 61010) covering safety requirements for electrical equipment for measurement control and laboratory use.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years from acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure planned preventive maintenance (PPM) and corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part number and costing.	
	Certificate of calibration and inspection from factory.	
26	**Benchtop tube sealer**	
	Description of Function	
	Blood Bag Tube Sealer is a compact equipment to seal the Blood Bag pilot tube by radio frequency sealing system.	
	Operational Requirements	
	The system should be heavy duty and be able to seal the blood bag etc quickly and effectively.	
	Should be simple to handle	
	System should gently seal the tubing with no hemolysis.	
	Technical Specifications	
	Should be a heavy duty tube-sealer capable of sealing tubes of various manufacturers of blood bag.	
	Should be for bench-top use.	
	The sealing time should be adjustable between 0.5-5 seconds	
	Sealing triggering should be automatic	
	Should also have extended portable hand unit. Sealing hand should be with coaxial cable of 1.5 - 2.0 meter.	
	Should have indication lamps (LED or any other) for “Sealing Process” on handle as well as main unit.	
	No warm-up time should be required.	
	Should ensure easy separation of tube segments after the sealing.	
	System should run on both mains and battery (more than 10 hrs. back up and charger).	

No.	Item Specifications	Fill Your Specifications
	Should be lightweight not more than 6 Kg.	
	Detection of wet tube, leakage & sealing defect. Alarm in case of seal not complete.	
	4 System Configuration Accessories, spares and consumables	
	Tube Sealer with Accessories - 01	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Standards, Safety and Training	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA approved product certificate.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period During warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	Supplier must accomplish proper installation & commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
27	**Water Distiller**	
	Technical Specifications	
	Minimum Distilled water output: 4L/h	
	Maximum water supply required: 1L/min	
	Flow regulator for water supply	
	Conductivity of water produced: 2 µS/cm or less	
	Automatic cut-out for low water level in the boiler	
	Automatic switch off when distillate reservoir is full	
	Heating elements should be silica glass sheathed	
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature,Humidity, etc. for Sudan.	
	Power supply: 220-240V/ 50 Hz AC Single phase with appropriate plug .The power cable must be minimum 3 Meter	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	Supplier must accomplish proper installation and commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
28	**Glucometer**	
	Technical Specifications	
	Hand held type Glucometer	
	Battery operated	
	Memory min. 50 measurements	
	Strips method measurements, Code free reading	
	Indication of high and low measurements	
	With Start up kits	
	Case is included	
	One box of strips and lancet is included	
	Operating instructions is included	
	Specify the Price of strip (by Pcs) in SDG.	

No.	Item Specifications	Fill Your Specifications
	Operating Environment	
	The product offered shall be designed to be stored and to operate normally under Climate, Temperature,Humidity, etc. for Sudan.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years after acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	Supplier must accomplish proper installation and commissioning of the equipment on site.	
	Documentation	
	User (Operating) manual in English	
	Service (Technical / Maintenance) manual in English	
	List of important spare parts and accessories with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	