

TENDER NOTICE

International Islamic University, Islamabad (IIUI) invites sealed bids from the Manufacturer or their Authorized Dealers / Suppliers/ Distributors duly registered with Income Tax and Sales Tax Departments for the Purchase of Lab Equipment briefly elaborated below:

Sr. No.	Name of Department/ Centre	Brief Description	Tender Submission Date & Time (On OR Before)	Tender Opening Date & Time	Tender Fee (Rs.)
1.	Department of Biological Sciences	1) Autoclave with fully-automated process for easy & quick control 2) Centrifuge Machine 3) Water Distillation Unit 4) Gel Documentation & Analysis System 5) ESCO Fume Hood with built in Gas & Water Valves 6) 48well Real-time PCR System 7) PCR MACHINE/Thermal Cycler Gradient 8) Rotary Evaporator Model Hei-VAP Value HL Digital 9) Double Beam Spectrophotometer 10) Water Bath 11) Incubator 12) Mini Gel Electrophoresis Horizontal unit dimension 13) Vertical Gel Electrophoresis 14) Pipette Sets 15) Orbital Shaking Incubator refrigerated front opening 16) Microscope Trinocular Research 17) E-Blotter complete system 18) Automatic Fraction Collector For Protein Purification 19) PERISTALTIC PUMP for protein purification	30-09-2021 10:30 A.M	30-09-2021 11:00 A.M	2000/-

02. Bidding Documents, containing detailed specifications, item descriptions, terms & conditions etc. can be obtained from the Web Site of PPRA as well as IIUI.

03. Sealed bids, prepared in accordance with the instructions in the bidding documents, must reach **on OR before** the date & time mentioned above at the office of Assistant Director-II (Purchase & Store), Room No. 213, 2nd Floor, Admin Block, IIUI, Sector H-10, Islamabad. (Contact: 051-9019255) **BY COURIER / BY REGISTERED MAIL.**

04. The bids will be opened by the **Bid Opening Committee** in the **Council Hall**, Admin Block, Sector H-10, International Islamic University Islamabad.

05. International Islamic University Islamabad reserves the right to accept or reject any or all bid(s) in terms of Rule-33 of Public Procurement Rules 2004.

Javaid Rabbani, Deputy Director (P&S), International Islamic University, Islamabad.

Tel: 051-9019255

INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD

Purchase & Store Section, Admin Block, New Campus, Sector H-10, Islamabad.

Tel: 051-9019255 Fax: 051-9258073

Tender No. 17/11/2020/P&S-

Sub: **Tender Document for Purchase of Lab Equipment for DBS, IIU**

"TERMS AND CONDITIONS"

1. Any addition, deletion or modification of any clause of the procurement terms & conditions of International Islamic University Islamabad (IIUI) by any vendor will not be acceptable and may lead to rejection of the bid.
2. Manufacturers or their Authorized Dealers / Suppliers/Distributors duly registered with Income Tax and Sales Tax Departments are eligible to participate in tender.
3. Documents along with Pay Order/Call Deposit/Demand Draft amounting to **Rs. 2000/-** as a tender documents fee (Non-Refundable) shall be submitted in favor of International Islamic University, Islamabad to the address given below.
4. Part / Advance payments is not allowed.
5. The exact completion/delivery time from the date of the purchase / work order will be maximum **120 days**. The handing over / completion time is of critical importance.
6. After opening of bids, International Islamic University Islamabad will examine the bids for completeness as per tender document.
7. Purchase order(s) will be awarded to the lowest evaluated OR technically recommended bidder (s) on the basis of item wise / subtotal wise / grand total wise according to the nature of BoQs/Compatibility requirements.
8. International Islamic University Islamabad, will follow the PPRA rule of **Single Stage One Envelope procedure**;
9. Bidders cannot challenge the findings of the evaluation or ask for reason of disqualification.
10. The bid should be submitted in a sealed envelope up to **30-09-2021** on or before **10:30 a.m** and will be opened on the same date **at 11:00 a.m** in the presence of available bidders or their representatives.
11. The envelope should be marked as under;

Assistant Director-II (P&S)
Room No. 213, 2nd Floor, Admin Block,
Sector H-10, New Campus
International Islamic University, Islamabad.
Tel: 051-9019255

12. The envelope shall also bear the word **"CONFIDENTIAL"** and following identification quotation for **"Purchase of Lab Equipment for Department of Biological Sciences**
13. **If the vendor fails to deliver the goods to International Islamic University, Islamabad in**

time then the penalty will be charged as under:

- a. 02% per month of the total Purchase Order value.
 - b. If the vendor fails to deliver the goods / services during the extended period (if granted) then the purchase / work order may be cancelled and Earnest money may be forfeited.
14. If the delivered goods / services are not according to the required quality standards / specifications, the same shall be liable to be rejected after inspection. The bidder/vendor would be required to REPLACE as per requirements mentioned in our BoQs at no cost to the IIUI, otherwise the purchase / work order will be cancelled after due date with confiscation of earnest money AND bidder will bear all cost and expenses thereof.
15. All prices should be quoted on **FOR Basis** (inclusive of all applicable taxes)
16. All prices should be valid for at least **120 days** Withdrawal or any modification of the original offer within the validity period shall entitle IIUI to forfeit the earnest money in favor of the IIUI and / or put a ban on such vendor participation in IIUI tenders / works.
17. It is the sole responsibility of the bidder / agent / supplier / manufacturer to comply with the applicable laws, be national or international.
18. In case of any dispute, decision of the President, IIUI will be final and binding upon the parties.
19. The IIUI reserves the right to modify the quantities of goods / services at any time before the award of purchase/ work order.
20. The bidder is required to furnish in form of **"Call Deposit" @2% (Re-fundable) of total value of the bid as Earnest Money in favor of "International Islamic University Islamabad"**. Any bid not accompanied by Earnest Money shall be rejected without any right of appeal.
21. Earnest Money of the successful bidder(s) shall be retained by the IIU till the successful completion of the warranty period of the goods.
22. International Islamic University Islamabad reserves the rights to accept or reject the bid if;
- i. Received later than the date and time fixed for tender submission
 - ii. The tender is unsigned/ unstamped
 - iii. The offer is ambiguous
 - iv. The offer is conditional
 - v. Offer is made by the unauthorized agent/ supplier/service provider of the original equipment manufacturer.
 - vi. The offer is from a firm, which is black listed by any Govt. Office.
 - vii. The offer is received by telephone/telex/fax/telegram.
 - viii. Any unsigned / ambiguous erasing, cutting / overwriting etc. is made.
 - ix. The Company Profile, client list and detail of similar projects/works is not attached.
23. The bidder should furnish a **CERTIFICATE** on judicial STAMP PAPER worth Rs. 100 as

23. The bidder should furnish a **CERTIFICATE** on judicial STAMP PAPER worth Rs. 100 as worded below in token of acceptance of all the terms and conditions of the tender. Otherwise the tender will not be considered under any circumstances.

I / We /

- Company Name: _____ / Vendor
- Postal Address: _____
- Tel. No: _____ Mob No. _____
- NTN# : _____ GST#: _____

The undersigned certify that our above named Firm/Company is not blacklisted by any Govt. Office and the terms and conditions as contained in this document, viz "**Terms and Conditions**" are accepted unconditionally.

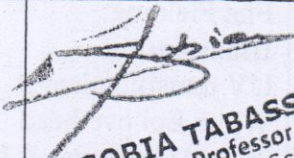
Sign & Stamp

Note:

1. Please quote the rates on our BoQs and clearly mention the quoted item(s) Make / Model / Country of Origin and Guarantee/Warranty, otherwise your bid / items may lead to rejection.
2. The quoted item(s) should be of the same specs, make/model or their equivalent.
3. In Addition to filling of the attached BoQs, supporting literature of the quoted model must be attached for verification & technical evaluation of the required specification by the bid evaluation committee. In case of any clash found between the quoted model and the literature model, the item/bid may be rejected.
4. Please also attach the Certificate supporting being Active Taxpayer as per requirement of FBR.

BOQ FOR PURCHASE OF LAB EQUIPMENT FOR DBS

		Price with Taxes
1.	<p>Autoclave with fully-automated process for easy & quick control</p> <p>Features:</p> <ul style="list-style-type: none"> - Time for sterilization can be easily adjusted by user-friendly control system. - When setting time for sterilization ends up, buzzer sound comes together with automatic exhaust of steam inside the equipment. - The advanced dual safety system makes optimized protection against any kind of dangerous factors which may be caused by excessive upturn of temperature & pressure. - High-efficiency Over-Temperature Limit function fulfill reliable protection against overheating above a set temperature. - User-friendly control panel enables end-users to take a look at both setting & present temperature. - When it comes up to a end-user's setting temperature for sterilization, the timer is automatically activated and both operating temperature & progress time of sterilization temperature are shown on the display for easy monitoring. - The safety devices present effective protection functions against overheating and over current. - Easy & quick operation with the completely-isolated structure from the outside of the equipment. <p>Technical Specifications:-</p> <p>Temperature: Range: Amb.+10°C to 125°C</p> <p>Controller: Digital PID controller (Program type: 5 pattern 18 segment)</p> <p>Capacity: 40 l</p> <p>Dimensions (in) ø300 x 650mm</p> <p>Display: PV & SV Dual Digital display</p> <p>Timer: 99hr 59min 59sec</p> <p>Pressure Gauge: 0 ~ 3 kg/cm²</p> <p>Operating Pressure: 1.2kg/cm² at 121°C (Degrees of Celcius)</p> <p>Door packing: One Touch pressure Handle type</p> <p>Safety Device: Over Temperature, Over pressure & Over</p> <p>Current protector</p> <p>Basket: Standard wire Basket</p> <p>Power Supply: AC 230V, 50/60Hz</p> <p>Technical Documentation:</p> <p>Sole agency authorization letter attested.</p> <p>Country of Origin: Korea/UK/Germany/USA/Japan</p>	
2.	<p>Centrifuge Machine</p> <p>Microprocessor with large LCD display</p> <p>Electrical lid lock</p> <p>Quick access to samples .</p> <p>Active imbalance identification and cut-off</p>	<p>DR. SOBIA TABASSUM Associate Professor Deptt. of Biological Science International Islamic University Islamabad</p>

	<p>Noise level < 60 dBA, at max. speed Easy removal of rotor, without tools Manufactured in accordance to international Safety regulations, i.e. IEC 61010 Distinct Control Panel Control panel with Touch-Operation Simple one-handed operation Easy to program with gloves on Splash-proof foil keyboard Permanent indication of pre-set and actual values Selection of speed in both rpm and g-force, In increments of 10 10 acceleration and deceleration rates, possibility of unbraked deceleration Pre-selection of the running time, from 10s to 99h 59min or continuous Storage of up to 99 runs Quick-key for short runs</p> <p>Technical Data Max. Speed: 6,800 rpm Max. RCF: 4,445xg Max. Volume: 8x15ml Speed range: 200-6,800 rpm Running time: 59min 50 s /10 s increments 99 h 59 min / 1 min increments 1-No. Angle Rotor Capacity 8 x 15 ml Speed 6800rpm</p> <p>Technical Documentation: Sole agency authorization letter attested. Country of Origin: /UK/Germany/USA/Switzerland</p>	
3.	<p>Water Distillation Unit</p> <ul style="list-style-type: none"> • Water Still for single distillation, suitable for bench mounting. • Economical energy consumption by distillation of the heated cooling water. • Thermostatic low water cut-off, Manual cooling water control via outlet temperature, • Heating element, evaporator and condenser made of stainless steel and housing made of galvanised sheet steel, powder coated Conductivity at 25°C ca. 2,3 µS/cm, Production Capacity output 4. Lit/h <p>Heater power 3,0 kW, Cooling water Consumption 0,7 L/min Operated on 220 Volts, Technical Documentation: Sole agency authorization letter attested. Country of Origin: Korea/UK/Germany</p>	
4.	<p>Gel Documentation & Analysis System Automatic image analysis software Features:- Band analysis/densitometry Ideal for 1D analysis, the software has automatic lane and peak detection. GeneTools software automatically compensates for smiling or distorted bands and tracks. Molecular weight or base pair values can be calculated using standards from one or more tracks. Quantification can also be automatically calculated from standards in a number of ways. Detailed</p>	 DR. SOBIA TABASSUM Associate Professor Deptt. of Biological Science International Islamic University Islamabad

results can be instantly printed or transferred to Word or Excel.

Band matching

Band matching can be performed by position, defined Rf or calibrated molecular weight/base pair value.

Automatic molecular weight/base pair calculations for sample bands based on standards from one or more lanes

GeneTools has a library of markers for automatic or manual assignment which are user configurable.

Multi-tier analysis for high throughput screening

Especially useful for analysing high throughput gels, GeneTools software provides multi-well line functions with automatic track alignment.

Manual band quantification

The user can manually quantify bands, spots or other objects on a sample. All data is instantly exportable to Microsoft Excel.

Spot Blot analysis

Automatic detection of spots using a spot grid, quantitative and incidence analysis. The software can also perform multiple background subtraction methods.

Colony counting

Automatic counting of two colour colonies with the ability to count light and dark colonies on the same plate.

Export results to Microsoft Excel and Word

Customized results tables can be exported to either Microsoft Word or Excel.

CAMERA CCD Digital camera

- 3m pixels
- USB2 connection

LENS Superior zoom lens for exceptional image quality

FILTER DRAWER Use a range of filters for extensive choice of fluorescent applications

SAFETY SWITCH Protects from accidental UV exposure when opening door

INTERNAL LED WHITE LIGHT For sample positioning and focusing

Specification: -

Camera

Sensor

1/3 inch

Resolution

3 million pixels

Bit depth

12/16bit (extended)

Greyscales

4096/65536

Dynamic range

3.6/48 (extended)

Viewing area

20x20cm

Excitation Source

Trans UV 302nm peak

Flat Fielding:

yes

Illumination

UV transilluminator

20 x 20cm

White Epi overhead


Yes

Computer & Laser Printer for above (Locally Supplied)

Technical Documentation:

Sole agency authorization letter attested.

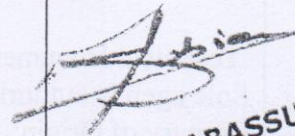
Country of Origin: UK/Germany/USA



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5. ESCO Fume Hood with built in Gas & Water Valves

Features:

	<p>Industrial grade support frame built with electro galvanized steel and oven-baked epoxy coated aluminum.</p> <p>Phenolic resin laminate baffle system ensures airflow uniformity throughout the main chamber of the hood</p> <p>Progressive Bypass Airflow System redistributes air intake when sash is closed</p> <p>Aerodynamic design eliminates air turbulence, minimizes noise levels and static pressure losses</p> <p>Grade 304 stainless steel airfoil sweeps the work surface to maintain superior operator protection</p> <p>Manufactured In Indonesia</p> <p>Specifications:</p> <p>Nominal size 1.2 meters (4')</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>Construction</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 Specification</p> <p>Sash Material Tempered Laminated and Framed Sash Glass</p> <p>Sash Configuration Vertical</p> <p>Complete unit with base storage cabinet</p> <p>Technical Documentation:</p> <p>Sole agency authorization letter attested.</p> <p>Country of Origin: UK/Germany/USA</p>	
6.	<p>48well Real-time PCR System</p> <p>SF4800 Real-Time PCR System</p> <p>Features:</p> <ul style="list-style-type: none"> The new generation of Peltier-based technology, fast ramping rate of up to 7°C/sec. Maintenance free, long life LED illuminator and high sensitivity photoelectric detector. Synchronous two color detection system, reducing errors caused by delay, shortening scan time. Calibration with ROX dye is not required, guarantees extremely uniform fluorescence wells. The software could be upgraded free for life. <p>Specifications</p> <p>Type: Genes & Life Science</p> <p>Equipments</p> <p>Brand Name: Skyfire</p> <p>Model Number: sf4800+</p> <p>Place of Origin: Zhejiang, China</p> <p>Instrument classification: Class III</p> <p>Warranty: 1 Year</p> <p>After-sale Service: Free spare parts</p> <p>Product name: Real-time PCR</p> <p>Instrument</p> <p>Language: English</p>	


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	<p>Function: Disease Analysis</p> <p>Display: 7 Inch TFT Touch Screen</p> <p>Reagent: Open System</p> <p>Usage: RNA</p> <p>Certificate: CE ISO</p> <p>Application: Hospital</p> <p>Feature: Testin</p> <p>Technical Documentation:</p> <p>Sole agency authorization letter attested.</p> <p>Country of Origin</p>	
7.	<p>PCR MACHINE/Thermal Cycler Gradient</p> <p>Features:</p> <p>Unique flexible programming</p> <p>Rapid run times</p> <p>Improved workflow over traditional gradient cyclers</p> <p>Ramping rates up to 5°C/sec.</p> <p>Simple user interface</p> <p>Adjustable heated lid accommodates strips, tubes, and microplates</p> <p>Pre-programmed standard protocols</p> <p>Simplified Workflow – Improved Throughput</p> <p>Sliding Adjustable Heated Lid</p> <p>Easy Programming</p> <p>Unique Block Design</p> <p>Technical Specification:</p> <p>Sample Capacity 96 x 0.2 mL tubes</p> <p>Programmable Temp. Range 4°C to 99.9°C</p> <p>Temperature Control Calculated or Block</p> <p>Temp. Accuracy/Uniformity ±0.5°C/±0.5°C</p> <p>Max. Heating Range among the 6 Peltier Blocks 30°C to 99°C</p> <p>Max. Temp Difference 24°C</p> <p>Ramp Rates 5°C/sec. heating, 3.5°C/sec. cooling</p> <p>Optimization Technology Six 4 x 4 Peltier Blocks</p> <p>with independently programmable temperatures</p> <p>Programmable Lid Temperature 60°C to 65°C, 100°C to 115°C</p> <p>Program Memory 200 complete programs</p> <p>Temp. Increments/Decrements Yes</p> <p>Time Increments/Decrements Yes</p> <p>User Program Folders Yes</p> <p>Password Protected Programs Yes</p> <p>Communication USB and RS232 ports</p> <p>Technical Documentation:</p> <p>Sole agency authorization letter attested.</p> <p>Country of Origin: Korea/UK/Germany/USA</p>	
8.	<p>Rotary Evaporator Model Hei-VAP Value HL Digital</p> <p>Features: -</p> <p>- Reduce your process times depending on your model and</p>	<p></p> <p>DR. SOBIA TABASSUM Associate Professor Deptt. of Biological Science International Islamic University Islamabad</p>

periphery up to 30%

- The chemically resistant PTFE vacuum seal reduces your spare parts budget up to 75% with prolonged operational lifespan.
- It can be used for 50ml – 500ml evaporating flask (Better than Buchi).
- Increases your range of applications by using 5 liter flasks in the universal bath at no added costs.
- Only Hei-Vap heating baths reach a temperature of 210°C which is 30°C higher than other evaporators on the market and allow for a broader range of applications which previously could not be performed on any rotary evaporator (for example bitumen distillation). Thus increasing the range of applications eliminates the need for investments in other equipment.

Technical Specification: -

Hand / Motor lift	Hand lift
Rotation speed (rpm)	20 – 280
Rotation speed setting	Scale
Drive	Brushless DC motor with electronic speed control
Heating capacity (W)	1,300
Temp. Range heating bath (°C)	20 – 210
Temperature range accuracy (°C)	±1
Overheat protection bath (°C)	Cut-off at 5°C, over set temperature
temperature Via separate PT 1000	
Bath temperature setting	Digital
Heating bath temperature control	Electronic / Digital
Secondary overtemp. Cut off (°C)	250
Material heating bath (mm)	Stainless steel AIS 316L
Volume heating bath (l)	4.5L

Technical Specification

Number of Head / Stages	2
Maximum Pumping Speed	0.75 m ³ /h/0.9 m ³ /h
Ultimate Vacuum	12 mbar
Ultimate Vacuum with Gas Ballast	20 mbar
Operated on 220 Volts	


Technical Documentation:

Sole agency authorization letter attested.
Country of Origin: Korea/UK/Germany/USA

2. Double Beam Spectrophotometer

Features

- Double beam stand-alone scanning UV/Vis spectrophotometer covering 190-1100nm
- 2nm bandwidth
- Long life Xenon lamp technology for low cost of ownership
- All application software is built in - no extra modules to buy
- Colour Touch screen display with easy to use software
- USB ports for method and result storage plus connection to a PC


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Technical specification

Type UV/Vis
Wavelength Range 190 - 1100nm
Wavelength Accuracy (+/-) $\pm 0.5\text{nm}$ across wavelength range
Wavelength Reproducibility (+/-) $\pm 0.1\text{nm}$
Lamp Source Xenon (PTR)
Beam Double Beam
Optical System Czerny-Turner Monochromator
Bandwidth 2nm
Detector Dual Solid State Silicon photodiode
Photometric Range -4.000A to 4.000A
Stray Light $< 0.050\%T$ at 220nm (NaI), $< 0.050\%T$ at 340nm (NaNO₂)
Zero Stability $\pm 0.001A/hr$ at 500nm
Baseline Flatness $\pm 0.002A$ 220 to 900nm
Measurement Type Fixed Wavelength, Abs/%T, Abs ratio, Abs difference, concentration (standard curve), concentration (factor), multiwavelength, kinetics, Life Science Methods, user log-on, Equation editor
Cell Compatibility Cuvette,
Cell Holder Dual (sample and reference),
Single Cell Holder
Display Colour Touchscreen
Data Interface USB
Noise $< 0.002A$ peak to peak, $0.0008A$ RMS near 2A at 500nm. $< 0.00020A$ RMS at 0A at 500nm over 20 measurements
Photometric Accuracy $\pm 0.002A$ at 0.5A, $\pm 0.004A$ at 1A, $\pm 0.006A$ at 2A at 440nm, 456nm, 546.1nm, 590nm, 635nm
 $\pm 0.005A$ using 60mg/L K₂Cr₂O₇
Photometric Reproducibility $\pm 0.002A$ at 1A
Spectral Scanning Yes (up to 1100nm)

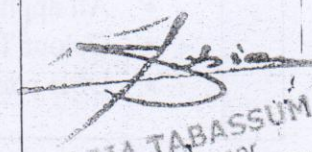
Complete unit with 2 Quartz & 2 Glass Cells

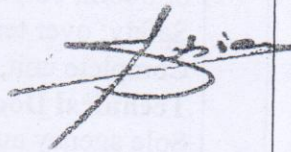
Technical Documentation:

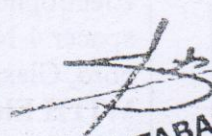
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Country of Origin: Korea/UK/Germany/USA

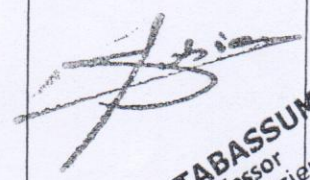
10. Water Bath

Basic class for standard temperature control tasks
Temperature range min. 5 °C above ambient up to +95 °C with additional boiling mode (+100 °C)
State-of-the-art control technology of the Basic and models
Microprocessor PID-temperature controller with integrated auto diagnostic system with fault indicator
integrated digital timer from 1 min. to 99,59 hours
Over temperature Protection (double)
Interior Stainless Steel Tank & Textured Stainless Steel Casing
Fitted With Gabled Cover
Operated on 220volts, WNB Series.
Capacity 10 Lit., interior dimension 350x210x140mm


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	<p>Technical Documentation: Sole agency authorization letter attested. Country of Origin: Korea/UK/Germany/USA</p>	
11.	<p>Incubator Adaptive multifunctional Digital PID-Microprocessor controller with High-Definition TFT-Color Display Temperature range 10°C above ambient up to +80°C Resolution of display for set point values 0.1°C Double doors (interior glass, exterior stainless steel) Adjustment of pre-heated fresh air admixture by air flap control in 10% steps, digital timer adjustable from 1 minute to 99 days, 23 hours adjustable electronic overtemperature monitor and mechanical temperature limiter, protection class 1 Double Over Temperature Protection Interior & Housing made of Stainless Steel Set point WAIT function - the process time does not start until the set temperature is reached Programme Stored in Case of Power Failure Operated on 220volts, IN Series Capacity 53 Lit, interior dimension: 400 x400x330mm with Two stainless steel trays,</p> <p>Technical Documentation: Sole agency authorization letter attested. Country of Origin: UK/Germany/USA</p>	
12	<p>Mini Gel Electrophoresis Horizontal unit dimension 20 x 9,5 x 8.5cm (LxWxH), Silicone rubber prevents any leakage, UV Transparent whole unit included lid to monitor the movement of bands during Electrophoresis, easy lid removal, Run up to 30 samples at once complete system with UV Tray 10 x 7 cm, one Comb for 10 samples thickness 1.00 mm and one comb for 15 samples thickness 1.00 mm with leads,</p> <p>Technical Documentation: Sole agency authorization letter attested. Country of Origin: UK/Germany/USA</p>	
13.	<p>Vertical Gel Electrophoresis (quantity 02) able to make and runs two gels simultaneously. Maximum gel size 8 x 11cm, gel thickness 0.75 mm, minimum buffer volume internal 250 ml, and minimum buffer volume external 500 ml, gel tank dimension:20 x 13 x 16.5cm. Injection moulded unit, compact design, complete unit includes Electrophoresis tank, casting module 2-set, glass plates 5-sets, 0.75mm spacer 4-Nos., 0.75 mm 10 teeth combs 2-Nos., one gel plate, alignment cord, Glass plate separator WITH Electrophoresis Power Supply, compact, space saving & light weight design; touch panel, audible & visible alarm, status alarm constant</p>	 <p>DR. SOBIA TABASSUM Associate Professor Deptt. of Biological Science International Islamic University Islamabad</p>

	<p>voltage or current, safety features includes, no load detection, over voltage protection, automatic recovery after power failure, dimension 320x240x73mm, digital voltage range 10 – 300V in 1 Volt step, current 4–400 mA in 1mA steps 75 Watt max, design 4 parallel outputs, with timer control 0–999minute (Country of Origin: Taiwan) Operated on 220 Volts, Country of Origin:</p> <p>Technical Documentation: Sole agency authorization letter attested. Country of Origin:UK/Germany/USA</p>	
14.	<p>Pipette Sets Measuring Range 0.2 to 2μl, Accuracy $\pm 0.014\mu$l, Model P2G, Gilson Made in France Measuring Range 1 to 10μl, Accuracy $\pm 0.040\mu$l, Model P10G, Measuring Range 2 to 20μl, Accuracy $\pm 0.060\mu$l, Model P20G, Gilson Made in France Measuring Range 10 to 100μl, Accuracy $\pm 0.15\mu$l, Model P100G, Measuring Range 20 to 200μl, Accuracy $\pm 0.30\mu$l, Model P200G, Gilson Made in France Measuring Range 100 to 1000μl, Accuracy $\pm 1.5\mu$l, Model P1000G</p> <p>Technical Documentation: Sole agency authorization letter attested. Country of Origin: France</p>	
15.	<p>Orbital Shaking Incubator refrigerated front opening noiseless with powerful induction motor, microprocessor temperature controlled with digital display, working temperature range: ambient +5°C to 60°C, set accuracy + 0.1 °C shaking speed 20 – 300 rpm, Interior : Stainless Steel (SUS304) shaking orbit 20mm, shaking setting & display digital, shaking timer 99hr and 59 minute, temperature setting & display digital, PID temperature controlled, interior chamber dimension 545 x 550 x 360mm, capacity to hold different flasks i.e. 250ml 23-Nos or 500ml 16-Nos or 1000ml 9-Nos, (Country of Origin: Korea) Safety: over temperature cut-off, over current breaker Complete unit, operated on 220 Volts.</p> <p>Technical Documentation: Sole agency authorization letter attested.</p> <p>Technical Documentation: Sole agency authorization letter attested. Country of Origin: Korea/UK/Germany/USA</p>	
16.	<p>Microscope Trinocular Research Antimould Treated Stand 45 degree Binocular observation tube, quadruple Fixed</p>	<p> DR. SOBIA TABASSUM Associate Professor Department of Biological Science International Islamic University Islamabad</p>

	<p>revolving nose piece Plan objectives 4X, 10X, 40X spring and 100X spring oil immersion, Plan Objectives extend clarity to the edge of the image, moveable Abbe Condenser with focusing control with aperture iris Diaphragm for critical focus coarse and fine focusing, tension adjustment, with built in low drive, mechanical stage with smooth moving coaxial controls, wide field eye piece 10X paired complete unit with standard accessories, built in variable Light Source Halogen Light 6Volt 20W, operated on 220 Volts,</p> <p>With Microscope Digital Camera HDMI C-mount camera 6MP Still resolution 3264x1836 2MP Live video 1920x1080 60 fps (frames per second) via HDMI 2MP Live video 1920x1080 30 fps (frames per second) via USB2.0 Video record: 1080p 30fps (frames per second) on SD card or PC Output: HDMI, USB 2.0, SD Card 1/3" CMOS chip (use .3x C-mount adapter) Button (1) controls: Exposure, White balance, Gamma, Gain, Sharpness, Saturation, Contrast Button (2) controls: Cross line, Image Compare, Image Freeze OS support: Windows XP and later Software: ISCapture full parameter control C-mount Adaptor Compatible Computer with 32" LED 32inches</p> <p>Technical Documentation: Sole agency authorization letter attested. Country of Origin: Korea/UK/Germany/USA</p>	
17.	<p>E-Blotter complete system E-Blotter Electrode Module, Module includes black & red Electrode plate in cassette holder, blotter cassette/2-sets, blotting sponge/1pkg, blotting paper 1 pkg, transfer gel capacity 1or 2 gels, buffer requirement 1450ml complete unit</p> <p>Technical Documentation: Sole agency authorization letter attested. Country of Origin: Korea/UK/Germany/USA</p>	
18.	<p>Automatic Fraction Collector For Protein Purification specifications Collection tube : 160 or more maximum capacity: 5ml or more protein measurement using UV 280nm collection mode: volume and time both Timing collection range: 1 second to 24 hours Dimension: at least 260mm*370mm*300mm Tubing compatible with chromatographic purification warranty: 1 year Certificate: CE ISO Technical Documentation: Sole agency authorization letter attested.</p>	 DR. SOBIA TABASSUM Associate Professor Deptt. of Biological Science International Islamic University Islamabad

	Country of Origin: Korea/UK/Germany/USA	
19.	PERISTALTIC PUMP for protein purification Specifications Pressure: 2.7bar Voltage: 110V/220V Speed: 1-600RPM Flow range: 0-6000mL/min Function: Speed Adjustable IP rate: IP31 Intelligent temperature control: Cooling fan intelligent temperature control system, reduce noise Warranty: 1 Year Warranty Technical Documentation: Sole agency authorization letter attested. Country of Origin: Korea/UK/Germany/USA	

Note: Required Equipment/item must be of the same specs as mentioned above or Equivalent.

For any further query, please contact with Dr. Sobia Tabassum, Chairperson, Department of Biological Sciences at her email: sobia.tabasum@iiu.edu.pk

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