H.E.J. RESEARCH INSTITUTE OF CHEMISTRY

INTERNATIONAL CENTER FOR CHEMICAL AND BIOLOGICAL SCIENCES
UNIVERSITY OF KARACHI
KARACHI-75270

TENDER NOTICE NO. HEJ-ICCBS-STRP-210217

Sealed tenders are invited from the sales tax registered and income tax registered firms (where applicable) for purchase/import of **"Machinery / Equipment"** under the project entitled "**Strengthening of Research Programs at HEJ Research Institute of Chemistry"** on ***C&F Basis*** and on ***Single-Stage One -Envelope*** procedure basis for the Center.

The tender documents can be collected from Purchase Office of the Center, on any working day between 9.00 a.m. to 12.30 p.m., from **03-Feb-2017** or from the date of publication of this advertisement in the newspapers or notification of this advertisement on the websites, on payment of Rs. 500/- (non-refundable), in shape of a Pay Order (Demand Draft by the out of Karachi suppliers), in favor of the **Director – H.E.J.**, or downloaded from the websites www.iccs.edu, www.pprasindh.gov.pk. The last date of issuing the tender documents is **20-Feb-2017**. The tenders can be submitted with 2% of the bid value as earnest money in shape of a Pay Order in favor of the **Director – H.E.J.**, latest by 2.30 p.m. on **21-Feb-2017.** The tender will be opened in Meeting Room of the Center at 3.00 p.m. on the same day in presence of the bidders or their representatives. Alternate Bids / Options should accompany separate earnest money Pay Orders along-with bidding documents. The Procuring Agency may reject all or any bid subject to the relevant provision of SPP Rule No. 25.

For any information and detail:
Purchase & Store Dept.
Tel # 34819011; 111-222-292 (109, 108)
Email address: store.iccs@hotmail.com

DIRECTOR

INTERNATIONALCENTER FOR CHEMICAL AND BIOLOGICAL SCIENCES

UNIVERSITY OF KARACHI
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Tender Notice No. ICCBS-HEJ-STRP-280217

Contact Person :
Dr. Farzana Shaheen
Lab No. : 211 UAN No. : 111-222-292 (Ext. 241)
I.C.C.B.S., University of Karachi.

S. No.	Item's Name	Item's Descriptions	Quantity	Estimated Rate (Rs.)
1.	Real time PCR Machine	AriaMx Real – Time PCR System, Eppendroff or equivalent	02	
2.	Gradient PCR Machine	Mastercycler nexus gradient, Eppendroff or equivalent	02	
3.	Gel Documentation System	Protein simple FlourChem FC3 or Equivalent	02	
4.	Mammalian Cell Transfection System	Lonza 4D Nucleofector system Core unit, X unit, and Y unit specifications, or equivalent4D Nucleofector system Core unit, X unit, and Y unit specifications, or equivalent Conductive polymer electrode material for electroporation of hard to transfect mammalian cells in different formats, including 20 ul and 100 ul volumes, and adherent cells in 24-well plate. Conductive polymer electrode material for electroporation of hard to transfect mammalian cells in different formats, including 20 ul and 100 ul volumes, and adherent cells in 24-well plate. <u>Accessories</u> Cell transfection reagents Electroporation cuvettes, strips 24-well dipping electrodes Warranty / service contract	01	

5.	Isotemp dry bath incubator	Provide controlled dry heat. Choice of 1 – to – 6 blocks analog models, 2-or4-blocks digital models. Temperature range : 5-13 C <u>Accessories</u> Heating blocks for micro centrifuge tubes	01	
6.	3D Thermal Rocker and Shaker with Acrylic Cover	Dimensions: 41W x 34D x 20H cm (16 x 13 1/4 x 7 ¾") Platform size: 36 x 36 cm (14 ¼ x 14 ¼") Speed 0-100 cycles per minute Temperature Control +- 0.5 C Temperature Range: Slightly above ambient to 100 C Temperature display LED Nonskid surface to keep samples in place.	01	
7.	Tissue Homogenizer	Alternate Names: Blender Electrical: 220 Volts, 50/60 Hz, Wide speed range: up to 30,000 rpm Sample volume range: 0.1-50ml Auto Clavable stainless steel shaft Operating environment: 0-40C, relative humidity 85% Stage speed control, universal motor type, dispersing of tissue decomposition, clinical and Stages speed control, universal motor type, dispersing of tissue decomposition, clinical and medical diagnostics and suspensions, suitable for centrifuge tubes and eppendorf tubes.	01	

8.	Bio Rad Electrophoresis System or Equivalent	Cat No. 165-8029 Mini-Protean Tetra Cell System and Mini Trans-bolt module 10 well, 1.0 mm thickness, 4 gel System includes 5 combs, 5 sets of glass plates, 2 casting stands, 4 casting frames, Sample loading guide, electrode assembly, companion running module, tank, lid with power cables, mini cell buffer dam Cat No. 165-3310 Spacer plates with 0.75 integrated spacers Cat No. 165-3354 Mini – Protean combs 0.75 mm (5) Cat No. 162-0177 Immun-Blot PVDF for Western blotting 26 cm x 3.3 m, 1 roll Cat No. 170-3932 Thick blot paper 50 sheets Cat No. 164-5050 Power Supply Cat No. 1704466 Biorad Mini – sub cell GT System Cat No. 1704405 Biorad wide Mini-sub cell GT system Cat No. 1703940 Semi-Dry Electrophoretic Transfer Cell	02	
9	UV-VIS spectrophotometer	Thermo Scientific Nanodrop 2000c specifications or equivalent <u>Cuvette specifications</u> Z Height: 8.5 mm Heating: 37 ± 0.5 °C Stirrer: 150-850 rpm Path Length: 10, 5, 2, 1 mm Absorbance Range: 0.008 - 1.5 Cuvette Dimensions 12.5 mm x 12.5 mm, up to 48 mm H	01	

		<u>Accessories</u> PC & Installation-operations CD Calibration check fluid Sample measuring pedestal reconditioning kit Label printer Warranty/Service plan		
10	Pipette Set	Pipettes Eppendroff or Equivalent 0.1- 2.5 µL cat # 4920 000.016 0.5 – 10 µL cat # 4920 000.024 2 –20 µL cat # 4920 000.032 20 –200 µL cat # 4920 000.067 100 –1,000 µL cat # 4920 000.083 0.5 –5 mL cat # 4920 000.105 1 –10 mL cat # 4920 000.113	01 Each	
11.	**Biosafety cabinet** class II B1	1) The cabinet should be Microprocessor controlled monitoring with a true airflow velocity sensor. 2) The Bio- safety cabinet should comply International Standard Certificates like EN 12469, ISO 14644.1 class 3, etc. 3) The cabinet should have permanent lubricated external	02	

		type rotor blower for high performance, maximum energy efficiency and minimal maintenance. 4) Should have long life ULPA Filter for supply and exhaust (per IEST-RP-CC001.3) with 99.999% efficiency for particle size 0.1 to 0.3 microns. 5) Programmable automatic UV light timer with extending UV light life for saving energy. 6) The Cabinet outer surface should have antimicrobial coating for minimizing contamination. 7) The controller should include soft touch keypad controls with LCD display of air flow velocity 8) The cabinet should have built-in warm, white, electronically ballasted zero flicker and instant start 5000K lightening with excellent illumination of the work zone. 9) The construction of cabinet should be electro galvanized steel including stand also. 10) External Dimension: 1035 x		

		732 x 7400 mm / 40.7” x 28.8” x 55.1” [w x d x h] Internal Dimension: 965 x 546 x 670 mm / 38.0” x 21.4” x 26.4” [w x d x h] 11) Inflow velocity should be 0.45m/s 12) The cabinet should come with following accessories: One no. UV lamp, electrical outlet sockets, one American style universal service fitting for gas/vacuum/water (any one) and fully SS made movable stand with wheels for easy movement.		
12	**Non refrigerated Centrifuge- table top and fixed angle**	Description of function: Centrifuges are required in the Laboratory to separate various components of Blood for analysis. · Operational requirements: Ø Aerodynamic compact construction for vibration free performance Ø Table top version · Technical Specifications: Ø Angle Head rotor with Tube Capacity Size 5-15 ml Ø Should have a digital timer Ø Body should be made of strong	01	

		fabricated & corrosion resistant steel Ø Control panel – for start / stop switch, dynamic brakes, One 2 step less speed regulator with zero start switch & speed indicator with timer and protective fuses. Ø Door interlock Ø Maintenance – free brushless drive motor with exact speed pre selection and digital display in control panel. Speed range 100 to 6000 rpm and above. · System Configuration Accessories, spares and consumables: Ø Tube Holders as appropriate · Environmental factors: Ø Shall meet IEF-60601-1-2:2001 (or equivalent BIS) General requirements of safety for Electromagnetic Compatibility Ø The unit shall be capable of operating continuously in		

		ambient temperature of 10- 40 oC and relative humidity of 15-90% Ø The unit shall be capable of being stored continuously in ambient temperature of 0-50 oC and relative humidity of 15-90% · Power Supply: ØPower input to be 220-240 VAC, 50Hz as appropriate fitted with Indian plug.		
13.	**Deep freeze -80°C vertical.**	**Description of function** o Deep freezers are required to preserve blood and blood products, vaccines etc at specified temperature. Ø **Operational Requirements** o Internal minimum capacity 350 to 400 L net at least double door with adjustable at least 6 shelves o Range up to -65oC to -85oC (adjustable) o Vertical Cabinet (upright mode) Ø **Technical Specifications** o Construction: Solid rust free cabinet to prevent	02	

		corrosion and lockable castor wheels. Inner surface should be stainless steel. O Control System: Micro-processor based temperature controller with digital temperature display LED/LCD with seven days graphic temperature recorder with rechargeable battery backup including charger maintenance free and insensitive to vibration. Details of battery and battery charger shall be indicated. O Refrigeration System: Heavy Duty refrigeration system, maintenance free, below -85oC (± 1oC) with hermetically sealed dual compressor, noise free and vibration free, air cooled with security lock to prevent unintentional switch off shall be supplied. It should have maximum cooling time of 5 hours at maximum ambient temperature of 33oC. The equipment should be of continuous duty. O Alarm: It should also have audio		

		visual Electronic Two 3 Alarm System independent of power supply. O Insulation: High density polyurethane or equivalent Gaskets – Double seal silicon. O Door heating system for easy opening of door. Ø **Environment factors** o The unit shall be capable of operating continuously in ambient temperature of 10 – 40 oC and relative humidity of 15-90%. O The unit shall be capable of being stored continuously in ambient temperature of 0 – 50 oC and relative humidity of 15-90%. Ø **Power Supply** o Power input to be 220-240VAC, 50Hz, / 440V 3 Phase as appropriate fitted with Indian plug. O Resettable over current breaker shall be fitted for protection.		

		O Suitable Servo controlled Stabilizer/ CVT Ø **Standards and Safety** o Should be FDA or CE or ISI approved product. O Electrical safety conforms to standards for electrical safety IEC-60601/ IS-13450. O Manufacturer should have ISO certification for quality standards.		
14.	**Electronic** **Balance**	High contrast, large LCD display for easy viewing. · Hanger for below balance weighing · Automatic external calibration · Confirms GLP/GMP and ISO 9001 standard. · Dye cast aluminium design for long term stability and accurate results. · Various weighing units like gm, mg, etc. · User selectable stability and filter level. · Readability : 0.001 gm · Linearity : 0.002 gm · Pan size : > 80 mm diameter · Response time : 2-3 sec	02	

		· Calibration L automatic external · Power supply : AC adapter · Data acquisition and storage system. ISO 9001 certified.		
15.	**pH Meter**	It should be compact with table top • Body of pH Meter should be Acid/ Alkali resistant • Material of the electrodes should be able to with stand disinfectant and sterilization procedure and should be TRIS compatible • Digital panel should be dust and water proof IP54 • Probe must be protected with cover with suitable probe stand. • pH measuring electrodes should be detachable and easily replaceable Two 4 • pH range should be – 2.000 to + 16.000 pm • resolution of pH Meter should be 0.001 pm • it should have facility of	02	

		measuring MV with measuring range – -+1999 • its resolution for MV should be 0.1 MV or better • its temperature measurement range should be -5.0 oC to +100oC • it should have facility to store the data, 50 points Data Logging • it should have in built real time clock • it should be electrically operated but should have provision for battery operation • Printer function should be there • Equipment should be provided with spare electrodes • Training of laboratory staff for the purchased equipment • Three years warrant, five comprehensive AMC should be available with service centres in close proximity • Availability of spares / disposables for at least 10 years • All consumable required for installation and standardization of system to be		

		given free of cost • List of users and satisfactory report of quoted model from reputed institute preferably Govt. institute / hospital • Should have all the accessories required for the functioning of the equipments • ISI mark or other equivalent quality certification • All electrical peripherals required for smooth functioning should be provided with the equipment There should be provision for demonstration before final approval of equipment. • All electrical peripherals required for smooth functioning, a voltage Stabilizer & suitable UPS provided with the equipment. Warranty: Three years #Five years maintenance contract after expiration of manufacturer warranty		

16.	**Magnetic Stirrer with Heating system**	Stainless steel work surface L X D 240 X 240 mm approx. • Max stirring capacity 5 lit. • In built Heating system with indicator. · Heating temperature range between 50 – 250 ° C or more. • Digital with Variable speed 30-2000 rpm • Gradual start-up stirring to prevent splashing • Stir rod support.(Stir bars of different size included) • Weight 5 kg. approx • Power supply 230V/50-60 Hz • Safety Glass 'O Non slip silicone cover plates • Protection rating IP42 Warranty: Three years #Five years maintenance contract after expiration of manufacturer warranty	01	
17.	**Liquid N2 Transport container with Liquid N2 Cylinder**	Effective capacity: 35 ± 5.0 litres Approx. · Should have daily evaporation rate of not more than 0.01 to 0.35 lt/day. · Should have a static holding time minimum of 110 days.	02	

		· Should have a capacity of holding 6 canisters & comes along with 2.0 ml vials · Should have roller bases for easy portability. **Accessories:** Tilting Trolley: Used for moving and decanting transport models. Transfer device: Used for transferring liquid nitrogen from transport models. SS Funnel: SS Funnel with handle is used for transferring liquid nitrogen to biological models. **Liquid Nitrogen Cylinder-** For transporting organs from field with LN2 Capacity- 35 Litres Static Hold- up to 121 days, Neck Diameter- 8.5” (21.6 cm), Static Evaporation rate- 0.5-0.7 litres per day Weight Empty- 12-14 Kg. Warranty: Three years #Five years maintenance contract after expiration of manufacturer warranty		

18.	**Vortex Shaker**	• Violent continuous or pulsating high-speed vortexing • Easy-to-use Touch On operation • Large, 6mm orbit for aggressive vortexing • Should have Micro plate Tray Rubber Platform, tube holders of different sizes • Touch & continuous mode operation • Speed (RPM) 0 to 3000 • (2700 for 50 Hz models) • Dimensions (base): (D x W x H) : 165 x 122 x 165 mm (6.5 x 4.8 x 6.5 in) Warranty: Three years #Five years maintenance contract after expiration of manufacturer warranty	02	
19.	**Desiccator** **Cabinets Unit**	Vacuum Desiccator is constructed of moulded fiberglass reinforced polyester. Nine shelf supports are moulded into the walls of the cabinet on 1” (25mm) centres. • Side hinged door frame is constructed of epoxy-coated cold rolled steel. Clear 3/8” (9.5mm) tempered	02	

		safety glass window is mounted in the door and is fully gasketed. Door lock has polished chrome finish. Brass needle. Valve has barbed tip and is designed for ¼" (6.4mm) ID vacuum tubing. • The cabinet is vacuum tested to a full vacuum of 29 inches of mercury. Includes two 12" (30.5cm) square aluminium shelves with twelve 7/8" (22mm) holes to support crucibles, stainless steel pan for granular desiccant (desiccant not included) and epoxy-coated steel wire support stand. • To place one Desiccator Cabinet on top of another, an optional epoxy- coated steel Stacking Rack is available. • A vacuum source is required. Two 6 • Capacity – 14 L & above pprox.. • Vacuum Tubing Kit, includes ¼" ID and ½" ID vacuum tubing, each 48"		

		long; 2 each ¼" and ½" tubing clamps; ¼" to ½" barbed reducer. • Stacking Rack, epoxy-coated steel. • Two Shelves, aluminium 12" (30.5 cm) square, with twelve 7/8" (22 mm)holes. • Desiccant Pan, stainless steel, 11" (27.9 cm) square x 7/8" (2.2 cm)deep. Support Stand, epoxy-coated steel wire frame. Includes: Tray for silica gel, two clear polystyrene shelves with vent holes. Warranty: Three years #Five years maintenance contract after expiration of manufacturer warranty		
20.	**Refrigerator-** **280-400 Ltrs** **(Pharma type)**	Capacity (as per requirement) pprox. 400 Litres. • Temperature 2-8oC • Preferably roller mounted (Standard casters) • Adjustable shelves • Battery backup • Durable rust free exterior	02	

		• Durable unbreakable interior • High and low temperature alarms; Door ajar alarm; Access ports; Low energy consumption; Automatic defrost; Reversible door; HCFCand CFC-free insulation; • Integrated controller with temperature alarm, on/off switch and digital thermometer Display, • Interior fluorescent lighting • Adequate Forced air circulation of air to ensure even cooling by DUCT system • Glass Door with lock • Operable at 220 V • Three years warranty, 5 yrs comprehensive AMC should be available with service centers in close proximity • Availability of spares/ disposables for at least 10 years. • List of users and satisfactory report of quoted model from reputed institute preferably Government		

		institute/ hospitals • Should have all the accessories required for the functioning of the equipment. • ISI mark or other equivalent quality certification CE marked; • All electrical peripherals required for smoothes functioning a voltage Stabilizer & suitable UPS provided with the equipment. Warranty: Three years #Five years maintenance contract after expiration of manufacturer warranty		
21.	**Microscope- with photo attachment**	Upright Tri- nocular Microscope. With phase contrast • Tube head: Articulates, free binocular head (infinity corrected optics) Quintuple objective nosepiece • Binocular observation head inclined at 30°-360° rotatable • Eye piece: Wild plan scope; WF 10X or more with iopter adjustment magnification optically > 1000 • Objectives: 45 mm Achromatic	01	

		(plan achromatic) • Objectives: 4x, 10x, 20x, 40x, 100x (S.oil) • Condenser adjustable NA 1.2x – 100x phase contrast • Stage- Variable, universal mounting stage, • Frame- Optical system focus: Fine Illuminator • Observation tube- • Halogen or LED illumination 12V/20W with intensity control. • Photo attachment provided with the instrument. • Main supply 220-240V (CE). •.Dust cover. • Diaphragm with Blue filter • Suitable Latest configuration computer set with printer & UPS to be provided. Warranty: Three years #Five years maintenance contract after expiration of manufacturer warranty		
22.	**Weighing Machine**	Maximum Capacity: 400 – 420g pprox. Minimum display: 0.01gm. Readability: Easy operation, external calibration,	02	

		readability. Pan Size : Minimum of 100 to 110 mm dia. Quick level indicator Micro switch key pad with digital display. Accurate high precision weighing technology- GLP/GMP protocol. Digital Display • Suitable UPS provided with the instrument Warranty: Three years #Five years maintenance contract after expiration of manufacturer warranty		
23.	**Media filtration System with pump**	**A** • Sterile filter unit • Disposable • Syringe filters with pore size 0.22um and 0.45um • Vacuum filters with pore size 0.22 um to capacity 250ml to 2500ml. **Common requirement** • All equipments should be CE, ISO 9001, ISO 13485 marked or equivalent • Should work appropriately in	01	

		Indian ambient temp. • Post supply, local service should be available • Warranty should be at least for 3-5 years. **B** • Suitable for vacuum filtration • Suction flask capacity 2 litres and 1liter • Tube connector for connecting stainless steel many One 8 fold to a suction flask 2 or 1 litre • Silicon stopper for stainless steel filter holder suitable for 2 and 1 litre suction flask. • Water traps to be used between suction flask and vacuum source, in order to prevent overflow of filter into eclectic vacuum pump. Suitable to connect filtration unit with a 0.45µm hydrophobic air permeable PTFE membrane. • Woulff's bottle 500 ml with stop cock to control the vacuum.		

		• Rubber vacuum hose (1 meter x 2) • Electric vacuum pump: a). Flow rate > 3.5 NL/ min b). Maximum vacuum – 0.4 bar c). Maximum Pressure– 1.0 bar d). Mains – 230 V / 50 Hz e). Materials (contact with filtrate) – PTFE, ETFE, Polypropylene, EPDM f). Oil and maintenance free with low noise level (53.5 dBA) Warranty: Three years #Five years maintenance contract after expiration of manufacturer warranty		
24.	**Digital water Bath with shaking**	Microprocessor Control & Programmable. • Function for timer, alarm, auto-tanning • Built-in safety and convenience. • Seamless stainless steel bath with globe cover. • Shaking Unit: 20 – 200 rpm.	01	

		• Digital display LED for temperature & shaking. Capacity: Around 20 ltrs pprox.. Heater : 500W or more Temperature range : ambient +50C to1000C Temperature accuracy : + 0.10C Temperature uniformity : + 1.00C Material bath : Seamless stainless Case : powder coated steel Outlet for easy cleaning SS Rack for 5-15 ml. tubes holder should be provided with the instrument. • Suitable UPS provided with the instrument Warranty: Three years #Five years maintenance contract after expiration of manufacturer warranty		
25.	**Centrifuge Cold (table top refrigerated centrifuge)**	Table-Top micro centrifuge-Microprocessor Controlled with large LC Display of time, speed and temperature. 1. Capacity: Dual 18 × 1.5/2.0 mL	02	

		2. CFC free cooling system 3. Speed at least up to 16,000 ×g or more (14,000 rpm) 4. Temperature range 4 °C to ambient. 5. Provision for fast pre-cooling. 6. Temperature accuracy inside the rotor and in tube (sample temp.) 7. Microprocessor controlled Large LCD display for Speed, RCF, Running time & temperature 8. Audible signal at end of each run 9. Aerosol tight lid 10. Suitable stabiliser 11. Five years maintenance contract after expiration of manufacturer warranty.		
26.	**Water Purification System with cartridge supply. (Nuclease free water for molecular biology grade RO/Nano combined system)**	top or wall mounted, Compact unit ASTM Types I/II water. Instant and fresh, ultra pure water free from ion, pyrogen (Testing Kit should be provided) with resistivity of ≥ 18.2 MΩ.cm, 10 litre per hour capacity at 25°C with automatic display board indicating operation, standby, tank full, Cl2	01	

		and pH cleaning or RO rinse, auto clean with automatic signals indicating low water pressure, tank full signal, replacing of RO cartridge, with sensors to measure water quality, used in molecular biology, microbiology, PCR with inorganic & organic trace analysis. · Storage capacity 20L approx. and provide at least two 5 L containers for transportation. · Three years warranty, 5 yrs comprehensive AMC should be available with service centers in close proximity. · Availability of spares / disposables for at least 10 years. · All consumables required for installation and standardization of system to be given free of cost. · List of users and satisfactory report of quoted model from reputed institute preferably Government institute/ hospital · All the accessories required for the functioning of the		

		equipment · ISI mark or other equivalent quality certification · With Pre-filtering and iron-guard kits · All electrical peripherals required for smooth functioning · There should be provision for demonstration before final approval of equipment One		
27.	**Sonicator**	Operating frequency : 20 kHz or better · Provided with Timer & Temperature probe · Power Output: Upto 600 Watts or more · Output settings: 20 to 100% · Duty cycle (pulsed operation): 0 to 100% · Probes to be supplied, one each, for processing volumes in the range of 0.2-5ml, · 0.5-15ml, 2-25ml, and 5-50ml. · Probe Length 80 mm-160 mm, material of construction: Titanium · Sound abatement Chamber	01	

		inside lined with White water proof noise abating material with support rod and converter clamp Laboratory jack. · Sound proof ear protector should be provided.		
28.	**Magnetic Stirrer**	· Stainless steel work surface LXD 240X240 · Max stirring capacity 5 lit**.** · Digital display with Variable speed 30-2000 rpm · Gradual start up stirring to prevent splashing · Stir rod support · Power consumption 40W · Dimension LXWXH260 x 260 x 130 · Weight 5 kg. · Power supply 230V/50-60 Hz · Safety Glass 'O' Non slip silicon cover plates · Protection rating IP42 · Suitable stir bars for 50 ml to 2000 ml	03	
29.	**Microwave oven** **1350 watt**	· Microwave capacity: 20 liters · Stainless steel cavity · Feather touch programme panel · Turntable diameter: 305 mm	02	

		· Power output: 900 W · Power consumption for microwave: 1350 Watts.		
30.	**Automated Nucleic acid extraction system**	· Complete automated nucleic acid isolation / purification workstation. · Should be able to process 24 samples at a time. · Sample/élution volume 20-1000 µl/ 25-200 µl. Should process broad variety of sample types: Whole blood, plasma, fresh or FFPE tissue, body fluids, cultured cells, bacteria or plant tissue (free form cross-contamination & can be used for PCR / RT PCR reactions). · Run time: 30-60 minute or less according to batch size. · Should be based on Magnetic bead technology for isolation of Nucleic acid. (DNA/RNA/mRNA/tRNA) · There should not be use of any manual steps & no other external device like vacuum pump or tubing/pumps are required. · Should have preinstalled	01	

		protocols (in build). · Should have integrated PC with touch screen monitor and additional keyboard, LIMS/network connectivity, CD drive & USB port. · Should be provided with starter Nucleic acid (DNA/RNA) purification/ isolation kit. · Three years comprehensive warranty should be provided directly from manufacturer. · All international certificates including CE, CB & original software license should be provided. · Power supply 100-240 V AC +/- 10%, 50/60 Hz +/- 5%.		
31.	**Microscope Fluorescent with photography attachment**	**Upright Research Microscope with Fluorescence attachment** · Microscope main stand: Mains stand for Biology & Medicine for transmitted light 100W illumination, height adjustable of focus knobs, stage carrier and centrable condenser holder for vertical	01	

		adjustment, right & left-hand operation and clamp screw, adjustable height stop. Mains 90-250V, commutable 50/60Hz. · Focus Drive (Z): 3 steps focus drive Course Medium Fine focusing, adjustable focus stop and focus torque adjustment, focus knobs. · Objective Nose piece: 7 Positioned Pre Centered par focal objective nosepiece having M25 Thread. · Fully motorized Microscope stage: Ergo Stage for right or left hand operation with Ultra Hard ceramic surface, travel range 76mm x 25mm with vernier reading & X/Y stage control. · Slide Holder: Slide holder for ergo stages for one hand slide exchange. · Plate holder: Suitable to hold multiwall as well as single 35 mm tissue culture plates · Observation Tube: Binocular Phototube HCL2TU 4/5/7 with image erection, with fixed photo tube and tube lens		

		00/1x, with viewing angle 20o, inter-pupillary adjustment 55-75 mm, constant focus, beam splitter position .. 0/100%, 100/0% and field of view 25. · Transmitted light source: Lamp housing 107/2, with lamp mount for halogen lamp 12V 100W non adjustable, 1-lens collector and heat protection filter, mains cable 0.55m. · Transmitted light lamp: 12V 100W tungsten halogen lamp. Equivalent LED illumination is also acceptable. · Condenser: Condenser Ach.. A0.9(P) with switchable condenser head, with color coding, for BF, DF, DH & Pol. · Eyepiece: Eyepiece pair HC PLAN 10x/22 Br.M · Immersion Oil: Immersion Oil 518C ISO 8036/1; 20ml · **Objectives:** · Suitable objectives for bright field, DIC, polarize and fluorescence applications. Ø HI PLAN 4x/0.10 SL/FWD: 18.0mm for the use with / without Cover Synchronized		

		Brightness Ø HI PLAN 10x/0.25 SL FWD: 12.0 MM for use with and without Cover Gs. Synchronized Brightness Ø HI Plan 40x/0.65 Cover glass: 0.17 / ICT upright with M25 thread FWD: 0.36 Ø HI PLAN 100x/1.25 OIL FWD: 0.10 mm. For use with a 0.17 mm Cover Gs (DIN/ISO) Fluorescence suitable · **Optional Objectives**: Ø N Plan 10x/0.25, -/B, with M25 thread FWD 17.6 Ø N PLAN 10x/0.25 PHI, -/B, FWD 17.6 with Phase I ring Ø N PLAN 40x/0.65PH2/ Cover gs: 0.17/ICT with Phase II ring · Measuring graticule: Graticule 10mm = 200 div. One 14 **Reflected light Fluorescence attachment** · Reflected light illuminator: Fluorescence illuminator 5-fold, Color coded and centrable iris		

		aperture and field diaphragm. Filter magazine for 4 light filters 32 mm diameter. Slots for polarizer/ analyzer. Daylight filters, 32mm. · Light source for Fluorescence: Lamp housing 107/2, with lamp mount for halogen lamp 12V 100W non adjustable, 1-less collector and heat protection filter, mains cable 0.55m with 12V 100W tungsten halogen lamp or LED illumination. · Power supply for Fluorescence: Lamp power, stabilized, AC – input range: 90-250V AC / 50/60 Hz. DC output voltages. Adjustable from 2.5V up to 12V, ambient temperature range; +5-60oC, protected for short out and open output connector. · UV Filter: Filter system A for UV excitation, excitation filter: BP 340-380/, dichromatic mirror: 400, suppression filter: LP; Should be able to detect fluorochromes like		

		DAPI, Hoecht. · Blue filter: Filter system I3 for blue excitation, excitation filter: BP 420-490, dichromatic mirror: 510, suppression filter: LP; Should be able to detect fluorochromes like Alexa488, GFP, FITC etc. · Green filter: BP 515-560; should be able to detect fluorochromes like Alexa594, Texas Red, TRITC, PI, PE etc. **Mega Pixel Fluorescence sensitive Color Digital Camera** **System with Fire wire Interface** · Camera resolution: 15.0 Mega pixels with Grade Zero sensor · Pixel Size: Pixel size 2.78 micron square · Color Depth: 36 bit Color depth · Exposure Time: Exposure time 0.2 millisecond to 60 · Scanning: Progressive scanning · A to D Conversion: 12 bit A/D conversion · Speed: Max. 5 Frames per second @ 2592 x 1944 resolution		

		· Interface: Single cable Fire wire IEEE1394a 6-pin · Control Software: Twain Software for PC · Camera connection: PCI interface card, FireWire · C-Mount adapter: Video objective 0.7 x or 0.55x for Trinocular or video/photo tubes **Software Module for Interactive Measurement** · Interactive Measurement Module: Interactive Measurement Module Using the mouse, measurements made by manually drawing on selected image,. Types include – Linear distance, Curved length, Area, Count, Grey level. All measurements shown in real units. Width and color of drawn lines can be adjusted and labeled with measurements. Grouping so that objects that consist of multiple fragments are measured as one. Results can apply to a single image or can be accumulated over 15 multiple images. Tracing can be		

		stored and recalled for remeasurements by editing. Results can be assigned to userdefined cases (user defines name, color code). Results are displayed individually and as s statistical summary in tabular form. Measurement data can be exported MS Excel or Word or saved in Ascii File. Save/recall measurement configurations to named files. · A suitable latest configuration computer set with printer suitable UPS for the entire system to be provided.		
32.	**Deep Freeze** **-20°C**	· Microprocessor controlled vertical Freezer · Separate chamber racks can be pulled out for easy handling · HCFC and CFC – free insulation and Refrigeration · Capacity 380L or more · Temperature adjustable from -12 to -25 oC · Integrated controller Digital display of set and actual temperature	02	

		· Interior fluorescent lighting. · Adequate forced air circulation of air to ensure even cooling by DUCT system. · High and low temperature alarm; Door ajar alarm; Access ports; Low energy consumption . · No consumption on storing material with automatic electric defrost. · With standard safety features · Power 220-240 V; 50/60 Hz · Three years warranty, 5 years comprehensive AMC should be available with service centers enclose proximity. · Availability of spares / disposable for at least 10 years. · All consumables required for installation and standardization of systems to be given free of cost. · List of users and satisfactory report of quoted model from reputed institutes preferably Govt institutes/hospitals		

		· Should have all the accessories required for the functioning of the equipments. · ISI mark or other equivalent quality certification CE marked · All electrical peripherals required for smooth functioning e.g, voltage stabilizer and UPS should be provided with the equipment.		
33.	**UV Trans-Illuminator**	· Active area of 21x26 cm · Contain uniform illumination and white filter. · High and low intensity operation for analytical or preparative applications · With intensity switch UV lamps · With clear UV-blocking safety cover · Power supply: 220 V.	01	
34.	**Quick Spin Micro centrifuge**	· Max speed (rpm) : 14,000 adjustable in 500 rpm increments. · Max RCF (xg) : 18000 or more · Max capacity : 24 x 15/2.2 ml**/**18	03	

		place Rotor 18X2.0 & 0.5ml with adaptor · Run Time : Pulse and continuous with timer · Temp. Range : 100 C to +400 C		
35.	**Dessicator (Small)**	· Should have Whisper Freeze Technology, powerful compressor to achieve fast ice production with the lowest noise level. · Should have robust temperature sensor; automatically switch off the ice production as soon as ice reaches the top of the bin. · Should have made up of stainless steel durable body. · Should have insulted bin to store ice for longer durations. · Should have CFC-free refrigerants. · Should come with one scoop. · Should have granular ice flakes. · Should have storage capacity 70 Kg. · Should have ice output per 24 Hours – 120 Kg. · Should have user friendly drain for defrost water.	01	

		· Should have external dimension 600x300x500mm (WxDxH) and internal dimension 700x700x975mm (WxDxH). · Iron filter and water softener pre-filtering kits to be included		
36.	**Ice Flaking machine**	· Should have Whisper Freeze Technology, powerful compressor to achieve fast ice production with the lowest noise level. · Should have robust temperature sensor; automatically switch off the ice production as soon as ice reaches the top of the bin. · Should have made up of stainless steel durable body. · Should have insulted bin to store ice for longer durations. · Should have CFC-free refrigerants. · Should come with one scoop. · Should have granular ice flakes. · Should have storage capacity 70 Kg. · Should have ice output per 24		

		Hours – 120 Kg. · Should have user friendly drain for defrost water. · Should have external dimension 600x300x500mm (WxDxH) and internal dimension 700x700x975mm (WxDxH). · Iron filter and water softener pre-filtering kits to be included		
37.	**CO2 Incubator with cylinder**	1. Capacity up to 170 liter. 2. Temperature: Range 4° C above ambient to 50° C with control ± 0.1° C. 3. Uniformity (on platform) ± 0.25° C at 37° C. 4. Cell culture facility; provision of CO2 incubation (CO2 range: 0.2 to 20%). 5. Disinfection (HTD) facility to protect against bacterial contamination. 6. Should have sealed inner glass door. 7. Should have two selves. 8. Stackable up to two high. 9. Device for elimination of repeated contamination of HEPA	02	

		filters. 10. Accessories with CO2 regulator, cylinder (30kg) and voltage stabilizer. 11. Power- 230V, 50-60Hz.		
38.	**Hot Air Oven**	· Size- Tabletop volume of 60ltr (approx.) · Digitally controlled equipment suitable for daily usage for sterilization -Microprocessor based · Should have double walled construction, special high quality insulated steel · Interior material- Stainless steel. · Facility for adjustable shelves, 3 removable shelves to be provided · Stackable with stacking kit. · Dimension: Chamber (in mm) [WXHXD]-350X500X400 (pprox..) Exterior (in mm) [WXHXD]-500X700X600 (pprox..) · Insulated door fitted with heavy hinges, mechanical door lock.	01	

		· Temperature range ambient to 250oC or more, digitally temperature setting accuracy with digital display. · Temperature uniformity- ± 2oC (pprox..) · Separate PT 100 sensor and large digital display for temperature (LCD). · Forced uniform air circulation, Digital safety thermostat. · Adjustable fan speed- 2 speeds · Delayed start and stop function, high quality heating element. · Operation time setting from 60 min or less to 99 h and hold. · Automatic audible & visible over-temperature alarm. · Supplied with cord & plug, operate at 220V/50 Hz AC supply · Three years warranty, 5 yrs comprehensive AMC should be available proximity · Availability of spares / disposables for at least 10 years. · All consumables required for		

		installation and standardization of system · List of users and Satisfactory Report of quoted model from reputed institute / hospital · Should have all the accessories required for the functioning of the equipment · ISI mark or other equivalent quality certification · All electrical peripherals required for smooth functioning e.g. voltage stabilizer provided with the equipment		
39.	**ELISA reader with washer**	**General Operation** · Self-diagnosis: Checks filter disk, plate transport, electronics, main PC board, battery, memory, and the optional internal printer (when available). · Warm-up time: 3 min(pprox..) · Reading speed: Ø Fast read mode 6 sec single wavelength, 10 sec dual wavelength Ø Step read mode 15 sec single wavelength, 30 sec dual wavelength	02	

		· Mixing capability: 3- speed setting programmable time 0- 999 sec. · Should be fully automatic, able to support all plate formats U bottom, V bottom and flat bottom 96-well micro plates Assay blanks: User-defined or stored assay template. · Data storage buffer: Last 10 plate data for endpoint, or last 30 plate data for kinetic reads. · Report types: Raw, absorbance, matrix, limit, cutoff, concentration, curve fit, difference, and kinetic. · Internal printer: Thermal printer with 112 mm paper width, 40 column, (optional) 9 x 8/7 (graphic/text mode) dot matrix · Computer interface: Bidirectional RS-232C serial communicable port, 9-pin D-sub plug · Memory backup: 5-year lithium battery. **Optical** · Photometric methods: Single and dual wavelength		

		· Photodetectors: 8 silicon photodiode detectors for measurements, 1 for reference · Light source: Tungsten halogen 20 W, 3,000 hr life · Spectral range: 400-750 nm · Filter capacity: 8 interference filters · Bandwidth: 10 nm · Standard filters:415, 450,490,540,630 & 750nm · Optional filters: 520,550 & 570 nm **Technical** · Indication range: 0.000 – 3.000 OD · Resolution: 0.001 OD(approx..) · Accuracy: ±1.0%, 0.010 from 0.000 to 3.000 OD at 490 nm (approx..) · Precision: 1.0% or 0.005 OD from 0.0–2.0 OD; 1.5% from 2.0–3.0 OD (approx..) · Linearity: ±1.0% from 0.000 to 2.000 OD, ±2.0% from 2.000 to 3.000 OD (approx..) · Reproducibility: 1.0% or 0.005 OD from 0.000 to 2.000 OD, 1.5% from 2.000 to 3.000 OD		

		· Channel-to-channel error: 1.5% or 0.005 OD from 0.000 to 3.000OD (approx..) · Stability and drift: 0.010 OD at OD = 1 with single wavelength reading · Plate shaking (3 speeds) **Incubator** · Temperature control: 25oC or ambient +5oC up to 45oC (approx..) · Incubator set point: 25-45 oC, 0.1oC step · Accuracy: ± 0.5%oC when set point = 37oC at ambient temperature of 25 oC · Well-to-well uniformity: ±0.7oC when set point = 37oC at ambient temperature of 25oC**.** · Warm-up time: <5 min when set point =37oC at ambient temperature of 25oC **Others** · Electrical voltage: 100-240VAC, 50/60 Hz · Power consumption: 100 VA maximum · Operating temperature: 5-35oC · Storage temperature: -20 to		

		50oC · Operating storage and humidity: 0-95% relative humidity without condensation **ELISA WASHER** · Dimensions (W x D x H):- 325 x 405 x 193 mm (12.8 x 16 x 7,6 in) (approx..) · Programmable horizontal and vertical needle positions to an accuracy of 0.1 mm for bottom washing, crosswise aspiration, and overflow washing · Dispense speed control · Plate shaking option to help minimize bubbles and liquid adherence to well sides · Light vibrating mode. · Waste-bottle sensor to detect high-waste liquid levels · Up to 75 programmable washing sequences to customize protocols · Operating conditions: 15–30°C/15–85% RH · Manifolds: 8- and 12-way · Easily accessible manifold interior for cleaning and		

		maintenance · Removable and autoclavable plate carrier · Standard aerosol protection cover · Integrated vacuum and dispensing pumps (9ltr/min) to ensure accurate and quiet washing and eliminate the need for bulky and noisy external pumps · Compatibility with 96-well microplates having flat- U-, or V-bottom wells · Residual well volume: <2µl · Wash volume: 50-3,000 µl per well · Soak time: Ø 0-9.9 seconds in strip mode Ø 0-59 minutes in plate mode Additional waste bottle 2 Lt. vol. required **Software:** Compatible counting software packages(windows compatible) should be included for onboard data analysis. **Computer:** A suitable latest configuration Computer with UPS with at least 30 minutes backup &		

		Laser Jet printer to be supplied with the system.		
40.	**Multichannel Micropipette Set. (8 or 12 channel) (1-10ul), (10-100ul), (20-200ul),**	Multichannel winding-free, instant volume adjustment, dispensing error <±1% Spring loaded tip cone, tight to fit universal tips in each category, ergonomic design .Adjustment opening for specific liquids and volume Secondary adjustment for specific liquid Light weight piston made of Forton Ejector should be smooth with ergonomic design Volume display: Four digits Fully autoclavable. Unsurpassed shock, heat, chemicals and UV-light resistance. Capacity: A. 1 – 10ul B. 10 – 100ul C. 20 – 200 ul.	02	
41.	**Lyophilizer- (Freeze drying machine)**	**Dimensions** · Cabinet: 425 x 570 x 650 (W x D x H mm) (tabili.) · Trap Chamber: 270 x 270 (W x D	01	

		x H mm) (tabili.) · Display Range: Ambient to -60 ˚C · Pressure Display Range: 0 to 999 Microns . **Compressor**: 1/3 HP or more hermatic unit CFC-free refrigeration **Refrigeration condenser system** · Capacity: 5 litres(tabili) · Liters/day: 3 Litres(tabili) · Temperature: -50 oC (tabili.) · Temperature uniformity : ±1 oC **Vacuum system** · Pump capacity: 165 liters (pump to be included with system) · Vacuum Gauge: Digital Vacuum Gauge with a range of 0 to 999 Microns **Defrosting System**: Hot gas solenoid system or Heater defrosting system **Electrical Requirement**: 230V, 50/60Hz · Supplied with drying chamber with rubber valves · Automatic control System		

		· Automatic Purge system · Safety valve function · Warranty for 3 years from the date of installation and AMC two years included. Additional trap should be provided. Voltage stabilizer should be provided. Vials/tubes/ampules should be included (1000nos.)		
42.	**Vacuum Concentrator (Freeze dryer)**	**(A)** · Rotation Speed : **100 ~ 2000 rpm (step less, slow start)** · Temp control range: **-300C to 950C** · Temp. control : Thermister ON/OFF · Rotation setting : Dial setting · Safety feature : Overheat protector, Motor break (when lid open), circuit breaker · Heater : 140 W · Motor : 40 W · Drive : Seal less magnetically coupled drive · Vacuum gauge : Bourdon type (-760 to 0 mm) · Nitrogen purge/air leak: Through	01	

		0.2 micron filter, port size 17 mm · Chamber material : SUS 304 (Stainless Steel) · Chamber port : Suction port size 17 mm · Chamber dimension : Ø 310 x 200H (mm) · Power : 220 VAC, 50 Hz. It comes complete with **Rotor** · Tube size : Micro-tube OD 10.8mm (1.5ml~ 2.2ml) · Capacity : 96 pcs. · The motor should be located under the vacuum chamber and rotor id driven magnetically. · Should have vapour contact metal parts coated with acid resistant materials, · The concentrator should have nitrogen gas inlet is useful for the application of easily oxidized samples for DNA, Peptides & Enzymes. · Membrane filter **0.3 micron** avoids contaminations when in taking air into chamber.		

		(B) Refrigerated Cold Trap: · Condensing capacity: Max. 0.5 Kg. water · Lowest Temp.: -500C · Safety feature: Breaker, overload relay for compressor · Refrigeration unit ; 300W air cooled type · Defrost : Built in · Service AC output : Max. 4A for vaccum pump · Trap dimension : Ø 90 x 225D (tabili. 1.4L) · Power : 220VA, 50 Hz. , It comes complete with Lid with I/O nozzle. **© Vaccum Pump :** · Ultimate Pressure : 5x10-4 Torr (tabili.) · Pumping speed : 50L/min. · Motor output : 200 W · Oil capacity : 550 – 700 ml. · Safety feature: Thermal protector, check valve, Oil filter · Power source : 220V AC, 50 Hz. · With oil mist filter OMT -050A & Oil Can $L SMR – 100 **(D) Low Temp. Circulator :** (to be		

		attached with Vacuum concentrator) · Temp control range: **-300C to 950C** · Temp. control Accuracy : ± 0.10C · Cooling capacity : 200 W · Circulation : 5L/min. · Temp. control : Microprocessor controlled PID · Heater wattage : 500 W, SUS 316 · Parameter display/setting: Digital LED · Safety feature : Self diagnosis · Temp. sensor : Thermister · Bath dimension : 140W x 260D x 150H mm, 4L(tabili.) · Bath cover : Included · Aux. function : Auto start/stop with 0-99h 59 min. timer, auto tuning, offset, external sensor input · Power : 100V AC, 800V A Extra trap and voltage tabilizer should be provided. All equipments should be CE, ISO 9001, ISO 13485 marked or equivalent		

43.	**Water bath - circulating**	· Should be based on advanced microprocessor technology with temperature control. · Operation through key pad. · Bath tanks and all parts in contract with the bath liquid should be made up of high grade stainless steel. · Filling volume should be around 20 liters. · Working temperature range- room temperature to 90oC. · There should be a multi display (LED) with actual value, set point, high/low temperature, for shaking frequency and times with display resolution of 0.1oC. · Temperature stability should be ± 0.2 oC. · Temperature uniformity in the bath should be ± 0.05 oC . · Should have provision to adjust shaking frequency up to 200 RPM. · Audible warning safety signals should be there for high/low temperature warnings, and dry running protection.	01	

		· Instrument should have lift up bath cover. · Carrier racks should be given for flasks and test tubes racks. · Water bath protective media should be there to prevent contamination and formation of algae. · Heating capacity - 2 KW. · Three years warranty, 5 yrs comprehensive AMC should be available with service centers in close proximity. · Availability of spares/ disposables for at least 10 years. · All consumable required for installation and standardization of system to be given free of cost. · List of users and satisfactory report of quoted model from reputed institute preferably Government institute/ hospitals. · Should have all the accessories required for the functioning of the equipment. · ISI mark or other equivalent quality certification.		

		· All electrical peripherals required for smooth functioning e.g. voltage stabilizer should be provided with the equipment.		
44.	**Autoclave automated control (Vertical)**	1. Steam Sterilizers or Autoclaves to sterilize materials under high temperature and pressured steam. Suitable for hospital dressings, surgical instruments, glassware, culture media and laboratory ware etc. Technical Specifications:- 1. Fully automated, Microprocessor controlled system for Sterilizing Operation. 2. Internal Capacity – 30 to 50 L with compact dimension 3. Vertical, Single door 4. Should be suitable to operate in AC room Chamber material : High quality stainless steel (SS304) Fail alert for door locking, temperature and pressure Safety valve for high pressure Chamber should constructed with	01	

		long lasting high grade and certified stainless steel 4.Operating temperature 30 deg to -138 deg C; pressure 1.1-2.2 kg/cm2 of steam pressure Temperature Accuracy: ± 0.5°C at 121°C 5. Digital display for temperature, pressure guage and time. 6. Insulated exterior Chamber with castors for easy shifting. Locks for castors. 7.Safety lock for door: pressure lock safety device; Low water off 8. Cooling for the vessel for rapid cooling 9. To be included : suitable baskets System Configuration Accessories, spares and consumables: Provide with high quality spares & consumables for at least 10 years. 10. Environmental factors: IEC-60601-1-2: 200 General Requirements of Safety for Electromagnetic Compatibility. 11. Power Supply: 220-240VAC, 50Hz,/440 - V Single / 3 Phase fitted with plug compatible with		

		local sockets. 12. Standards and Safety: Electrical safety conforms IEC-60601 / IS-13450 (BIS), ISI approved. 13. Documentation: User/Technical/Maintenance manuals, Standard Installation, Certificate of calibration & inspection; List of spare parts and accessories with part number and costing; Log book with instruction for quarterly maintenance checklist. #Should submit a report of quality checks using biological Indicator		
	Total PKR	**Above PKR : 1.0 Million**		

Instructions to bidders

Preparation of Bids

1. Scope of Work

The, I.C.C.B.S., plans to develop / acquire a comprehensive integrated solution for all the functional needs and requirements of MACHINERY / EQUIPMENT, as described in later pages.

2. Method and procedure of Procurement

National Competitive Bidding **Single Stage One Envelop Procedure** as per SPP Rules 2010 (updated 2013)

2. Language of Bid

The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Procuring agency , shall be written in the English language

3. Documents Comprising the Bid

The bid prepared by the Bidder shall comprise the following components:

(a) Price Schedule completed in accordance with ITB Clauses 4, 5 and 6.

(b) Bid security furnished in accordance with ITB Clause 9.

4. Bid Prices

4.1 The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total bid price of the equipment it proposes to supply under the contract.

4.2 the prices shall be quoted on delivery to consignee's end inclusive of all taxes, stamps, duties, levies, fees and installation and integration charges imposed till the delivery location specified in the Schedule of Requirements. No separate payment shall be made for the incidental services.

4.3 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account, unless otherwise specified in the Bid Data Sheet.

4.4 Prices shall be quoted in Pak Rupees unless otherwise specified in the Bid Data Sheet. The conversion of the foreign currency in Pak rupees should be mentioned in case of C&F prices.

5. Bid Form

The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating chemicals to be supplied, description of the chemicals and prices.

6. Bid Currencies

Prices Shall be quoted in Pak Rupees *(after conversion from foreign currency)* when the prices are being quoted on C&F basis.

7. Documents Establishing Bidder's

The Bidder shall furnish, as part of its bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted.

Eligibility and Qualification

(a) that the Bidder has the financial and technical capability necessary to perform the contract;

(b) that the Bidder meets the qualification criteria listed in the Bid Data Sheet.

8. Documents' Eligibility and Conformity to Bidding Documents

The documentary evidence of conformity of the equipments to the bidding documents may be in the form of cat number, part number etc., and shall consist a detailed description of the essential technical and performance characteristics of the systems.

9. Bid Security

9.1 The bid security is required to protect the Procuring agency against the risk of Bidder's conduct, which would warrant the security's forfeiture

The bid security shall be denominated in the currency of the bid:

(a) at the Bidder's option, be in the form of either demand draft/call deposit or an unconditional bank guarantee from a reputable Bank ;

(b) be submitted in its original form; copies will not be accepted;

(c) remain valid for a period of at least 14 days beyond the original validity period of bids, or at least 14 days beyond any extended period of bid validity

9.2 bid securities shall be released to the unsuccessful bidders once the contract has been signed with the successful bidder or the validity period has expired.

9.3 The successful Bidder's bid security shall be discharged upon the Bidder signing the contract, and furnishing the performance security.

9.4 The bid security may be forfeited:

(a) if a Bidder withdraws its bid during the period of bid validity or

(b) in the case of a successful Bidder, if the Bidder fails:

(i) to sign the contract in accordance or
(ii) to furnish performance security

10. Period of Validity of Bids

10.1 Bids shall remain valid for the period specified in the Bid Data Sheet after the date of bid submission prescribed by the Procuring agency. A bid valid for a shorter period shall be rejected by the Procuring agency as non responsive.

10.2 In exceptional circumstances, the Procuring agency may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security

shall also be suitably extended as per Rule-38 of SPP Rules, 2010 (updated 2013). A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid.

11. Format and Signing of Bid

11.1 The Bidder shall prepare an original and the number of copies of the bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" and "COPY OF BID," as appropriate. In the event of any discrepancy between them, the original shall govern.

11.2 The original and the copy or copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the contract. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.

11.3 Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.

Submission of Bids

12. Sealing and Marking of Bids

12.1 The Bidder shall seal the original and each copy of the bid in separate envelopes, duly marking the envelopes as "ORIGINAL BID" and ONE COPY. The envelopes shall then be sealed in an outer envelope. The inner and outer envelopes shall be addressed to the Procuring agency at the address given in the BDS, and carry statement "DO NOT OPEN BEFORE 3.00 P.M. on 21-02-2017.

12.2 If the outer envelope is not sealed and marked as required, the Procuring agency shall assume no responsibility for the bid's misplacement or premature opening.

13. Deadline for Submission of Bids

13.1 Bids must be received by the Procuring agency at the address specified in BDS, not later than the time and date specified in the Bid Data Sheet.

13.2 The Procuring agency may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents. in such case all rights and obligations of the Procuring agency and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

14. Late Bids

Any bid received by the Procuring agency after the deadline for submission of bids prescribed by the Procuring agency shall be rejected and returned unopened to the Bidder.

15. Modification and Withdrawal of Bids

15.1 The Bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification, including substitution or withdrawal of the bids, is received by the Procuring agency prior to the deadline prescribed for submission of bids.

15.2 No bid may be modified after the deadline for submission of bids.

15.3 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiry of the period of bid validity Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security.

Opening and Evaluation of Bids

16. Opening of Bids by the Procuring agency

16.1 The Procuring agency shall open all bids in the presence of bidders' representatives who choose to attend, at the time, on the date, and at the place specified in the Bid Data Sheet. The bidders' representatives who are present shall sign a register/attendance sheet evidencing their attendance.

16.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Procuring agency may consider appropriate, will be announced at the opening.

17. Clarification of Bids

During evaluation of the bids, the Procuring agency may ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.

18. Preliminary Examination

18.1 The Procuring agency shall examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.

18.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the Supplier does not accept the correction of the errors, its bid will be rejected, and its bid security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.

18.3 Prior to the detailed evaluation, the Procuring agency will determine the substantial responsiveness of each bid to the bidding documents. A substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Procuring agency's determination of a bid's responsiveness is to be based on the contents of the bid itself.

18.4 If a bid is not substantially responsive, it will be rejected by the Procuring agency and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

19. Evaluation and Comparison of Bids

19.1 The Procuring agency will evaluate and compare the bids which have been determined to be substantially responsive.

19.2 The Procuring agency's evaluation of a bid will be on delivery to consignee's end inclusive of all taxes, stamps, duties, levies, fees and installation and integration charges imposed till the delivery location.

20. Contacting the Procuring agency

20.1 No Bidder shall contact the Procuring agency on any matter relating to its bid, from the time of the bid opening to the time of announcement of Bid Evaluation Report. If the Bidder wishes to bring additional information to the notice of the Procuring agency, it should do so in writing.

20.2 Any effort by a Bidder to influence the Procuring agency in its decisions on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.

Award of Contract

21. Post-qualification

21.1 In the absence of prequalification, the Procuring agency may determine to its satisfaction whether that selected Bidder having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily.

21.2 The determination will take into account the Bidder's financial and technical capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 7 as well as such other information as the Procuring agency deems necessary and appropriate.

21.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Procuring agency will proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.

22. Award Criteria

The Procuring agency will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.

23. Procuring agency's Right to Accept any Bid and to Reject any or All Bids

23.1 Subject to relevant provisions of SPP Rules 2010 (updated 2013), the Procuring agency reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award.

23.2. Pursuant to Rule 45 of SPP Rules 2010 (updated 2013), Procuring agency shall hoist the evaluation report on Authority's web site, and intimate to all the bidders seven days prior to notify the award of contract.

24. Notification of Award

24.1 Prior to the expiration of the period of bid validity, the Procuring agency shall notify the successful Bidder in writing, that its bid has been accepted.

24.2 Upon the successful Bidder's furnishing of the performance security pursuant to ITB Clause 26, the Procuring agency will promptly notify each unsuccessful Bidder and will release their bid security.

25. Signing of Contract

25.1 At the same time as the Procuring agency notifies the successful Bidder that its bid has been accepted, the Procuring agency will send the Bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.

25.2 Within the period specified in BDS, of receipt of the Contract Form, the successful Bidder shall sign and date the contract and return it to the Procuring agency.

26. Performance Security

26.1 Within the period specified in BDS, of the receipt of notification of award from the Procuring agency, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the bidding documents, or in another form acceptable to the Procuring agency.

26.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 25 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Procuring agency may make the award to the next lowest evaluated Bidder or call for new bids.

27. Corrupt or Fraudulent Practices

27.1 The Government of Sindh requires that Procuring agency's (including beneficiaries of donor agencies' loans), as well as Bidders/Suppliers/Contractors under Government-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the SPPRA, in accordance with the SPP Act, 2009 and Rules made there under:

(a) **"Corrupt and Fraudulent Practices"** means either one or any combination of the practices given below;

(i) "**Coercive Practice**" means any impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;

(ii)"**Collusive Practice**" means any arrangement between two or more parties to the procurement process or contract execution, designed to achieve with or without the knowledge of the procuring agency to establish prices at artificial, noncompetitive levels for any wrongful gain;

(iii) **"Corrupt Practice"** means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;

(iv) "**Fraudulent Practice"** means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(b) **"Obstructive Practice"** means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract or deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements before investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or acts intended to materially impede the exercise of inspection and audit rights provided for under the Rules.

Bid Data Sheet

The following specific data for MACHINERY / EQUIPMENT to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

Introduction	
ITB 1	**Name and address of Procuring Agency:** International Center for Chemical and Biological Sciences, H.E.J. Research Institute of Chemistry University of Karachi Karachi-75270.
ITB 1	**Name of Contract.** *Purchase of MACHINERY / EQUIPMENT for the Center.*
Bid Price and Currency	
ITB 4	Prices quoted by the Bidder shall be ***"fixed" and in C&F prices."****(The rates shall also be quoted in Pak rupees after conversion from foreign currency).*
Preparation and Submission of Bids	
ITSB 19	*Qualification requirements:* 1. Complete Company profile 2. Valid Registration with tax authorities is required 3. Relevant experience at least Six (06) Months. 4. Rs. 100,000.00 Turn-over of at least last three years
ITB 7	**Amount of bid security.** 2 % of Bid
ITB 8	**Bid validity period**. 90 days
ITB-9	**Performance Guarantee** 5% of the P.O. Value
ITB 10	**Number of copies.** One original One copy

ITB 19.1	**Deadline for bid submission**. 21-02-2017 at 2.30 p.m.
ITB 20	**Bid Evaluation:** Lowest evaluated bid
	Under following conditions, Bid will be rejected: 1. Conditional and Telegraphic tenders/bids; 2. Bids not accompanied by bid security (Earnest Money); 3. Bids received after specified date and time; 4. Bidder submitting any false information; 5. Black Listed Firms by Sindh Government or any Entity of it

Summary Sheet

TENDER NOTICE NO. HEJ-ICCBS-STRP-210217

The tender will liable to be rejected, if this form will not accompany the tender bid / quote

Serial No.	Make & Country of Origin	Model No. / CAT No.	Bid Value	Foreign Currency (If applicable)	Conversion Rate (If applicable)	Price in PKR
1.						
2.						
3.						

Total Bid Value in PKR		
Earnest Money @ ____% in PKR		
Pay Order/Demand Draft No:		Date:

SCHEDULE OF REQUIREMENTS

S. No.	Description of service / goods	Quantity	Required Delivery Schedule in Days from the Date of Contract Award	Location
1	*Purchase / Import of* *MACHINERY / EQUIPMENT.*	As per tender document	12 weeks on C&F orders	I.C.C.B.S., Karachi
2				
3				

Sample Forms

Date: _____

To:

International Center for Chemical and Biological Sciences

University of Karachi,

Karachi-75270.

Dear Sir:

Having examined the bidding documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to develop and deliver the required system in conformity with the said bidding documents for the sum of *[total bid amount in words and figures]* or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to develop the system in accordance with the delivery schedule specified in the Schedule of Requirements.

If our Bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to **Five (5) percent** of the Contract Price/Pay order for the due performance of the Contract, in the form prescribed by the Purchaser.

We agree to abide by this Bid for a period of 90days from the date fixed for Bid opening under Clause 16 of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this _____ day of _____ 2017_____

_____ _____

[signature] *[in the capacity of]*

Duly authorized to sign Bid for and on behalf of _____

To: *[name of Procuring agency]*

WHEREAS *[name of Supplier]* (hereinafter called "the Supplier") has undertaken, in pursuance of Contract No. *[reference number of the contract]* dated _____ 2017 to deploy *[description of goods and services] (*hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a bank guarantee by a reputable bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of *[amount of the guarantee in words and figures],* and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limits of *[amount of guarantee]* as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the _____ day of _____2017_____

Signature and seal of the Guarantors

_____

[name of bank or financial institution]

_____

[address]

_____

[date]