



TENDER DOCUMENTS
BIOLOGY/CHEMISTRY LAB EQUIPMENT AND
GLASS WARE
NUTECH/SCM/Bio/Chem Lab-2018/TD-014

NATIONAL UNIVERSITY OF TECHNOLOGY

TENDER NOTICE
National University of Technology (NUTECH)
NUTECH/SCM/Bio/Chem Lab-2018/TD-014

Sealed bids are invited from Government / FBR Registered Firms for the procurement of Biology and Chemistry laboratory equipment and glass ware for NUTECH Technology Labs.

1. Tender documents containing terms & conditions and detailed specifications of items can be downloaded from NUTECH website "<https://nutech.edu.pk/d-p.php>" w.e.f **03-01-2019**.
2. Quotations shall be submitted as per requirement of the tender documents.
3. Bidders will be required to submit bank draft/PO equal to 4% of quoted value as Bid Bond in favor of National University of Technology (NUTECH).
4. Sealed bids with detailed specification should reach on the following address latest by **1100 hours on 06-02-2019**. Late submission will not be entertained.
5. Bids will be opened at **1130 hours** on **06-02-2019** at SCM Office.
6. Project is to be completed in 110 days from the date of award of contract.

Deputy Director (Supply Chain Management Office)
NATIONAL UNIVERSITY OF TECHNOLOGY (NUTECH) UPROAD, SECI-12,
ISLAMABAD
Tel: 0092-51-5476768, Ext :178



NATIONAL UNIVERSITY OF TECHNOLOGY
SUPPLY CHAIN MANAGEMENT OFFICE

INVITATION TO TENDER

Submission Date/Time 06-02-2019 at 11 00 hours

1. NUTECH desires to procure the list of item(s)/Store(s) as per **Annexure-A**. Interested bidders are requested to send their bids through courier or deliver at NUTECH under two separate sealed envelopes (placed together in third envelope), marked clearly, "Technical Offer" and "Commercial Offer", respectively to the undersigned, latest by or before above mentioned due date. If due to any unforeseen circumstances, NUTECH establishment remains closed, then the last date of submission will be extended to next working day.

2. Please also note that Technical Offer should contain Annexes-A & B duly filled in (supported with relevant technical literature /details/ catalogues etc). Commercial Offer will contain Annexure-C. Please ensure no space is left blank in the annexes.

3. Following must be noted for this IT (Invitation to Tender):-

- a. Validity of offer will be 90 days
- b. Delivery period will be 110 days
- c. Tender(s) must be accompanied with a Bid Bond in agreement of faithful compliance of the conditions of Contract/Purchase Order. This amount will be equivalent to 4% of the total quoted value. In case of non-acceptance of any offer, the Bid Bond will be returned to the bidder by fastest possible means. The Bid Bond amount submitted by the successful bidder will however, be refunded on effective termination of Contract/ Purchase Order. (The Bid Bond will be forfeited in case of default by the bidder from his commitments made through his offer). Submission of Bid Bond is mandatory, otherwise your offer will be rejected.
- d. 2 years warranty against 5% bank guarantee will be required from the

successful bidders from the date of commissioning.

e. Rates should be quoted on Free Delivery basis at NUTECH Islamabad.

4. We reserve the rights to accept or reject any or all tenders as a whole or in part without assigning any reason whatsoever. The decision in this regard will be firm, final and binding on all bidders.

DD (Supply Chain Management)



NATIONAL UNIVERSITY OF TECHNOLOGY
SUPPLY CHAIN MANAGEMENT OFFICE

TECHNICAL OFFER

Annex A

User Reference No Bio/Chem Lab -002 Date 26-12-2018

Technical Specification

Ser	Nomen	Description	Country of Origin	A/U	Qty Req	Bidder Compliance			Tech Scrutiny to be done by user	
						Yes	No	Alternate Offer	Accepted	Rejected
BIOLOGY LAB EQUIPMENT										
1.	Weighing Balances (0.001g-1000g)	Readability: 0.001gm, Capacity 1000 gm, Microprocessor Controlled, Digital Display	European/ North American region	Nos	2					
2.	Hot plate (with magnetic stirrers)	stirring quantity: ~ 2-3 L, speed range: 100-1500 rpm, heating power: 500 W, heating plate diameter: 150 mm temperature control:	European/ North American region	Nos	2					

		20- 320°C, dimensions (mm): 155 x 215 x 100							
3.	pH-meter with sensor probe	0 to14.00 pH,Manual temperature compensation, Hold, Record (Max., Min.), °C/°F.	European/ North American region	Nos	2				
4.	Light microscope (Binocular microscope)	Secured eyepieces, Powerful LED illumination, 360° rotatable, Objectives: E-plan achromatic DIN objectives 4x N.A.0.10, 10x N.A.0.25, S40x N.A.0.65, All optics should be anti-fungus treated and anti-reflection coated, Height adjustable, Dimensions: 40 cm x 19 cm x 24 cm (H x B x D)	European/ North American region	Nos	1				
5.	Fluorescence Microscope	3 position trinocular head (100% eyes/ 100%camera/ split between eyes & camera), -10x wide field eyepieces, plan 4x objective, uplanfl	European/ North American region	Nos	1				

		10x, 20x, 40x objective, -plan 100x oil immersion objective,-bx-ura2 fluorescence illuminator with rotatable front 6 cube turret, 120 fluorescence illumination system, - 100 watt quartz halogen lamp house for transmitted light, -6 place nosepiece with analyzer slot, - abbe type condenser, -right handed mechanical x y stage w/slider holder, -power cord, dust cover & instruction manual included.							
6.	Refrigerator (-20°C)	Cabinet Material: Scratch-resistant painted, Defrost: Automatic	European/ North American region	Nos	1				
7.	Universal oven	>30 liters, 230 V, 5-300°C (Precise drying, heating, ageing, burn-in and hardening)	European/ North American region	Nos	1				
8.	Water Bath (Shaking)	Bath volume: 5-10 L,	European/	Nos	1				

		Temperature range: 5-100 °C	North American region						
9.	Shaking incubator	Temp Range: 4- 80°C, Audible and visual alarms, Memory: Nonvolatile with automatic power failure restart, Speed range: 25 – 500 rpm	European/ North American region	Nos	1				
10	Hematocytometer	counting chamber acc. to Thomas cover glasses blood mixing pipettes each with rubber tube and mouthpiece complete in a storage case	European/ North American region	Nos	2				
11	Mini centrifuge	Max. Speed: 7000 rpm, Max. RCF: 2680 xg, Rotor: 2ml x 8 and PCR 8 x 2 rotors, Rotor Capacity: 8x0.2/0.5/1.5/2.0ml tube;, 16x0.2ml PCR strips, 2x0.2ml PCR strips	European/ North American region	Nos	1				
12	Refrigerated Bench top centrifuge 4°C (16000rpm)	Centrifuge with angle rotor for 15 ml centrifuge tubes, Continuous speed	European/ North American region	Nos	1				

		adjustment max.6000 U/min; Connection voltage 230 V / 50-60 Hz; Power requirement 65 W; Overheating protection; Impulse key for short runs							
13	Vortex	Quiet and compact stable design Adapters available for tubes etc. Continuous or touch operation, Electronic speed control for constant speed even during, changes in load Steel base, silicone feet for ultra-stability and vibration, Damping Speed range : 250-2500 rpm, Shaking movement : Orbital, 4mm dia, Motor type : Eccentric, oilless bearings	European/ North American region	Nos	1				
14	Distillation / deionization Unit)	Capacity 4 L/h, Low- gas, bacteria and pyrogen free distillate, Conductivity approx.	European/ North American region	Nos	1				

		2,5 µS/cm, Thermostatic low water cut-off to protect the heating element, Cooling water requirement approx. 32 L/h, Power consumption 3 kW, Dimensions (cm): 28,5 x 51 x 25, Electrical connection: 230 V							
15	Autoclave with insert	With precision manometer Thermometer, Integrated heating Application range up to 1.4 bar at 125 °C or up to 2.7 bar at 140 °C, Volume: 12 liters, Safety valve, Excess pressure safety valve, Safety lock	European/ North American region	Nos	1				
16	Laminar flow hood	Working size: 4 feet, HEPA Filter 99.999%, Efficiency for particles > 0.3 µm, H14 Class according to EN 1822 Prefilter 85% efficiency for	Local	Nos	1				

		particles >0.5um							
17	PCR Thermal Cycler (Multi-block) 3 blocks	Temperature Range: 0 to 100.0 °C, Block Format: Interchangeable, Capacity: 3 x 32-well x 0.2 ml tubes, Format: 0.2 ml tubes, 12-strip wells, Display Interface: Touchscreen, Program Features: Auto re-start (after power outages), Program overwrite protection, Instrument Memory: USB and On-board	European/ North American region	Nos	2				
18	PCR Thermal Cycler Single block	Sample capacity: 96 x 0.2 ml tubes, 0.2 ml tube strips, or 1 x 96-well plate; Temperature range 4–100°C	European/ North American region	Nos	2				
19	Gel-Doc System	Sample size: 28 x 36 cm; Image area: 25 x 26 cm; Excitation source: Trans UV 302, 254, 365 nm & White, Epi-White light; Illumination control: 3 modes	European/ North American region	Nos	1				

		(trans-UV, trans white, epi-white); Detector: CCD; Pixel size in microns (H x V): 8.4 x 9.8; Filter holder:2 positions (1 Emission Filter, 1 Chemi); Emission filters: 1 included (amber), 4 optional; Dynamic range: 1.8 Orders; Pixel density (gray levels): 8 bit (256 gray levels)							
20	Gel electrophoresis with 2 supplies	Horizontal apparatus, multichannel pipette compatible combs and gel caster, mini-maxi	European/ North American region	Nos	4				
21	Nano drop	Micro-volume, life science and standard spectrophotometer measurement modes, Ideal for DNA, RNA and Protein measurements, Only 0.5µl sample volume require, Purity scan over entire wavelength range,	European/ North American region	Nos	1				

		198 to 1000nm, Detects DNA concentrations as low as 2ng/μl, Easy and quick to clean, Results reproducible, accurate and easily obtained, Method and result saving to USB memory stick, warranty including Xenon lamp							
22	Electronic colony counter	LED displays for speed & timer, an anti-slip platform for culture flasks and straps to secure tubes, 40-200RPM shaking speed range	European/ North American region	Nos	1				
23	UV Trans illuminator	Compact benchtop, high low intensity switchable, visualization of agarose/acrylamide gel stained by EtBr, dual wavelength (302/365nm), 316 stainless steel	European/ North American region	Nos	1				
24	Ice Machine	Energy and water efficiency Water Sense adaptive purge control –	Local	Nos	1				

		Delivers maximum reliability by reducing scale buildup, extending time between cleanings. Auto Alert, LED lights that signal when it is time to descale, sanitize and more. Convenient, space-saving, durable design.							
25	Growth chamber (plant)	Automatic 24-hr. programming with timer Sliding glass doors for easy access and viewing. Four fluorescent and three incandescent lamps for various lighting levels Two interior electrical outlets allow use of other equipment Main power switch, lamp switch, heater output, fan, thermostat and programmer switches feature on/off indicator lights Removable front control panel allows	European/ North American region	Nos	1				

		maintenance without disturbing experiments							
26	Benchtop Liquid Nitrogen Containers(1 L, 2 L, 5L)	Stainless steel exterior, resist corrosion, vented lid, rubber cushioned base, shallow, flash freezing and cold traps capability.	European/ North American region	Nos	3 (1L) 3 (2L) 1(5L)				
27	Multichannel Micropipettes	0.5-10ul, 10-100ul, 100-1000ul	European/ North American region	Nos	2 each				
28	Micropipettes	0.1µl-1000µl	European/ North American region	Nos	8 each				
29	Microwave oven	Uniform Heating, Speedy Defrost, Clock Function	Local	Nos	1				
30	Glass door refrigerator	Capacity(L):1000; +1°C ~ +4°C, Adjustable Thermostat, Timer Defrost Function, 50 mm PU Insulation, Heavy Duty Castor Wheel, Internal & External Light, Double Glazed Glass, Heated Glass & Frame, Embraco	Local	Nos	1				

		Compressor, Fixed Position Door, Digital Thermometer, Adjustable Shelving.							
31	Microplate Spectrophotometer	Excellent performance for UV-Vis measurements in microplates, UV-Vis wavelength selection in 2 µL micro-volume samples, cuvettes and 6- to 384-well plates, Color touchscreen with available WiFi, Bluetooth and flash drive connectivity, Full Gen5™ or equivalent data analysis onboard or PC for all read modes, Advanced incubator design to 65-70 °C and new Condensation Control mode, Advanced shaking profiles including linear, orbital and double orbital, cuvettes	European/ North American region	Nos	1				
32	Rotary Evaporator	0-200 rpm, Step less speed, Digital	European/ North	Nos	1				

		display for temperature control, Capacity: 2-5 L	American region						
33	Mini Refrigerator centrifuge	Rotary knobs, easy to clean lid, temp range: -10 to 40 °C, Max Speed: 15000 rpm, continuous cooling at the end of run	European/ North American region	Nos	1				
34	Ultra-low freezer (-80°C)	Maximum storage capacity, energy efficient, upright	European/ North American region	Nos	1				
CHEMICAL LAB EQUIPMENTS									
1.	UV-Visible spectrophotometer	Wavelength range:190—1100 nm Spectral bandwidth: Fix 1.2 nm Scanning speed:12000 nm/min Wavelength accuracy (Deuterium line at 656 nm):± 0.1 nm Wavelength reproducibility (with Holmium oxide filter):≤0.02 nm Photometric reproducibility:≤	North American and Europe	Nos	2				

		<p>0.0005 A Baseline stability at 500 nm: ≤ 0.0001 (RMS) Long-term stability a 500 nm: ±0.0005 A/h Scanning speed: 12000 nm/min Cell holder: Single Cell holder Display: on Computer Cuvettes: 2 Glass and 2 Quartz cells</p> <p>Peltier temperature controlled device for single cell operation Complete unit with 1 kVA true sine wave UPS, PC(min i-5) with installed software and allied accessories for smooth functioning</p>							
2	Single Beam Spectrometer	<p>Optical system: Split beam ratio Scan speed: Selectable Wavelength range: 190 -1100nm Wavelength</p>	North American and Europe	Nos	4				

		accuracy: ± 1 nm Wavelength reproducibility: \leq 0.2nm Spectral bandwidth: 2nm Photometric range: - 0.3-3.0Abs Photometric accuracy: 0.002A (0- 0.5A) Stray light: \leq 0.05%T (220nm NaI, 340nm NaNO ₂) Standard Functionality Photometric Measurement Photometric & Quantitative (Quantitative, Multi- wavelength, Measurement Spectrum and Kinetic measurements with program cards) Detector: Silicon photo diode Silicon photo diode Light source: Tungsten Halogen and Deuterium arc						
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		Lamp Display Digital: LCD PC Interface: RS232 Software support Local and UV-Win Power supply: 220V							
3	Electronic Analytical Balance Digital	Weighting Capacity:220gm/82gm Minimum display: 0.1mg/0.01mg 220 voltage operated Automatic calibration by pressing keys with internal calibration weight	North American and Europe	Nos	1				
4	Electronic Balance digital top loading	Capacity: 220gm, Readability 0.001gm, Protective plastic draft shield cover as standard accessory, 220 voltage operated	North American and Europe	Nos	4				
5	Flame Photometer	Flame design. With ease of use resulting from auto ignition and flame optimization. Peak picker for presenting unambiguous	North American and Europe	Nos	1				

		<p>readings with selected filter indicator. With built in Sodium, Potassium, Lithium, Calcium and Barium Filters. Minimum Detection Level</p> <p>Na 0.1 ppm K 0.1 ppm Li 0.1 ppm Ca 2 ppm Ba 20 ppm</p> <p>Specificity Na, K and Li interference is <0.5% value of element under analysis, Aspiration rate 3 – 6 mL/min, Speed of Analysis/Time to stability 20 seconds complete with compressor and Gas Cylinder. Operated on 220 Volts</p>							
6	pH Meter Digital Bench	Digital Bench Model Microprocessor Controlled with parallel Temperature	North American and Europe	Nos	5				

		<p>indication, PH Range: -2.0 to 20.0 \pm0.005pH, PH Resolution: 0.005pH, MV Range: \pm1200.0mV, Accuracy mV: \pm0.3mV, Automatic Temperature Compensation, Temperature Range: -5 to +105.0°C, Temperature accuracy: \pm0.1°C with two/three Point Calibration System, Battery operated as well as operated With 220 Volts</p>							
7	Conductivity Meter Digital	<p>Digital Bench Top Microprocessor Controlled with parallel temperature indication, Conductivity Range: 0.0 us/cm to 1000 ms/cm, Accuracy: 0.5%, Temperature Range:</p>	North American and Europe	Nos	5				

		<p>-5.0 to +105.0°C, Salinity: 0.0-70.0, TDS: 0-1999 mg/l, Temperature accuracy ± 0.1K Calibration with 0.01 mol KCl. Reference Temperature 20 or 25°C Complete as above with a Conductivity Electrode with built in Temperature Sensor Electrode Stand with Base Standard solution 50 ml Complete package Operated on 220 Volts</p>							
8	Viscometer Digital	<p>Digital simple low cost, No calculation required Direct reading of Viscosity in cP or mPa•s. Displayed info: Viscosity (cP or mPa•s), % Torque,</p>	North American and Europe	Nos	1				

		<p>Speed/Spindle. Easy to Use Auto range Push for determining full scale range (FSR) viscosity. Accuracy: $\pm 1.0\%$ of range, Repeatability: $\pm 0.2\%$, Range 1 cps to 2 million cps (1-15cp only achievable with Optional UL Adaptor) 18 speeds from 0.3 to 100 rpm with stand set of 4 spindles and carrying case Operated on 220 Volts</p>							
9	Fume Hood	<p>Industrial grade support frame built with electrogalvanized steel and oven-baked epoxy coated aluminum. Aerodynamic design eliminates air turbulence, minimizes noise levels and static</p>	North American and Europe	Nos	1				

		<p>pressure losses</p> <p>Phenolic resin laminate baffle system ensures airflow uniformity throughout the main chamber of the hood</p> <p>Grade 304 stainless steel airfoil sweeps the work surface to maintain superior operator protection</p> <p>Nominal Size 1.2 meter</p> <p>External Dimensions 1200 x 873 x 1500 mm(W x D x H)</p> <p>Internal Dimensions 1120 x 682 x 1435 mm(W x D x H)</p> <p>Main Body: EG steel with aluminum and oven-baked Epoxy-polyester hybrid Isocide™ powder coating</p> <p>Airfoil: Stainless Steel grade 304</p> <p>Sash Material: Tempered Laminated and</p>							
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		Framed Sash Glass Sash Configuration: Vertical Complete unit with base storage cabinet							
10	Distillation Apparatus	All glass Borosilicate Glass fitted with metal heating element 3 KW, Capacity: 4 Litre per hour, conductivity: 4 $\mu\text{s/cm}$, pH: 5.5 to 6.5	North American and Europe	Nos	2				
11	Deionizer / Ion exchanger	It is equipped with conductivity meter, wall mount Flow rate: 50 liter/hour, pure water quality: 0.1 – 20 $\mu\text{s/cm}$ depends on water quality, operated on 220 Volts	North American and Europe	Nos	1				
12	Magnetic Stirrer with Ceramic Hotplate	Ceramic Top plate, extremely resistant to corrosion Dimension (mm): 180 x 180mm, ceramic coated, Temperature range	North American and Europe	Nos	5				

		up to 550°C, Stirring volume up to 15 Lit Electronic speed regulation up to 1500 rpm Control knob for stirrer and digital temperature, operated on 220 Volts, 800W							
13	Ultrasonic bath	Ultrasonic frequency: (kHz) 37 / 80 Ultrasonic power effective (W) : 130 / 100 Ultrasonic peak performance max. (W): 520 / 400 Heating power (W): 250 Unit outer dimensions W/D/H (mm): 300 / 179 / 221 Tank internal dimensions W/D/H (mm) :240 / 137 / 100 Basket internal dimensions W/D/H (mm):198 / 106 / 50 Max. Filling volume	North American and Europe	Nos	1				

		tank (lit.) :2.75							
14	Orbital Shaker Digital	Compact, flat laboratory shakers available with orbital motion, adjustable timer, digital display of speed, protected against overload and intrinsically safe operation Shaking motion: orbital Shaking movement: 20 mm Speed range: infinitely Adjustable: 30 – 500 rpm Load Capacity: 5kg Speed display: Digital Dimensions (WxDxH): 320 x 125 x 375 mm Complete with Universal Platform	North American and Europe	Nos	1				
15	Universal Oven 32 Litre	Adaptive Multifunctional Digital PID-microprocessor Controller with High-	North American and Europe	Nos	2				

		Definition TFT-Color Displays Temperature range 5°C above ambient up to +300°C							
16	Calorimeter	Copper Calorimeter 10W Size: 48mm Diameter x 50mm Height	North American and Europe	Nos	4				
17	Water Bath	Controller digital display (LED) of set and actual temperature (0,1°C resolution) and of (remaining) programme time Temperature range in °C: min. 5°C above ambient up to +95°C with additional boiling mode (+100°C) Voltage 230 V, 50/60 Hz Electrical load approx. 1200 W (during heating) Dimensions W x H x D : 240 x 140 x 210	North American and Europe	Nos	3				

		mm (7 Liters)							
18	Electrochemical workstation (Potentiostat/Galvanostat)	Electrode connections: 2, 3 and 4 Potential range: +/- 10 V Compliance voltage: +/- 30 V Maximum current: +/- 3 A Current ranges: 1 A to 10 pA Potential accuracy: +/- 0.2 % Potential resolution: 0.3 μ V Current accuracy: +/- 0.2 % Current resolution: 0.0003 % (of current range) Input impedance: > 1 T Ω Potentiostat bandwidth: 1 MHz Computer interface: USB Control software: Electrochemical software for impedance & voltammetric studies Accessories	North American and Europe	Nos	1				

		<p>required:Standard Volume Cell Kit with Glassy Carbon Working Electrode Glassy Carbon and Gold Electrode Standard Platinum Counter Electrode Kit includes isolation tube and adapter to fit 14/20 port 6.9 mm OD epoxy tube shroud, 150 mm long Single Junction Silver Chloride (Ag/AgCl) Reference Electrode Standard Voltammetry Cell 100 mL with PTFE stoppers and sparging/purging accessories Polishing Solutions and Materials Kit this kit includes three packs of polishing disks (rayon, nylon, and 600 grit sandpaper)</p>							
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		and three bottles of polishing solutions (5.0 μm, 0.3 μm, and 0.05 μm) PTFE Mount with 1/4" ID red cap slides onto electrode, fits into a 14/20 port Complete unit with 1 kVA true sine wave UPS, PC (min i-5) and allied Software/accessories for smooth functioning.							
19	Digital Multimeter	True RMS Digital Multimeter	North American and Europe		2				
20	Power supply	Product Type:DC Power Supply Output Amps:5 Display : Digital Output: 0 to 30 VDC, 0 to 5 A Power(VAC):230 Power(Hz):60	North American and Europe		2				
21	Molecule building set	Advanced Molecular Construction Set for teaching purposes	North American and Europe	Nos	1				
22	Furnace Muffle	Furnace Muffle	North	Nos	1				

		digital temperature range up to 1100°C/2012°F digital single set point, large Chamber Size: 180x230x230mm (7" x 9" x 9") fitted with high performance HYBRID Muffle longer Life, Operated on 220v 1300 Watt, 6 Amp	American and Europe						
23	Abbe Refractometer	Range = 1.30 - 1.70 RI (0 - 95 °Brix) Resolution (Scale Division) = 0.0005 (0.25 °Brix) Operating Temperature = 5 – 75 °C Temperature Resolution: 0.1°C Temperature Accuracy: ±1°C	North American and Europe	Nos	2				
24	Polarimeter Digital	Range (Angular (°A)): -355 to +355, (ISS (°Z)): -225 to +225 Resolution 0.01/0.001 (selectable) Accuracy: ± 0.010	North American and Europe	Nos	1				

		<p>Read out mode: Optical rotation, optical specific rotation, concentration, sugar scale Z, Brix purity, optical purity Reading Time : Continuous measurement and display or single shot (selectable) Tube Length = 10 to 200mm Beam Diameter: 4mm Optical Density 0.0 to 3.0 OD Measuring Range 5- 40 °C Sensor Accuracy ± 0.1 °C Operated on 220Volts</p>							
25	CO ₂ Gas	400L SS Cylinder with regulator (analytical grade)	Europe/ North America	Nos	1				
26	N ₂ gas	400 L SS Cylinder with regulator (analytical grade)	Europe/ North America	Nos	1				

BIOLOGY LAB GLASSWARE									
1	Measuring Cylinders	(1 Litre - 5ml) (plastic + glass) Graduated Autoclavable Glass, plastic	Imported/Lo cal	Nos	4 each				
2	Glass pipettes with aspirator		Imported/Lo cal	Nos	12				
3	Pipettes tips	a. 1000 µl b. 0.1µl	Imported/Lo cal	Nos	500 each - 1000 each				
4	Eppendorf tube	a. 1.5 ml b. 2ml	Imported/Lo cal	Nos	1000 each 2000 each				
5	PCR Tubes	(Transparent)	Imported/Lo cal	Nos	1000				
6	Spatula, Weighing dishes/boats/loop		Imported/Lo cal	Nos	15				
7	Autoclave Tape		Imported/Lo cal	Packs	4				
8	Mortar and pestle		Imported/Lo cal	Nos	10				
9	a. Plastic funnels b. Glass Funnels	(variable)	Imported/Lo cal	Nos	5 piece each				
10	Wash Bottle	Originally certified glassware	Imported/Lo cal	Nos	12				
11	Lab Measuring Jugs		Imported/Lo	Nos	3				

	a.1L b 5L		cal		each				
12	Plastic dropper	Disposable	Imported/Local	Nos	2000				
13	Hand press (pump) gallon for distilled water	Autoclavable	Imported/Local	Nos	2				
14	Petri dishes a. Small b. Medium c. large)	Glass Autoclavable	Imported/Local	Nos	50 each				
15	Flasks a.25ml b. 1L	Graduated Autoclavable Glass	Imported/Local	Nos	12 each				
16	a. Slides (plain), b. cover slips, c. Cavity slides		Imported/Local	Boxes	5 boxes				
17	Test tube a. 5 ml b. 20 ml	Glass Autoclavable	Imported/Local	Packs	500 each				
18	Falcon tubes for ultracentrifuge a. 5 ml b. 15 ml		Imported/Local	Packs	200 each				
19	Beakers a. 5 ml b. 1L	Graduated Autoclavable	Imported/Local	Nos	10 each				
20	Buffer bottles (Schott Duran)		Imported/Local	Nos	30				
21	Syringes a. 0.5 b. 5cc	Disposable	Imported/Local	Packs	100 each				
22	a. DNA Models		Imported/Local	Nos	3				

	b. RNA Models		cal		each				
23	Glass Rods		Imported/Local	Nos	12				
24	a. Tube Stands b. Racks c. plastic baskets		Imported/Local	packets	3 each				
25	Micropore filtration		Imported/Local	Nos	1				
26	PCR Tubes 0.2ml	Disposable	Imported/Local	Packets	5 pkt				
28	PCR Tubes 0.2ml	Dnase/Rnase Free	Imported/Local	Packets	5 pkt				
29	Eppendorf Tubes		Imported/Local	Packets	10 pkt				
30	a. PCR Rack b. Ependorf Rack c. falcon tubes rack		Imported/Local	Nos	12 each				
31	96-well plate	Dnase/Rnase	Imported/Local	Packets	30 pkt				
32	96-well plate a. 1 ml b. 1.5 ml	Dnase/Rnase Free	Imported/Local	Packets	25 pkt				
33	Min-Max Thermometer		Imported/Local	Nos	12				
34	Cuvettes	(Quartz) (1-1.5ml)	Imported/Local	Nos	2 each				
35	Ice pad		Imported/Local	Nos	6				
36	Thermal sheet for print		Imported/Local	Nos	4 rolls				
37	Glass pipettes with aspirator		Imported/Local	Nos	12				

38	Pipettes tips a.	a. 1000µl b.0.1µl) (autoclavable)	Imported/Local	Packets	2000 each				
39	Spirit Lamp		Imported/Local	Nos	10				
40	Falcon tubes	a.15ml b. 50ml	Imported/Local	Nos	200 each				
41	Filter paper sheet		Imported/Local	Nos	20 pieces				
42	Cork borer		Imported/Local	Nos	5				
43	cotton		Imported/Local	Nos	15 rolls				
44	Aluminium foil		Imported/Local	Nos	15				
45	Parafilm		Imported/Local	Nos	5 rolls				
46	Cloth dusters		Imported/Local	Packets	5 pkt				
47	Detergents a. Bleach b. Vim c. Tube Washing		Imported/Local	Nos	20 each				
48	Brushes		Imported/Local	Nos	20				
49	Tissue Paper Roll		Imported/Local	Nos	24				
50	Glass markers (permanent)		Imported/Local	Nos	5 box				
51	Zipped polyethylene bags (M-L)		Imported/Local	Packets	100 pkt				
52	Wire Loop		Imported/Local	Nos	10				

			cal						
53	Autoclave Baskets		Imported/Local	Nos	24				
54	a. Burners b. Forceps c. Needles d. Blade knives		Imported/Local	Nos	10 each				
55	scissors		Imported/Local	Nos	10				
56	Sampling Bottles		Imported/Local	Nos	15				
57	Surgical/ Latex/ Gloves		Imported/Local	Packets	100 pkt				
58	Polythene gloves		Imported/Local	Packets	100 pkt				
59	Goggles		Imported/Local	Nos	10				
60	a. Head Cover b. shoes Covers		Imported/Local	Packets	10 pkt each				
61	a. Safety Mask b. Fuming Mask		Imported/Local	Packets	100 pkt each				
62	Moisturizing agents		Imported/Local	Nos	10				
63	Lab Coats		Imported/Local	Nos	50				
64	First-Aid Kits		Imported/Local	Nos	2				
65	Stop watch		Imported/Local	Nos	5				
66	Dustbin with lid		Imported/Local	Nos	5				

67	Acid dispensers		Imported/Local	Nos	2				
CHEMICAL LAB GLASSWARE									
1	Safety goggles	Plastic	Any	Nos	50				
2	Beakers 10 ml Original Certified Glassware	Pyrex	Any	Nos	30				
3	Beakers 25ml Original Certified Glassware	Pyrex	Any	Nos	30				
4	Beakers 50ml Original Certified Glassware	Pyrex	Any	Nos	30				
5	Beaker 100ml Original Certified Glassware	Pyrex	Any	Nos	50				
6	Beaker 250ml Original Certified Glassware	Pyrex	Any	Nos	50				
7	Beaker 500ml Original Certified Glassware	Pyrex	Any	Nos	20				
8	Beaker 1000ml Original Certified Glassware	Pyrex	Any	Nos	10				
9	Erlenmeyer flasks 10ml Original Certified Glassware	Pyrex	Any	Nos	25				
10	Erlenmeyer flasks 25ml Original Certified Glassware	Pyrex	Any	Nos	25				

11	Erlenmeyer flasks 50ml Original Certified Glassware	Pyrex	Any	Nos	50				
12	Erlenmeyer flasks 100ml Original Certified Glassware	Pyrex	Any	Nos	25				
13	Erlenmeyer flasks 250ml Original Certified Glassware	Pyrex	Any	Nos	15				
14	Erlenmeyer flasks 500ml Original Certified Glassware	Pyrex	Any	Nos	15				
15	Erlenmeyer flasks 1000ml Original Certified Glassware	Pyrex	Any	Nos	10				
16	coiled condenser	Pyrex	Any	Nos	5				
17	Liebig condenser	Pyrex	Any	Nos	5				
18	Dropper bottles 100 ml	Pyrex	Any	Nos	15				
19	distillation flask 250 ml	Pyrex	Any	Nos	15				
20	Florence flasks, AKA boiling flasks/round bottom flask 50 ml	Pyrex	Any	Nos	10				
21	Florence flasks, AKA boiling flasks/round bottom flask 100 ml	Pyrex	Any	Nos	10				
22	Florence flasks, AKA boiling flasks/round bottom flask 250 ml	Pyrex	Any	Nos	10				
23	Glass rods	Pyrex	Any	Nos	20				
24	Test tubes 16x150mm	Pyrex	Any	Nos	100				

25	test tube Tongs	Steel	Any	Nos	10				
26	Test Tube Racks	Wooden/plastic	Any	Nos	10				
27	Watch glasses	Pyrex	Any	Nos	20				
28	Crucible holders	Stainless Steel	Any	Nos	15				
29	Crucible stand	Stainless Steel /porcelain	Any	Nos	15				
30	Crucibles	Pyrex / Porcelain	Any	Nos	20				
31	Funnels	Pyrex	Any	Nos	15				
32	Graduated cylinders 10 ml Original Certified Glassware	Pyrex	Any	Nos	15				
33	Graduated cylinders 25 ml Original Certified Glassware	Pyrex	Any	Nos	25				
34	Graduated cylinders 50 ml Original Certified Glassware	Pyrex	Any	Nos	50				
35	Graduated cylinders 100 ml Original Certified Glassware	Pyrex	Any	Nos	25				
36	Graduated cylinders 250 ml Original Certified Glassware	Pyrex	Any	Nos	10				
37	Graduated cylinders 500 ml Original Certified Glassware	Pyrex	Any	Nos	5				
38	Graduated cylinders 1000ml Original Certified Glassware	Pyrex	Any	Nos	5				
39	Volumetric flasks 5ml Original Certified Glassware	Pyrex	Europe/Sout h Korea	Nos	10				
40	Volumetric flasks	Pyrex	Europe/Sout	Nos	10				

	10ml Original Certified Glassware		h Korea						
41	Volumetric flasks 25ml Original Certified Glassware	Pyrex	Europe/South Korea	Nos	15				
42	Volumetric flasks 50ml Original Certified Glassware	Pyrex	Europe/South Korea	Nos	15				
43	Volumetric flasks 100ml Original Certified Glassware	Pyrex	Europe/South Korea	Nos	25				
44	Volumetric flasks 250ml Original Certified Glassware	Pyrex	Europe/South Korea	Nos	20				
45	Volumetric flasks 500ml Original Certified Glassware	Pyrex	Europe/South Korea	Nos	20				
46	Volumetric flasks 1000ml Original Certified Glassware	Pyrex	Europe/South Korea	Nos	10				
47	glass Droppers	Pyrex	Any	Nos	100				
48	Pipettes 1ml	Pyrex	Europe/South Korea	Nos	10				
49	Pipettes 2ml	Pyrex	Europe/South Korea	Nos	10				
50	Pipettes 5ml	Pyrex	Europe/South Korea	Nos	15				
51	Pipettes 10ml	Pyrex	Europe/South Korea	Nos	10				
52	Burette 50ml	Pyrex	Europe/South Korea	Nos	15				
53	Burette Stand	Pyrex	Europe/South Korea	Nos	25				

54	Ring stands, rings, and clamps	Stainless Steel	Any	Nos	20				
55	crucible Tongs	Stainless Steel	Any	Nos	15				
56	Forceps	Stainless Steel	Any	Nos	10				
57	Spatulas	Stainless Steel	Any	Nos	10				
58	Thermometers(Different temp range)	Glass	Europe/South Korea	Nos	10				
59	Bunsen Burners	Stainless Steel	Any	Nos	10				
60	Mortar and Pestle	Porcelain	Any	Nos	5				
61	Reagent bottle 100 ml	Pyrex	Any	Nos	20				
62	Reagent bottles(N/M) 250ml	Pyrex	Any	Nos	20				
63	Reagent bottles(W/M) 250	Pyrex	Any	Nos	20				
64	Test tube holder	Stainless Steel	Any	Nos	6				
65	sand bath	Stainless Steel	Any	Nos	10				
66	Separating funnel 100ml	Pyrex	Any	Nos	5				
67	Separating funnel 250ml	Pyrex	Any	Nos	5				
68	Separating funnel 500ml	Pyrex	Any	Nos	5				
69	suction flask 500ml	Pyrex	Any	Nos	5				
70	suction flask 250ml	Pyrex	Any	Nos	5				
71	specific gravity bottle 25 cc	Pyrex	China/South Korea	Nos	10				
72	Buchner funnel	Porcelain	China/South Korea	Nos	10				
73	Desiccator	Pyrex	China/South Korea	Nos	5				
74	Clamp & stands	Stainless Steel	Any	Nos	10				

75	Pipette bulb 5ml	Pyrex	Any	Nos	10				
76	Burette Clamp	Stainless Steel	Any	Nos	20				
77	Test Tube stands	Stainless Steel	Any	Nos	5				
78	Test Tube Brush	Stainless Steel	Any	Nos	6				
79	Corks (Different Sizes)	Rubber	local	Nos	8				
80	gloves /pack	Rubber	Any	Nos	20				
81	magnetic bars small 1/2 inch	Teflon coated bars	Any	Nos	10				
82	magnetic bars medium 1 inch	Teflon coated bars	Any	Nos	10				
83	Masks (Chemical)	Standard	Any	Nos	100				
84	Masks (Dust)	Standard	Any	Nos	100				
85	viscometer Ostwald	Pyrex	Any	Nos	10				
86	wash bottles	Plastic	Any	Nos	10				
87	Whatmann filter paper /pack (sheets)	Standard	Any	Nos	2				
88	Whatmann filter paper No . 40	Standard	Any	Nos	5				
89	Whatmann filter paperNo.42	Standard	Any	Nos	5				
90	Whatmann filter paper No.44	Standard	Any	Nos	5				
91	Whatmann filter	Standard	Any	Nos	5				

	paper No.542								
92	Glass Cuvette/pair	Pyrex	China/South Korea	Nos	2				
93	Quartz Cuvette/pair	Quartz	China/South Korea	Nos	1				
94	Micro Pippet 10-100µl	Pyrex	Europe/South Korea	Nos	5				
95	Micro Pippet 100-1000µl	Pyrex	Europe/South Korea	Nos	5				
96	Glass cuvette (1.0) ml	Pyrex	Europe/South Korea	Nos	10				
97	Rubber Sucker for Pipette filling	Rubber	Any	Nos	10				

Special Instructions Biology Lab Equipment

Description	Bidder			Tech Scrutiny to be done by User		
	Yes	No	Alternate Offer	Accepted	Rejected	Reasons of Rejection
Environment Conditions (a) Temperature range: -05°C to +60°C (b) Relative humidity: 0-90% non-condensing						
Warranty period Two years from the date of commissioning. A warranty sticker is to be pasted on each item by the Supplier / OEM highlighting Name of Firm, Contract No and date, Description of Store and Warranty validity						
Training Notes Supplier will provide a set of handouts for training on operation and maintenance of the equipment						
Publications Supplier is to provide hard and soft copies (CD) of following manuals. (a) Operational / Maintenance manual: - Qty 01 with Equipment and additional Qty 02 for record purposes and should consist of following sections:- (1) Equipment Description /Operation:- (a) Specifications (b) Description (c) Operation (d) Safety precautions (2) Servicing:- (a)Maintenance Schedule (b)Adjustment / test (c)Removal / Installation procedure (d)Tools Used (e) Calliberation						

<p>(3) Trouble shooting guide (4) Cleaning requirements (5) Shipping and receiving (6) Storage requirements</p> <p>(b) IPB (Illustrated Parts Breakdown Manual) should have full parts description along with detailed diagrams (exploded view).</p> <p>(c) Experimental manuals which must contain the list and procedure of the experiments that equipment can perform.</p>					
<p>Spares / Technical Support</p> <p>(a) Supplier to have in-country spares / technical support and ensure spares and technical support / assistance for next 10 years</p> <p>(b) Comprehensive list of spares required for scheduled maintenance of Equipment is to be provided</p> <p>(c) Any software provided must have its license</p> <p>(d) Software upgrade support must be provided free of cost for ten years with renewed license at every upgrade</p> <p>(e) Supplier must also provide calibration service for at least five years after commissioning</p>					
<p>Additional Spare / Replaceable parts.</p> <p>(a) Replaceable spare / parts during scheduled inspections are to be identified and provided as per requirement along with equipment sufficient to cater five years consumption.</p> <p>(b) All specialized / standard tools required for inspection / repair / servicing must be supplied along with equipment.</p>					
<p>Physical Inspection Criteria: 100% physical inspection of store will be carried out before commissioning of the equipment for following details:-</p> <p>(a) For physical damage, scratches and deformity.</p>					

<p>(b) Accessories /components as per contractual specifications.</p> <p>(c) Technical Manuals (Operation manual, user guide, IPBs).</p> <p>(d) Quality certificate and calibration certificate by the OEM</p> <p>(e) OEM certificate and verifiable documents by the supplier that store has been procured from certified source and is factory new and from latest production.</p> <p>(f) Brand name and country of origin.</p>					
<p>Commissioning</p> <p>(a) Commissioning of the equipment will be carried out by OEM rep at his own cost and risk at designated place at NUTECH.</p> <p>(b) Any special requirement for installation, operation and commissioning must be specified in the offer by the supplier.</p>					
<p>Training</p> <p>01 week OEM operational/ maintaince training at NUTECH</p>					
<p>Improvement and Safety Measures</p> <p>Any improvement and safety measures suggested by NUTECH during commissioning are to be resolved by the supplier / manufacturer at no extra cost.</p>					
<p>Liability of Supplier</p> <p>(a) OEM certificate of authorized dealership Supplier is to provide original OEM certificate of subject equipment bought directly from the manufacturer and being an authorized dealer.</p>					

<p>(b) In case the equipment supplied is not compatible with specifications, the supplier will be obliged to call his representatives at his own cost for consultation and corrective action</p>					
<p>Special Notes</p> <p>(a) Additional requirements for the maintenance of equipment (if any) must be intimated by the supplier in technical offer.</p> <p>(b) Supplier must provide the list of organizations using same equipment in Pakistan (if any).</p> <p>(c) Equipment must be a standard product of OEM available at web address of OEM.</p> <p>(d) In case of premature failure of the equipment, OEM has to replace / rectify the item free of cost. Required transportation charges would be borne by the supplier.</p>					

Special Instructions Chemistry Lab Equipment

Description	Bidder			Tech Scrutiny to be done by User		
	Yes	No	Alternate Offer	Accepted	Rejected	Reasons of Rejection
Environment Conditions (a) Temperature range: -05°C to +60°C (b) Relative humidity: 0-90% non-condensing						
Warranty period Two years from the date of commissioning. A warranty sticker is to be pasted on each item by the Supplier / OEM highlighting Name of Firm, Contract No and date, Description of Store and Warranty validity						
Training Notes Supplier will provide a set of handouts for training on operation and maintenance of the equipment						
Publications Supplier is to provide hard and soft copies (CD) of following manuals. (a) Operational / Maintenance manual: - Qty 01 with Equipment and additional Qty 02 for record purposes and should consist of following sections:- (1) Equipment Description /Operation:- (a)Specifications (b)Description (c)Operation (2) Servicing:- (a)Maintenance Schedule (b)Adjustment / test (c)Removal / Installation procedure (d)Tools Used (3) Trouble shooting guide (4) Cleaning requirements (5) Shipping and receiving (6) Storage requirements (b) IPB (Illustrated Parts Breakdown Manual) should have full						

<p>parts description along with detailed diagrams (exploded view). (c) Experimental manuals which must contain the list and procedure of the experiments that equipment can perform.</p>						
<p>Spares / Technical Support (a)) Supplier to ensure in country spares and technical support / assistance for next 10 years (b) Comprehensive list of spares required for scheduled maintenance of Equipment is to be provided (c) Any software provided must have its license (d) Software upgrade support must be provided free of cost for five years with renewed license at every upgrade (e) Supplier must also provide calibration service for at least five years after commissioning</p>						
<p>Additional Spare / Replaceable parts. (a) Replaceable spare / parts during scheduled inspections are to be identified (if any) and provided as per requirement along with equipment sufficient to cater five years consumption. (b) All specialized / standard tools (if any) required for inspection / repair / servicing must be supplied along with equipment.</p>						
<p>Physical Inspection Criteria: 100% physical inspection of store will be carried out before commissioning of the equipment for following details:- (a) For physical damage, major scratches and deformity. (b) Accessories /components as per contractual specifications.</p>						

<p>(c) Technical Manuals (Operation manual, user guide, IPBs).</p> <p>(d) Quality certificate and calibration certificate by the OEM</p> <p>(e) OEM certificate and verifiable documents by the supplier that store has been procured from certified source and is factory new and from latest production.</p> <p>(f) Brand name and country of origin.</p>					
<p>Commissioning</p> <p>(a) Commissioning of the equipment will be carried out by OEM rep at his own cost and risk at designated place at NUTECH.</p> <p>(b) Any special requirement for installation, operation and commissioning must be specified in the offer by the supplier.</p>					
<p>Training</p> <p>01 week OEM operational/ maintaince training at NUTECH</p>					
<p>Improvement and Safety Measures</p> <p>Any improvement and safety measures suggested by NUTECH during commissioning are to be resolved by the supplier / manufacturer at no extra cost.</p>					
<p>Liability of Supplier</p> <p>(a) OEM certificate of authorized dealership Supplier is to provide original OEM certificate of subject equipment bought directly from the manufacturer and being an authorized dealer.</p>					

(b) In case the equipment supplied is not compatible with specifications, the supplier will be obliged to call his representatives at his own cost for consultation and corrective action						
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Special Instructions Biology Lab Glassware

Description	Bidder			Tech Scrutiny to be done by User		
	Yes	No	Alternate Offer	Accepted	Rejected	Reasons of Rejection
Environment Conditions (a) Temperature range: -05°C to +60°C (b) Relative humidity: 0-90% non-condensing						
Training Notes Supplier will provide testing samples of glass ware to check its quality.						
Publications Supplier is to provide hard and soft copies (CD) of following manuals. (a) <ul style="list-style-type: none"> (1) Description /Operation:- <ul style="list-style-type: none"> (a) Specifications (b) Description (c) Cleaning requirements 						
Physical Inspection Criteria: 100% physical inspection of glassware will be carried out before commissioning of the glassware for following details:- <ul style="list-style-type: none"> (a) For physical damage, scratches and deformity. (b) Quality certificate 						

(c) Brand name and country of origin.						
Delivery Any special requirement for handling must be specified in the offer by the supplier.						
Liability of Supplier in case the glassware supplied is not compatible with specifications, the supplier will be obliged to call his representatives at his own cost for replacement of glassware.						
Special Notes (a) Supplier must provide the list of organizations using same equipment in Pakistan (if any). (b) Glassware must be a standard product of the brand available at web address.						

Special instructions Chemistry Lab Glassware

- | |
|--|
| <ul style="list-style-type: none"> Product should be delivered intact and without any breakage/scratches. |
|--|

Firm Name _____ Signature _____ Name _____ Designation _____



NATIONAL UNIVERSITY OF TECHNOLOGY
SUPPLY CHAIN MANAGEMENT OFFICE
TECHNICAL OFFER

Annex B

User Reference No. Bio/Chem Lab -002 Date 26-12-2018

Please fill in the following essential parameters:

1. Validity of Offer: _____ Days (Should not be less than 90 days)
2. Delivery Period: _____ Days (After Placement of order)
3. Country of Origin: _____
4. Warranty/Guarantee: _____ Months from the date of final acceptance of the stores.

General

GST No: _____ (Please enclose copy)

NTN/CNIC: _____ (if exempted, please provide valid exemption certificate)

Payment Terms:

1. 50 % Advance payment (Against valid bank Guarantee)
2. 50 % Payment after delivery
3. Others

Details of Payment Recipient

(1) Name/Title: _____

(2) Address: _____

Signature: _____

Official Seal: _____

Name: _____

Designation: _____



NATIONAL UNIVERSITY OF TECHNOLOGY
SUPPLY CHAIN MANAGEMENT OFFICE

FINANCIAL OFFER

Annex C

User Reference No Bio/Chem Lab -002 Date 26-12-2018

Ser	Nomen	Description	A/U	Qty Req	Unit Price Rs (to be quoted excluding GST)	GST Rs (If applicable)	Custom Duty Rs (If applicable)	Total amount Rs
BIOLOGY LAB EQUIPMENT								
1.	Weighing Balances (0.001g-1000g)	Readability: 0.001gm, Capacity 1000 gm, Microprocessor Controlled, Digital Display	Nos	2				
2.	Hot plate (with magnetic stirrers)	stirring quantity: ~ 2-3 L, speed range: 100-1500 rpm, heating power: 500 W, heating plate diameter: 150 mm temperature	Nos	2				

		control: 20- 320°C, dimensions (mm): 155 x 215 x 100						
3.	pH-meter with sensor probe	0 to 14.00 pH, Manual temperature compensation, Hold, Record (Max., Min.), °C/°F.	Nos	2				
4.	Light microscope (Binocular microscope)	Secured eyepieces, Powerful LED illumination, 360° rotatable, Objectives: E-plan achromatic DIN objectives 4x N.A.0.10, 10x N.A.0.25, S40x N.A.0.65, All optics should be anti-fungus treated and anti-reflection coated, Height adjustable, Dimensions: 40 cm x 19 cm x 24 cm (H x B x D)	Nos	1				
5.	Fluorescence Microscope	3 position trinocular head (100% eyes/ 100%camera/ split between eyes & camera), -10x wide field eyepieces, plan 4x objective, uplanfl 10x, 20x, 40x objective, - plan 100x oil immersion objective,-bx-ura2 fluorescence illuminator with rotatable front 6 cube turret, 120 fluorescence illumination system, -100	Nos	1				

		watt quartz halogen lamp house for transmitted light, -6 place nosepiece with analyzer slot, -abbe type condenser, -right handed mechanical x y stage w/slider holder, -power cord, dust cover & instruction manual included.						
6.	Refrigerator (-20°C)	Cabinet Material: Scratch-resistant painted, Defrost: Automatic	Nos	1				
7.	Universal oven	>30 liters, 230 V, 5-300°C (Precise drying, heating, ageing, burn-in and hardening)	Nos	1				
8.	Water Bath (Shaking)	Bath volume: 5-10 L, Temperature range: 5-100 °C	Nos	1				
9.	Shaking incubator	Temp Range: 4-80°C, Audible and visual alarms, Memory: Nonvolatile with automatic power failure restart, Speed range: 25 – 500 rpm	Nos	1				
10.	Hematocytometer	counting chamber acc. to Thomas cover glasses blood mixing pipettes each with rubber tube and mouthpiece complete in a storage	Nos	2				

		case						
11.	Mini centrifuge	Max. Speed: 7000 rpm, Max. RCF: 2680 xg, Rotor: 2ml x 8 and PCR 8 x 2 rotors, Rotor Capacity: 8x0.2/0.5/1.5/2.0ml tube;; 16x0.2ml PCR strips, 2x0.2ml PCR strips	Nos	1				
12.	Refrigerated Bench top centrifuge 4°C (16000rpm)	Centrifuge with angle rotor for 15 ml centrifuge tubes, Continuous speed adjustment max.6000 U/min; Connection voltage 230 V / 50-60 Hz; Power requirement 65 W; Overheating protection; Impulse key for short runs	Nos	1				
13.	Vortex	Quiet and compact stable design Adapters available for tubes etc. Continuous or touch operation, Electronic speed control for constant speed even during, changes in load Steel base, silicone feet for ultra-stability and vibration, Damping Speed range : 250-2500 rpm, Shaking movement : Orbital, 4mm dia, Motor type : Eccentric, oilless	Nos	1				

		bearings						
14.	Distillation / deionization Unit)	Capacity 4 L/h, Low-gas, bacteria and pyrogen free distillate, Conductivity approx. 2,5 µS/cm, Thermostatic low water cut-off to protect the heating element, Cooling water requirement approx. 32 L/h, Power consumption 3 kW, Dimensions (cm): 28,5 x 51 x 25, Electrical connection: 230 V	Nos	1				
15.	Autoclave with insert	With precision manometer Thermometer, Integrated heating Application range up to 1.4 bar at 125 °C or up to 2.7 bar at 140 °C, Volume: 12 liters, Safety valve, Excess pressure safety valve, Safety lock	Nos	1				
16	Laminar flow hood	Working size: 4 feet, HEPA Filter 99.999%, Efficiency for particles > 0.3 µm, H14 Class according to EN 1822 Prefilter 85% efficiency for particles >0.5um	Nos	1				
17	PCR Thermal Cycler (Multi- block) 3 blocks	Temperature Range: 0 to 100.0 °C, Block Format: Interchangeable,	Nos	2				

		Capacity: 3 x 32-well x 0.2 ml tubes, Format: 0.2 ml tubes, 12-strip wells, Display Interface: Touchscreen, Program Features: Auto re-start (after power outages), Program overwrite protection, Instrument Memory: USB and On-board						
18	PCR Thermal Cycler Single block	Sample capacity: 96 x 0.2 ml tubes, 0.2 ml tube strips, or 1 x 96-well plate; Temperature range 4–100°C	Nos	2				
19	Gel-Doc System	Sample size: 28 x 36 cm; Image area: 25 x 26 cm; Excitation source: Trans UV 302, 254, 365 nm & White, Epi-White light; Illumination control: 3 modes (trans-UV, trans white, epi-white); Detector: CCD; Pixel size in microns (H x V): 8.4 x 9.8; Filter holder: 2 positions (1 Emission Filter, 1 Chemi); Emission filters: 1 included (amber), 4 optional; Dynamic range: 1.8 Orders; Pixel density (gray levels): 8 bit (256 gray	Nos	1				

		levels)						
20	Gel electrophoresis with 2 supplies	Horizontal apparatus, multichannel pipette compatible combs and gel caster, mini-maxi	Nos	4				
21	Nano drop	Micro-volume, life science and standard spectrophotometer measurement modes, Ideal for DNA, RNA and Protein measurements, Only 0.5µl sample volume require, Purity scan over entire wavelength range, 198 to 1000nm, Detects DNA concentrations as low as 2ng/µl, Easy and quick to clean, Results reproducible, accurate and easily obtained, Method and result saving to USB memory stick, warranty including Xenon lamp	Nos	1				
22	Electronic colony counter	LED displays for speed & timer, an anti-slip platform for culture flasks and straps to secure tubes, 40-200RPM shaking speed range	Nos	1				
23	UV Trans illuminator	Compact benchtop, high low intensity switchable, visualization of agarose/acrylamide gel	Nos	1				

		stained by EtBr, dual wavelength (302/365nm), 316 stainless steel						
24	Ice Machine	Energy and water efficiency Water Sense adaptive purge control – Delivers maximum reliability by reducing scale buildup, extending time between cleanings. Auto Alert, LED lights that signal when it is time to descale, sanitize and more. Convenient, space-saving, durable design.	Nos	1				
25	Growth chamber (plant)	Automatic 24-hr. programming with timer Sliding glass doors for easy access and viewing. Four fluorescent and three incandescent lamps for various lighting levels Two interior electrical outlets allow use of other equipment Main power switch, lamp switch, heater output, fan, thermostat and programmer switches feature on/off indicator lights Removable front control panel allows maintenance without	Nos	1				

		disturbing experiments						
26	Benchtop Liquid Nitrogen Containers(1 L, 2 L, 5L)	Stainless steel exterior, resist corrosion, vented lid, rubber cushioned base, shallow, flash freezing and cold traps capability.	Nos	3 (1L) 3 (2L) 1(5L)				
27	Multichannel Micropipettes	0.5-10ul, 10-100ul, 100-1000ul	Nos	2 each				
28	Micropipettes	0.1µl-1000µl	Nos	8 each				
29	Microwave oven	Uniform Heating, Speedy Defrost, Clock Function	Nos	1				
30	Glass door refrigerator	Capacity(L):1000; +1°C ~ +4°C, Adjustable Thermostat, Timer Defrost Function, 50 mm PU Insulation, Heavy Duty Castor Wheel, Internal & External Light, Double Glazed Glass, Heated Glass & Frame, Embraco Compressor, Fixed Position Door, Digital Thermometer, Adjustable Shelving.	Nos	1				
31	Microplate Spectrophotometer	Excellent performance for UV-Vis measurements in microplates, UV-Vis wavelength selection in 2 µL micro-volume samples, cuvettes and 6- to 384-well plates, Color	Nos	1				

		touchscreen with available WiFi, Bluetooth and flash drive connectivity, Full Gen5™ or equivalent data analysis onboard or PC for all read modes, Advanced incubator design to 65-70 °C and new Condensation Control mode, Advanced shaking profiles including linear, orbital and double orbital, cuvettes						
32	Rotary Evaporator	0-200 rpm, Step less speed, Digital display for temperature control, Capacity: 2-5 L	Nos	1				
33	Mini Refrigerator centrifuge	Rotary knobs, easy to clean lid, temp range: -10 to 40 °C, Max Speed: 15000 rpm, continuous cooling at the end of run	Nos	1				
34	Ultra-low freezer (-80°C)	Maximum storage capacity, energy efficient, upright	Nos	1				
CHEMISTRY LAB EQUIPMENT								
1.	UV-Visible spectrophotometer	Wavelength range:190—1100 nm Spectral bandwidth: Fix 1.2 nm Scanning speed:12000 nm/min Wavelength accuracy	Nos	2				

		<p>(Deuterium line at 656 nm):\pm 0.1 nm Wavelength reproducibility (with Holmium oxide filter):\leq0.02 nm Photometric reproducibility:\leq 0.0005 A Baseline stability at 500 nm:\leq 0.0001 (RMS) Long-term stability a 500 nm:\pm0.0005 A/h Scanning speed:12000 nm/min Cell holder:Single Cell holder Display:on Computer Cuvettes:2 Glass and 2 Quartz cells</p> <p>Peltier temperature controlled device for single cell operation Complete unit with 1 kVA true sine wave UPS, PC(min i-5) with installed software and allied accessories for smooth functioning</p>						
2.	Single Beam Spectrometer	<p>Optical system: Split beam ratio Scan speed: Selectable</p>	Nos	4				

		<p>Wavelength range: 190 - 1100nm Wavelength accuracy: ± 1nm Wavelength reproducibility: ≤ 0.2nm Spectral bandwidth: 2nm Photometric range: -0.3-3.0Abs Photometric accuracy: 0.002A (0-0.5A) Stray light: $\leq 0.05\%$T (220nm NaI, 340nm NaNO₂) Standard Functionality Photometric Measurement Photometric & Quantitative (Quantitative, Multi-wavelength, Measurement Spectrum and Kinetic measurements with program cards) Detector: Silicon photo diode Silicon photo diode Light source: Tungsten Halogen and Deuterium arc Lamp Display Digital: LCD PC Interface: RS232 Software support Local and UV-Win Power supply: 220V</p>						
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3.	Electronic Analytical Balance Digital	Weighting Capacity:220gm/82gm Minimum display: 0.1mg/0.01mg 220 voltage operated Automatic calibration by pressing keys with internal calibration weight	Nos	1				
4.	Electronic Balance digital top loading	Capacity: 220gm, Readability 0.001gm, Protective plastic draft shield cover as standard accessory, 220 voltage operated	Nos	4				
5.	Flame Photometer	Flame design. With ease of use resulting from auto ignition and flame optimization. Peak picker for presenting unambiguous readings with selected filter indicator. With built in Sodium, Potassium, Lithium, Calcium and Barium Filters. Minimum Detection Level Na 0.1 ppm K 0.1 ppm Li 0.1 ppm Ca 2 ppm Ba 20 ppm	Nos	1				

		Specificity Na, K and Li interference is <0.5% value of element under analysis, Aspiration rate 3 – 6 mL/min, Speed of Analysis/Time to stability 20 seconds complete with compressor and Gas Cylinder. Operated on 220 Volts						
6.	pH Meter Digital Bench	Digital Bench Model Microprocessor Controlled with parallel Temperature indication, PH Range: -2.0 to 20.0 ±0.005pH, PH Resolution: 0.005pH, MV Range: ±1200.0mV, Accuracy mV: ±- 0.3mV, Automatic Temperature Compensation, Temperature Range: -5 to +105.0°C, Temperature accuracy: ±0.1°C with two/three Point Calibration System, Battery operated as well as operated With 220 Volts	Nos	5				
7.	Conductivity	Digital Bench Top	Nos	5				

	Meter Digital	<p>Microprocessor Controlled with parallel temperature indication, Conductivity Range: 0.0 us/cm to 1000 ms/cm, Accuracy: 0.5%, Temperature Range: -5.0 to +105.0°C, Salinity: 0.0-70.0, TDS: 0-1999 mg/l, Temperature accuracy: ± 0.1K Calibration with 0.01 mol KOH Reference Temperature 20 or 25°C Complete as above with a Conductivity Electrode with built in Temperature Sensor Electrode Stand with Base Standard solution 50 ml Complete package Operated on 220 Volts</p>						
8.	Viscometer Digital	<p>Digital simple low cost, No calculation required Direct reading of Viscosity in cP or mPa•s. Displayed info: Viscosity (cP or mPa•s), % Torque, Speed/Spindle. Easy to Use Auto range Push for determining full</p>	Nos	1				

		<p>scale range (FSR) viscosity. Accuracy: $\pm 1.0\%$ of range, Repeatability: $\pm 0.2\%$, Range 1 cps to 2 million cps (1-15cp only achievable with Optional UL Adaptor) 18 speeds from 0.3 to 100 rpm with stand set of 4 spindles and carrying case Operated on 220 Volts</p>						
9.	Fume Hood	<p>Industrial grade support frame built with electrogalvanized steel and oven-baked epoxy coated aluminum. Aerodynamic design eliminates air turbulence, minimizes noise levels and static pressure losses</p> <p>Phenolic resin laminate baffle system ensures airflow uniformity throughout the main chamber of the hood Grade 304 stainless steel airfoil sweeps the work surface to maintain superior operator protection Nominal Size 1.2 meter</p>	Nos	1				

		<p>External Dimensions 1200 x 873 x 1500 mm(W x D x H) Internal Dimensions 1120 x 682 x 1435 mm(W x D x H) Main Body: EG steel with aluminum and oven-baked Epoxy- polyester hybrid Isocide™ powder coating Airfoil: Stainless Steel grade 304 Sash Material: Tempered Laminated and Framed Sash Glass Sash Configuration: Vertical Complete unit with base storage cabinet</p>						
10.	Distillation Apparatus	<p>All glass Borosilicate Glass fitted with metal heating element 3 KW, Capacity: 4 Litre per hour, conductivity: 4 µs/cm, pH: 5.5 to 6.5</p>	Nos	2				
11.	Deionizer / Ion exchanger	<p>It is equipped with conductivity meter, wall mount Flow rate: 50 liter/hour, pure water quality: 0.1 –</p>	Nos	1				

		20 us/cm depends on water quality, operated on 220 Volts						
12.	Magnetic Stirrer with Ceramic Hotplate	Ceramic Top plate, extremely resistant to corrosion Dimension (mm): 180 x 180mm, ceramic coated, Temperature range up to 550°C, Stirring volume up to 15 Lit Electronic speed regulation up to 1500 rpm Control knob for stirrer and digital temperature, operated on 220 Volts, 800W	Nos	5				
13.	Ultrasonic bath	Ultrasonic frequency: (kHz) 37 / 80 Ultrasonic power effective (W) : 130 / 100 Ultrasonic peak performance max. (W): 520 / 400 Heating power (W): 250 Unit outer dimensions W/D/H (mm): 300 / 179 / 221 Tank internal dimensions W/D/H (mm) :240 / 137 / 100 Basket internal	Nos	1				

		dimensions W/D/H (mm):198 / 106 / 50 Max. Filling volume tank (lit.) :2.75						
14.	Orbital Shaker Digital	Compact, flat laboratory shakers available with orbital motion, adjustable timer, digital display of speed, protected against overload and intrinsically safe operation Shaking motion: orbital Shaking movement: 20 mm Speed range: infinitely Adjustable: 30 – 500 rpm Load Capacity: 5kg Speed display: Digital Dimensions (WxDxH): 320 x 125 x 375 mm Complete with Universal Platform	Nos	1				
15.	Universal Oven 32 Litre	Adaptive Multifunctional Digital PID-microprocessor Controller with High-Definition TFT-Color Displays Temperature range 5°C above ambient up to +300°C	Nos	2				
16	Calorimeter	Copper Calorimeter 10W	Nos	4				

		Size: 48mm Diameter x 50mm Height						
17	Water Bath	<p>Controller digital display (LED) of set and actual temperature (0,1°C resolution) and of (remaining) programme time</p> <p>Temperature range in °C: min. 5°C above ambient up to +95°C with additional boiling mode (+100°C)</p> <p>Voltage 230 V, 50/60 Hz</p> <p>Electrical load approx. 1200 W (during heating)</p> <p>Dimensions W x H x D : 240 x 140 x 210 mm (7 Liters)</p>	Nos	3				
18	Electrochemical workstation (Potentiostat/Galvanostat)	<p>Electrode connections: 2, 3 and 4</p> <p>Potential range: +/- 10 V</p> <p>Compliance voltage: +/- 30 V</p> <p>Maximum current: +/- 3 A</p> <p>Current ranges: 1 A to 10 pA</p> <p>Potential accuracy: +/- 0.2 %</p> <p>Potential resolution: 0.3 µV</p> <p>Current accuracy: +/- 0.2 %</p>	Nos	1				

		<p>Current resolution:0.0003 % (of current range) Input impedance:> 1 TOhm Potentiostat bandwidth:1 MHz Computer interface:USB Control software:Electrochemical software for impedance & voltammetric studies Accessories required:Standard Volume Cell Kit with Glassy Carbon Working Electrode Glassy Carbon and Gold Electrode Standard Platinum Counter Electrode Kit includes isolation tube and adapter to fit 14/20 port 6.9 mm OD epoxy tube shroud, 150 mm long Single Junction Silver Chloride (Ag/AgCl) Reference Electrode Standard Voltammetry Cell 100 mL with PTFE stoppers and sparging/purging accessories</p>						
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		Polishing Solutions and Materials Kit this kit includes three packs of polishing disks (rayon, nylon, and 600 grit sandpaper) and three bottles of polishing solutions (5.0 μm , 0.3 μm , and 0.05 μm) PTFE Mount with 1/4" ID red cap slides onto electrode, fits into a 14/20 port Complete unit with 1 kVA true sine wave UPS, PC (min i-5)and allied Software/accessories for smooth functioning.						
19	Digital Multimeter	True RMS Digital Multimeter	Nos	2				
20	Power supply	Product Type:DC Power Supply Output Amps:5 Display : Digital Output: 0 to 30 VDC, 0 to 5 A Power(VAC):230 Power(Hz):60	Nos	2				
21	Molecule building set	Advanced Molecular Construction Set for teaching purposes	Nos	1				
22	Furnace Muffle	Furnace Muffle digital	Nos	1				

		temperature range up to 1100°C/2012°F digital single set point, large Chamber Size: 180x230x230mm (7" x 9" x 9") fitted with high performance HYBRID Muffle longer Life, Operated on 220v 1300 Watt, 6 Amp						
23	Abbe Refractometer	Range = 1.30 - 1.70 RI (0 - 95 °Brix) Resolution (Scale Division) = 0.0005 (0.25 °Brix) Operating Temperature = 5 – 75 °C Temperature Resolution: 0.1°C Temperature Accuracy: ±1°C	Nos	2				
24	Polarimeter Digital	Range (Angular (°A)): -355 to +355, (ISS (°Z)): -225 to +225 Resolution 0.01/0.001 (selectable) Accuracy: ± 0.010 Read out mode: Optical rotation, optical specific rotation, concentration, sugar scale Z, Brix purity, optical purity	Nos	1				

		Reading Time : Continuous measurement and display or single shot (selectable) Tube Length = 10 to 200mm Beam Diameter: 4mm Optical Density 0.0 to 3.0 OD Measuring Range 5-40 °C Sensor Accuracy ± 0.1 °C Operated on 220Volts						
25	CO ₂ Gas	400L SS Cylinder with regulator (analytical grade)	Nos	1				
26	N ₂ gas	400 L SS Cylinder with regulator (analytical grade)	Nos	1				
BIOLOGY LAB GLASSWARE								
1	Measuring Cylinders	(1 Litre - 5ml) (plastic + glass) Graduated Autoclavable Glass, plastic	Nos	4 each				
2	Glass pipettes with aspirator		Nos	12				
3	Pipettes tips	a. 1000 μ l b. 0.1 μ l	Nos	500 each- 1000				

				each				
4	Eppendorf tube	a. 1.5 ml b. 2ml	Nos	1000 each 2000 each				
5	PCR Tubes	(Transparent)	Nos	1000				
6	Spatula, Weighing dishes/boats/loop		Nos	15				
7	Autoclave Tape		Pac ks	4				
8	Mortar and pestle		Nos	10				
9	a. Plastic funnels b. Glass Funnels	(variable)	Nos	5 piece each				
10	Wash Bottle	Originally certified glassware	Nos	12				
11	Lab Measuring Jugs a. 1L b 5L		Nos	3 each				
12	Plastic dropper	Disposable	Nos	2000				
13	Hand press (pump) gallon for distilled water	Autoclavable	Nos	2				
14	Petri dishes a. Small b. Medium c. large)	Glass Autoclavable	Nos	50 each				
15	Flasks a. 25ml b. 1L	Graduated Autoclavable Glass	Nos	12 each				
16	a. Slides (plain), b. cover slips,		Box es	5 boxes				

	c. Cavity slides							
17	Test tube a. 5 ml b. 20 ml	Glass Autoclavable	Packs	500 each				
18	Falcon tubes for ultracentrifuge a. 5 ml b. 15 ml		Packs	200 each				
19	Beakers a. 5 ml b. 1L	Graduated Autoclavable	Nos	10 each				
20	Buffer bottles (Schott Duran)		Nos	30				
21	Syringes a. 0.5 b. 5cc	Disposable	Packs	100 each				
22	a. DNA Models b. RNA Models		Nos	3 each				
23	Glass Rods		Nos	12				
24	a. Tube Stands b. Racks c. plastic baskets		packets	3 each				
25	Micropore filtration		Nos	1				
26	PCR Tubes 0.2ml	Disposable	Packets	5 Packets				
28	PCR Tubes 0.2ml	Dnase/Rnase Free	Packets	5 Packets				

29	Eppendorf Tubes		Pac kets	10 Packets				
30	a. PCR Rack b. Ependorf Rack c. falcon tubes rack		Nos	12 each				
31	96-well plate	Dnase/Rnase	Pac kets	30 Packets				
32	96-well plate a. 1 ml b. 1.5 ml	Dnase/Rnase Free	Pac kets	25 Packets				
33	Min-Max Thermometer		Nos	12				
34	Cuvettes	(Quartz) (1-1.5ml)	Nos	2 each				
35	Ice pad		Nos	6				
36	Thermal sheet for print		Nos	4 rolls				
37	Glass pipettes with aspirator		Nos	12				
38	Pipettes tips a.	a. 1000µl b.0.1µl) (autoclavable)	Pac kets	2000 each				
39	Spirit Lamp		Nos	10				
40	Falcon tubes	a.15ml b. 50ml	Nos	200 each				
41	Filter paper sheet		Nos	20 pieces				
42	Cork borer		Nos	5				
43	cotton		Nos	15 rolls				
44	Aluminium foil		Nos	15				
45	Parafilm		Nos	5 rolls				
46	Cloth dusters		Pac kets	5 Packets				

47	Detergents a. Bleach b. Vim c. Tube Washing		Nos	20 each				
48	Brushes		Nos	20				
49	Tissue Paper Roll		Nos	24				
50	Glass markers (permanent)		Nos	5 boxes				
51	Zipped polyethylene bags (M-L)		Packets	100 Packets				
52	Wire Loop		Nos	10				
53	Autoclave Baskets		Nos	24				
54	a. Burners b. Forceps c. Needles d. Blade knives		Nos	10 each				
55	scissors		Nos	10				
56	Sampling Bottles		Nos	15				
57	Surgical/ Latex/ Gloves		Packets	100 Packets				
58	Polythene gloves		Packets	100 Packets				
59	Goggles		Nos	10				
60	a. Head Cover b. shoes Covers		Packets	10 Packets each				
61	a. Safety		Pac	100				

	Mask b. Fuming Mask		kets	Packets each				
62	Moisturizing agents		Nos	10				
63	Lab Coats		Nos	50				
64	First-Aid Kits		Nos	2				
65	Stop watch		Nos	5				
66	Dustbin with lid		Nos	5				
67	Acid dispensers		Nos	2				
CHEMISTRY LAB GLASSWARE								
1	Safety goggles	Plastic	Nos	50				
2	Beakers 10 ml Original Certified Glassware	Pyrex	Nos	30				
3	Beakers 25ml Original Certified Glassware	Pyrex	Nos	30				
4	Beakers 50ml Original Certified Glassware	Pyrex	Nos	30				
5	Beaker 100ml Original Certified Glassware	Pyrex	Nos	50				
6	Beaker 250ml Original Certified Glassware	Pyrex	Nos	50				
7	Beaker 500ml Original Certified Glassware	Pyrex	Nos	20				

8	Beaker 1000ml Original Certified Glassware	Pyrex	Nos	10				
9	Erlenmeyer flasks 10ml Original Certified Glassware	Pyrex	Nos	25				
10	Erlenmeyer flasks 25ml Original Certified Glassware	Pyrex	Nos	25				
11	Erlenmeyer flasks 50ml Original Certified Glassware	Pyrex	Nos	50				
12	Erlenmeyer flasks 100ml Original Certified Glassware	Pyrex	Nos	25				
13	Erlenmeyer flasks 250ml Original Certified Glassware	Pyrex	Nos	15				
14	Erlenmeyer flasks 500ml Original Certified Glassware	Pyrex	Nos	15				
15	Erlenmeyer flasks 1000ml Original Certified Glassware	Pyrex	Nos	10				
16	coiled condenser	Pyrex	Nos	5				
17	Liebig condenser	Pyrex	Nos	5				

18	Dropper bottles 100 ml	Pyrex	Nos	15				
19	distillation flask 250 ml	Pyrex	Nos	15				
20	Florence flasks, AKA boiling flasks/round bottom flask 50 ml	Pyrex	Nos	10				
21	Florence flasks, AKA boiling flasks/round bottom flask 100 ml	Pyrex	Nos	10				
22	Florence flasks, AKA boiling flasks/round bottom flask 250 ml	Pyrex	Nos	10				
23	Glass rods	Pyrex	Nos	20				
24	Test tubes 16x150mm	Pyrex	Nos	100				
25	test tube Tongs	Steel	Nos	10				
26	Test Tube Racks	Wooden/plastic	Nos	10				
27	Watch glasses	Pyrex	Nos	20				
28	Crucible holders	Stainless Steel	Nos	15				
29	Crucible stand	Stainless Steel /porcelain	Nos	15				
30	Crucibles	Pyrex / Porcelain	Nos	20				
31	Funnels	Pyrex	Nos	15				
32	Graduated cylinders 10 ml Original Certified Glassware	Pyrex	Nos	15				
33	Graduated	Pyrex	Nos	25				

	cylinders 25 ml Original Certified Glassware							
34	Graduated cylinders 50 ml Original Certified Glassware	Pyrex	Nos	50				
35	Graduated cylinders 100 ml Original Certified Glassware	Pyrex	Nos	25				
36	Graduated cylinders 250 ml Original Certified Glassware	Pyrex	Nos	10				
37	Graduated cylinders 500 ml Original Certified Glassware	Pyrex	Nos	5				
38	Graduated cylinders 1000ml Original Certified Glassware	Pyrex	Nos	5				
39	Volumetric flasks 5ml Original Certified Glassware	Pyrex	Nos	10				
40	Volumetric flasks 10ml Original Certified Glassware	Pyrex	Nos	10				
41	Volumetric flasks 25ml Original	Pyrex	Nos	15				

	Certified Glassware							
42	Volumetric flasks 50ml Original Certified Glassware	Pyrex	Nos	15				
43	Volumetric flasks 100ml Original Certified Glassware	Pyrex	Nos	25				
44	Volumetric flasks 250ml Original Certified Glassware	Pyrex	Nos	20				
45	Volumetric flasks 500ml Original Certified Glassware	Pyrex	Nos	20				
46	Volumetric flasks 1000ml Original Certified Glassware	Pyrex	Nos	10				
47	glass Droppers	Pyrex	Nos	100				
48	Pipettes 1ml	Pyrex	Nos	10				
49	Pipettes 2ml	Pyrex	Nos	10				
50	Pipettes 5ml	Pyrex	Nos	15				
51	Pipettes 10ml	Pyrex	Nos	10				
52	Burette 50ml	Pyrex	Nos	15				
53	Burette Stand	Pyrex	Nos	25				
54	Ring stands, rings, and clamps	Stainless Steel	Nos	20				
55	crucible Tongs	Stainless Steel	Nos	15				
56	Forceps	Stainless Steel	Nos	10				

57	Spatulas	Stainless Steel	Nos	10				
58	Thermometers(Different temp range)	Glass	Nos	10				
59	Bunsen Burners	Stainless Steel	Nos	10				
60	Mortar and Pestle	Porcelain	Nos	5				
61	Reagent bottle 100 ml	Pyrex	Nos	20				
62	Reagent bottles(N/M) 250ml	Pyrex	Nos	20				
63	Reagent bottles(W/M) 250	Pyrex	Nos	20				
64	Test tube holder	Stainless Steel	Nos	6				
65	sand bath	Stainless Steel	Nos	10				
66	Separating funnel 100ml	Pyrex	Nos	5				
67	Separating funnel 250ml	Pyrex	Nos	5				
68	Separating funnel 500ml	Pyrex	Nos	5				
69	suction flask 500ml	Pyrex	Nos	5				
70	suction flask 250ml	Pyrex	Nos	5				
71	specific gravity bottle 25 cc	Pyrex	Nos	10				
72	Buchner funnel	Porcelain	Nos	10				
73	Desiccator	Pyrex	Nos	5				
74	Clamp & stands	Stainless Steel	Nos	10				
75	Pipette bulb 5ml	Pyrex	Nos	10				
76	Burette Clamp	Stainless Steel	Nos	20				
77	Test Tube stands	Stainless Steel	Nos	5				

78	Test Tube Brush	Stainless Steel	Nos	6				
79	Corks (Different Sizes)	Rubber	Nos	8				
80	gloves /pack	Rubber	Nos	20				
81	magnetic bars small 1/2 inch	Teflon coated bars	Nos	10				
82	magnetic bars medium 1 inch	Teflon coated bars	Nos	10				
83	Masks (Chemical)	Standard	Nos	100				
84	Masks (Dust)	Standard	Nos	100				
85	viscometer Ostwald	Pyrex	Nos	10				
86	wash bottles	Plastic	Nos	10				
87	Whatmann filter paper /pack (sheets)	Standard	Nos	2				
88	Whatmann filter paper No . 40	Standard	Nos	5				
89	Whatmann filter paperNo.42	Standard	Nos	5				
90	Whatmann filter paper No.44	Standard	Nos	5				
91	Whatmann filter paper No.542	Standard	Nos	5				
92	Glass Cuvette/pair	Pyrex	Nos	2				
93	Quartz Cuvette/pair	Quartz	Nos	1				
94	Micro Pippet 10-100µl	Pyrex	Nos	5				
95	Micro Pippet 100-1000µl	Pyrex	Nos	5				
96	Glass cuvette	Pyrex	Nos	10				

	(1.0) ml							
97	Rubber Sucker for Pipette filling	Rubber	Nos	10				
Total								

Total Value _____

GST _____

Custom duty (If applicable) _____

Gross Total Value _____

Bid Bond Ref _____

Firm Name _____ Signature _____ Name _____ Designation _____
