



Centre for Advanced Research in Sciences (CARS)
University of Dhaka, Dhaka 1000.

Invitation for Tender (National)

Tender Ref. No. CARS/ST/P-284/OTM/2020

Date : ০৫-০৯-১৪২৭ বঙ্গাব্দ
20-12-2020 খ্রিষ্টাব্দ

Sealed Tenders are hereby invited from reputed supplier for Supply, Installation, Testing and Commissioning of Chemicals, Consumables & Glassware's, Equipment, Computer & UPS at the CARS, University of Dhaka.

1.	Ministry/Division	Ministry of Education		
2.	Agency	University of Dhaka		
3.	Procuring Entity Name	Centre for Advanced Research in Sciences (CARS), University of Dhaka.		
4.	Procuring Entity Code	Not used		
5.	Procuring Entity District	Dhaka		
6.	Invitation for	Supply, Installation, Testing and Commissioning of Chemicals, Consumables & Glassware's, Equipment, Computer & UPS at the CARS.		
7.	Invitation TenderRef No.	CARS/ST/P-284/OTM/2020		
8.	Date :	20-12-2020 খ্রিষ্টাব্দ		
KEY INFORMATION				
9.	Procurement Method	Open Tendering Method		
FUNDING INFORMATION				
10.	Budget and Source of Funds	Revenue Budget (RB) 2019-2020 (D.U, Suspense Account: 2020-2021)		
11.	Development Partner (if applicable)	N/A		
PARTICULAR INFORMATION				
12.	Project/Programme Code (if applicable)	Not used		
13.	Project/Programme Name (if applicable)	Not Applicable		
14.	Tender Package No.	Lot wise		
15.	Tender Package Name	Supply, Installation, Testing and Commissioning of Chemicals, Consumables & Glassware's, Equipment, Computer & UPS at the CARS.		
16.	Tender Publication Date	20-12-2020 খ্রিষ্টাব্দ		
17.	Tender Last Selling Date	11-01-2021 খ্রিষ্টাব্দ Up to office hours		
18.	Tender Closing Date and Time	Date :		Time:
		12-01-2021 খ্রিষ্টাব্দ		12:00 Noon
19.	Tender Opening Date and Time	12-01-2021 খ্রিষ্টাব্দ		12:30 pm
20.	Name & Address of the Office(s)	Address(s)		
	-Selling Tender Document (Principal)	(i) Centre for Advanced Research in Sciences (CARS), University of Dhaka.		
	-Receiving Tender Document	(i) Centre for Advanced Research in Sciences (CARS), University of Dhaka.		
	-Opening Tender Document	Centre for Advanced Research in Sciences (CARS), University of Dhaka.		
21.	Place/Date/Time of Pre-Tender Meeting	Name/Address	Date:	Time
INFORMATION FOR TENDERER				
22.	Eligibility of Tenderer	(i) Up to date Trade License (ii) Up to date VAT Registration Certificate (iii) Up to date Income Tax Clearance Certificate (iv) Experience Certificate in similar works of comparable value in a single tender in last five years as mentioned in TDS (v) Bank solvency Certificate (vi) Manufacturer Authorization letter for applicable Equipment. (vii) Applicant must be owner of the firm or Representative of the firm		

		<p>will be authorized by the owner of the Firm signature with name and seal of the owner.</p> <p>viii) Country of origin and made in country will be same. If differ then explain clearly with black and white.</p> <p>(ix) Color catalogue of the Equipment.</p> <p>(x) The Supplier has to avail an expert maintenance team, list of application training support team and needed submission of team member's list with Bio-data.</p> <p>(xi) Competency certificate of after sale service as mentioned in the TDS. Availability of Spare- Parts Certainty declaration at least 10 years.</p> <p>(xii) Warranty: free of cost spare- parts 2 years for Equipment, Computer and UPS. Installation and training must be provided by the supplier (free of cost). Consumables & Glassware's 24 Months from the date of delivery. Expiry date is needed at least 12 months from the date of delivery for chemicals.</p>			
23.	Brief Description of Goods	Supply, Installation, Testing and Commissioning of Chemicals, Consumables & Glassware's, Equipment, Computer & UPS at the CARS.			
24.	Brief Description of Related Services	Supply, Installation, Testing and Commissioning of Chemicals, Consumables & Glassware's, Equipment, Computer & UPS at the CARS.			
25.	Tender Document Price TK.-5,500.00	The Price of Tender Schedule as mentioned is to be deposited in A/C No. 36000392, Janata Bank, T.S.C branch, Dhaka University . Tender schedule and terms and conditions may be collected on submission of the deposit receipt from the above mentioned offices on all working days except on the date fixed for submitting the tender.			
26.	Identification/Name of Equipment	Location	Tender Security Amount in Taka	Completion Time	
	Chemicals, Consumables & Glassware's, Equipment, Computer & UPS	CARS, DU.	Lot-1 : Chemicals	45,800.00	90 days from the date of issuance a Purchase order
			Lot- 2 : Consumables & Glassware's	19,100.00	
			Lot- 3 : Equipment	75,860.00	
			Lot- 4 : Computer & UPS	18,000.00	
PROCURING ENTITY DETAILS					
27.	Name of Official Inviting Tender	Prof. Dr. Md. Abdul Malek			
28.	Designation of Official Inviting Tender	Director			
29.	Address of Official Inviting Tender	Centre for Advanced Research in Sciences (CARS), University of Dhaka.			
30.	Contact details of Official Inviting Tender	9661900/Ext. 4616/ 4636.			
31.	The procuring entity reserves the right to accept or reject any or all tenders without assigning any reason whatsoever. The procuring authority also reserves the right to omit, increase or decrease the quantity of Chemicals, Consumables & Glassware's, Equipment, Computer & UPS from the Tender. The suppliers must abide by the decision of the University authority. Tender form, schedule of requirements of supply, tender notice and terms and conditions etc. will form the integral part of the tender. The suppliers should write the name of the item and the name of the firm on the envelope clearly . Vat, Income Tax and other Taxes, if any, imposed by the Govt. will be deducted from their bills as per Govt. rules.				

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Director

Centre for Advanced Research in Sciences (CARS)
University of Dhaka.

Section 6. Schedule of Requirements

This Section provides the List of Goods and Delivery Schedule and List of Related Services and Completion Schedule and must be carefully prepared by a Procuring Entity for each object of procurement.

Invitation for Tender No :		Date :	
Tender Package No :			

A. List of Goods & Related services and Delivery Schedule

Item No.	Description of Item	Unit of Measurement	Quantity	Point of Delivery	Delivery Period Required
1	2	3	4	5	6
				CARS, DU	90 days from the date of issuance a purchase order.

Lot-1 : Chemicals

Sl. No.	Product Specification	Lab./Name	Pack size	Qty.
01	Methanol, HPLC Grade	EACRL	2.5 L	02
02	Acetonitrile, HPLC Grade	„	2.5 L	01
03	Standard vitamin D3 (25-Dihydroxy), 1 unit = 1 gm.	„	1 Unit	01
04	Hexane HPLC Grade	„	2.5 L	01
01	Acetone (Reagent Grade), accuracy of 98%	Basic Lab.	2.5L	01
02	Methanol (HPLC Grade)	„	2.5L	05
03	Acetonitrile (HPLC Grade)	„	2.5L	04
04	Dimethyl Sulfoxide (DMSO)	„	1 L	01
05	DI-Basic Potassium Phosphate, accuracy of 96%	„	500 g	01
06	Mono-Basic Potassium Phosphate, accuracy of 96%	„	500 g	01
07	DI-Basic Sodium Phosphate, accuracy of 97%	„	250 g	01
08	Mono-Basic Sodium Phosphate, accuracy of 97%	„	500 g	01
09	Sodium Hydroxide Pellet, accuracy of 98%	„	500 g	01
10	Enterobacter Sakazakii agar	„	500gm	01
01	Acetonitrile (HPLC grade)	FARL	2.5 L	20
02	Methanol (HPLC grade)	„	2.5 L	08
03	Isopropyl alcohol (IPA, 1-propanol) (HPLC grade)	„	2.5 L	04
04	Hexane (HPLC grade)	„	2.5 L	04
05	Sodium hydroxide(Crystal)	„	500 g	01
06	n-Hexane, reagent grade, accuracy of 94%	„	2.5 L	01
07	Ethanol, accuracy of 96%	„	2.5 L	04
08	Ferric chloride, accuracy of 97%	„	500 g	01
09	Sodium chloride, accuracy of 99%	„	1 kg	02
10	Glycerol, accuracy of 99%	„	500 gm	01
11	L-Sorbose, accuracy of 99%	„	100 gm	01
12	Triton-X-100	„	100	01

			gm	
13	Bromocresol Blue	„	500 g	01
14	Bromocresol purple	„	100g	01
15	Di-Methile Sulfoxide(DMSO), accuracy of 98%	„	500 ml	01
16	Ringer's Solution	„	100ml	01
17	Sodium Bio-sulphate, accuracy of 98%	„	100ml	01
18	Lead Nitrate, accuracy of 98%	„	500 g	01
19	Sodium Thio-sulphate, accuracy of 98%	„	500 g	01
20	Phenol red	„	100 ml	01
21	Hydrochloric Acid, accuracy of 37%	„	2.5 L	01
22	Potassium Chloride, accuracy of 98%	„	500 g	01
23	Phosphate Buffer solution	„	500 ml	01
24	Methanol, accuracy of 98%	„	2.5 L	01
25	PH 4.0 standard solution	„	500mL	01
26	PH 7.0 standard solution	„	500ml	01
27	Potassium permanganate, accuracy of 98%	„	500 g	01
28	Silver nitrate (Reagent Grade)	„	100gm	01
29	Ferric Pyrophosphate	„	100gm	01
30	Formalin	„	100ml	01
31	Tryptic Soy Agar (TSA)	„	500gm	02
32	Tryptic Soy Broth (TSB)	„	500gm	02
33	Cetrimide Agar	„	500 g	01
34	Buffered charcoal yeast extract agar(BCYE)	„	500 g	01
35	Difco Legionella Agar Base with Cysteine supplement	„	500g	01
36	Alpha-keto glutarate monopotassium sulphate	„	25g	01
37	MRS Broth	„	500 g	01
38	Sorbitol Mac conkey Agar(SMAC)	„	500 g	01
39	ACES reagents for legionella	„	1000 ml	01
40	Listeria Selective Agar	„	500 g	01
41	Mannital salt Agar	„	500g	01
42	Alkaline peptone Water	„	500 g	01
43	Xylose Lysine Deoxycholate Agar	„	500 g	01
44	Dichloran Rose Bengal chloramphenicol	„	500 g	01
45	Yeast Extract	„	500 g	01
46	Lab Lemco Powder	„	500 g	01
47	Tryptone Bile Glucuronic (TBX) Agar	„	500 g	01
48	EC Broth	„	500 g	01
49	Agar Powder	„	500 g	01
50	Muller Hinton Agar	„	500g	01
51	E.coli: 0157:H7 serology test kit, 1 box=25 test	„	Box	01
52	Nalidixic acid, 5 disc/pack.	„	Pack	01
53	Cefixime, 5 disc/pack.	„	Pack	01
54	Rifampicin, 5 disc/pack.	„	Pack	01
55	Ceftazidime, 5 disc/pack.	„	Pack	01
56	Bacitracin, 5 disc/pack.	„	Pack	01
57	Blank disc, 5 disc/pack.	„	Pack	01
58	Gentamycin, 5 disc/pack.	„	Pack	01
59	Oxacillin, 5 disc/pack.	„	Pack	01
60	Piperacillin, 5 disc/pack.	„	Pack	01
61	Polymyxin B, 5 disc/pack.	„	Pack	01
01	PCR Components(Taq polymerase, Buffer, Mgcl2,dNTPs)	GEBRL	No's	02
02	Exo-Sep-IT-II (100 REACTIONS)	„	No's	02
03	Mboll (300U)	„	No's	01
04	Hinf1(5000 U)	„	No's	01
05	Glacial Acetic Acid(500 ml)	„	Bottle	01
06	Absolute ethanol (1L)	„	Bottle	01
07	Saturate phenol (400ml)	„	Bottle	02
08	Eppendorf Tube (1.5ml) 500 pieces/ packet	„	Packet	03

09	Nano tips(0.5-10ul)1000 pcs /packet	„	Packet	05
10	Yellow tips 1000 pcs/ packet	„	Packet	05
11	Blue tips 500 pcs/ packet	„	Packet	05
12	Whatman Filter paper (110 mm), intake.	„	Packet	01
01	Ethanol, reagent grade, 99%	AQEPRL	2.5L	01
02	Acetone,reagent grade, 95%	„	2.5 L	01
03	Tryptone soya broth	„	500 gm	01
04	Gram staining solution	„	500 ml	01
05	SDA	„	500 gm	01
06	PDA	„	500 gm	01
07	Mcconkey agar	„	500 gm	01
08	BSA	„	500 gm	01
09	PCA	„	500 gm	01
01	30% Polyacrylamide, suitable for electrophoresis	PPRL	200 ml	01
02	Glycine, for Molecular Biology, 98%	„	500 g	01
03	Tricine, for Molecular Biology, 98%	„	500 g	01
04	Tris-Base, for Molecular Biology, 98%	„	500 g	01
05	EDTA, for Molecular Biology, 98%	„	100 g	01
06	TEMED, suitable for electrophoresis, 98%	„	100 ml	01
07	Ammonium persulfate, Electrophoresis, 98%	„	50 g	01
08	SDS, Electrophoresis, 98%	„	500 g	01
09	Protein marker, for electrophoresis, 1 kit = 250 µl	„	1 Kit	01
10	Peptide marker, for electrophoresis, 1 kit =240 µl, per vial for 100 test.	„	1 Kit	01
11	DTT, Molecular biology	„	1 g	01
12	Glycerol, Molecular biology,98%	„	500 ml	01
13	Bromophenol blue, Protein biology	„	25 g	01
14	Coomassie Brilliant Blue stain (G250), Protein biology	„	25 g	01
15	Phosphoric acid, Molecular biology	„	500 g	01
16	Ethanol, reagent grade, 99%-100%	„	2.5 L	01
17	Aluminum (III) sulfate, Molecular biology,98%	„	10 g	01
18	Ethidium Bromide, Molecular biology,98%	„	10 ml	01
01	Acetonitrile (HPLC Grade)	DARL	2.5	12
02	Methanol (HPLC Grade)	„	2.5 L	12
03	Ethanol (Reagent Grade)	„	2.5 L	20
04	Dichloromethane (Analytical Grade)	„	1 L	10
05	Ethyl Acetate (Reagent Grade)	„	1 L	25
06	n-Hexane (Reagent Grade)	„	1 L	25
01	Potassium Bromide (FTIR grade)	MSRL	100g	02
02	Methanol (HPLC grade)	„	2.5 L	01
03	Absolute Ethanol (HPLC grade)	„	2.5 L	01
04	Acetone (Reagent Grade)	„	5 L	01
01	DMEM with glutamine& sodium bicarbonate (1 year life time at least)	TCRL	500ml	08
02	Cell Counting kit -8 (CCK-8), 2 years life time at least.	„	1 ml	04
03	Electrophoresis Agarose	„	100g	01
04	FBS (Fetal Bovine Serum)	„	500 ml	01
05	Ethanol	„	2.5 L	06

Lot- 2 : Consumables & Glassware's

Sl. No.	Product Specification	Lab. Name	Pack size	Qty.
1	Beaker 50ml	EACRL	No's	12
2	Beaker 100ml	„	No's	12
3	Beaker 250ml	„	No's	12
4	Effendorf tube(1.5 mL) DNAse, RNase free (1Box = 500Pcs)	„	Box	01
1	Measuring cylinder (glass) 1000ml	BASIC	No's	03
2	Measuring cylinder (glass) 500ml	„	No's	03
3	Measuring cylinder (glass) 250ml	„	No's	03
4	Measuring cylinder (glass) 100ml	„	No's	03
5	Volumetric Flask 5ml	„	No's	10
6	Volumetric Flask 10ml	„	No's	10
7	Volumetric Flask 20ml	„	No's	10
8	Volumetric Flask 50ml	„	No's	10
9	Volumetric Flask 100ml	„	No's	10
10	Volumetric Flask 250ml	„	No's	10
11	Volumetric Flask 500ml	„	No's	10
12	Glass thermometer	„	No's	01
13	Test tube rack (SS)	„	No's	05
14	Parafilm	„	Roll	02
15	Glass test tube	„	No's	100
16	Magnifying glass	„	No's	01
17	Conical flask 500ml	„	No's	02
18	Conical flask 250 ml	„	No's	02
19	Anaerobic Gas Pack	„	Packet	02
20	Anaerobic indicator	„	Packet	02
21	Eppendorf	„	Packet	02
22	Glass vial 1.5 ml	„	No's	25
23	Glass vial 2 ml	„	No's	25
24	Measuring boat	„	No's	20
25	Autoclavable test tube rack	„	No's	05
26	Aluminium foil	„	No's	05
27	Glass pipette (10 ml)	„	No's	10
28	Biohazard Bag	„	No's	400
29	Syringe Filter paper (0.45Micrometer)	„	Packet	01
30	Syringe Filter paper (0.22 Micrometer)	„	Packet	01
31	Ziplock bag, size: 20X50 cm.	„	No's	100
32	Weighing paper	„	Roll	03
33	Beaker100 mL	„	No's	20
34	Beaker 50 mL	„	No's	20
35	Funnel (medium)	„	No's	02
36	Nylon-membrane filter paper 47 mm (0.22 µm)	„	Box	01
37	Whatman filter paper 125 mm, intake.	„	Box	01
38	Disposable syringe 5 mL	„	No's	100
39	Reagent bottle 500 mL	„	No's	01
40	Reagent bottle 250 mL	„	No's	01
01	Glass test tube, Size: 15 cm.	FARL	No's	100
02	Duran bottle 500 ml	„	No's	02
03	Duran bottle 1000 ml	„	No's	02
04	Conical flask, 500 ml	„	No's	03
05	Conical flask 250 ml	„	No's	03
06	Conical flask 100 ml	„	No's	03
07	Conical flask 50 ml	„	No's	03
08	Whatman filter paper, Size 1	„	Pcs	100

09	Tips 1 ml Packet :500pcs	„	Packet	04
10	Tips 100 µl Packet :500pcs	„	Packet	04
11	Falcon tube (50 ml)	„	No's	50
12	Falcon tube (15 ml)	„	No's	100
13	Stomacher bag, sterilized	„	No's	500
01	Dream Taq Green DNA Polymerase (5U/ µL)	GEBRL	Unit	01
02	10m MdNPs	„	1ml	01
03	PCR product purification kit (100 preps/ packet)	„	Packet	01
04	Primer (25nmol)127bp	„	Packet	01
01	Glass fiber filter paper, 22 cm/15 cm	AQEPRL	Box	01
02	Slide	„	Box	02
03	Cover slip	„	Box	02
04	PTFE filter paper 0.22 µm	„	Box	02
05	Whatman Filter paper 91	„	Box	02
01	Syringe Filter PTFE, 25 mm, 0.22 µm (100 Pcs/01Packet)	DARL	Packet	04
02	Membrane Filter Nylon, 47 mm, 0.22 µm (100 Pcs/01 Packet)	„	Packet	10
03	IC guard column cartridge (10 Pcs/01 Packet)	„	Packet	10
01	Column (Glass)	MSRL	No's	02
02	Crucible Tongs	„	No's	01
03	Glass rod	„	No's	12
04	Porcelain crucible (30 mL)	„	No's	12
05	Pipette tips (1 mL - 5 mL)	„	No's	100
01	Syringe Filter 0.45µm (Individually packed)	TCRL	No's	300
02	Syringe Filter 0.2 µm (Individually packed)	„	No's	100
03	10 ml serological pipette (Cell culture grade, individually packed)	„	No's	500
04	96 well plate (Flat bottom, sterilized, individually packed)	„	No's	200
05	48 well plate (Flat bottom, sterilized, individually packed)	„	No's	100
06	50ml Falcon tubes (Autoclaveable)	„	No's	250
07	Yellow tips	„	No's	5000
08	Blue 1000 µl tips	„	No's	3000
09	Biohazard bag	„	No's	200
10	Hand gloves (Medium) (Powder free)	„	Box	05
11	Hand gloves (Large) (Powder free)	„	Box	05
12	1.5 ml eppendorf tube	„	No's	3000
13	PCR tubes (0.2 ml)	„	No's	2000

Lot- 3 : Equipment.

Sl. No.	Product Specification	Lab. Name	Pack size	Qty .
01	Micro incinerator Temp ranges (c) 5 ⁰ to 40 ⁰ C Maximum Temp 815 ⁰ Chamber Height 39164''	Basic Lab.	No's	01

02	Desktop pH meter Rang : -2.00 to 16.00 p ^H Power Supply : 12 V DC Dimension : 230x160x95mm Weight : 0.9 kg Environment : 0 to 50 ⁰ C	„	No's	01		
01	Vacuum pump Specification : <ul style="list-style-type: none"> • Suction capacities between 62 m³/h and 144 m³/h • Ultimate vacuum at continuous operation 400mbar abs (62 and 122 Active) and 100 mbar abs (62 and 122 Passive) • Passive and Active Cooling options available • Heavy Duty options available with ProCoat™ finish • IE3 Motor • 50 Hz Motor options; 1.25kw, 1.5kW & 2.7kW • 60 Hz Motor options; 1.5Kw, 1.8Kw and 3Kw 	AQEPRL	No's	02		
02	O₃ Scrubber net Specification: Dimensions: (H x W x D) 22 x 5 x 5 inches (54 x 13 x 13 cm). Weight Net: 8 lbs (4 kg) Gross 15 lbs (7 kg), in shipping container. Power: 120V AC, 50/60 Hz, 40W 220V AC, 50/60 Hz, 40W Fuse: 1.5 amp Flow Rate: 25 to 30 cubic feet per minute.	„	No's	02		
03	O₃ light source , Range 400 to 700 nanometer (nm) Specification: Components: .185 nm UV lamp, Ballast or transformer to power lamp, Fan or air pump to move air through the generator Ozone Concentration: range of 240 – 280 nm VUV lamp: UV wavelengths in the band of 100-200 nm.	„	No's	01		
01	Electrophoresis package A) Power pack Features : <ul style="list-style-type: none"> » 10 electrophoresis methods can be stored. » Automatic memory function. » Buzzing alarm for misoperation & faults. » Unibody design, touch keys, dual core microprocessor control. » Display preset value and actual output value at the same time. » Automatic detection of no-load, over-load, short circuit, rapid resistance change, ground leak and system overheating Technical Parameters : Voltage Range 3~300V, Current Range 1~400mA, Power Range 1~120W 1~300W, Increment 1V, 1mA, 1W, Type of Output Constant-voltage, current or power, Display LCD, Output Port Four sets, Timing 1min~9h59min , Power recovery function; Non-proliferation field function, Power Supply AC220V+10%, 50/60Hz; 110V+10%, 60Hz, External Size(LWH) 280,237,118mm, Package Size(LWH) 380340230 mm Gross Weight 4kg.	PPRL	Set	01		
	B) Vertical gel electrophoresis unit (Protein) : <ol style="list-style-type: none"> 1. Easy installation 2. Auto-switch off when the lid is removed 3. Recommended common power supply. 4. Gel casting tray should be supplied. 					
	C) Horizontal gel electrophoresis unit (DNA/RNA) : Features : <ol style="list-style-type: none"> 1. Auto-switch-off when the lid is removed. 2. Recommended common power supply. 3. Gel casting tray should be supplied. 					
	D. Gel casting tray : Size : According to the bath. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Gel Tray</td> <td>100X100mm</td> </tr> </table>	Gel Tray	100X100mm			
Gel Tray	100X100mm					

	<table border="1"> <tr> <td>(W*L)</td> <td></td> </tr> <tr> <td>Gel Trays(W*L):</td> <td>82X88mm</td> </tr> <tr> <td>Comb Thickness</td> <td>0.75, 1.0 &1.5mm</td> </tr> <tr> <td>Comb Throughput</td> <td>11,15 samples</td> </tr> <tr> <td>Amount of gel:</td> <td>1~2 piece</td> </tr> <tr> <td>NO. of samples</td> <td>11~30</td> </tr> <tr> <td>Buffer Volume</td> <td>750ml</td> </tr> <tr> <td>Standard Accessories</td> <td>Body tank with electrode*1, Gel casting base*1, Notched glass plates*4, 0.75mm bonded glass spacer*2, 1.0mm bonded glass spacer*2, 1.5mm bonded glass spacer*2, 0.75 mm thickness 11 wells comb*2, 1.0mm thickness 11 wells comb*2, 1.5mm thickness 11 wells comb*2, 0.75mm thickness 15 wells comb*2, 1.0mm thickness 15wells comb*2, 1.5mm thickness 15wells comb*2, Gel shovel*1, Clamp version*2, Dummy plate*1</td> </tr> <tr> <td>External Size (L*W*H)</td> <td>150*120*115mm</td> </tr> <tr> <td>Package Size(L*W*H)</td> <td>370*300*220mm</td> </tr> <tr> <td>Gross weight</td> <td>~2 Kg</td> </tr> </table>	(W*L)		Gel Trays(W*L):	82X88mm	Comb Thickness	0.75, 1.0 &1.5mm	Comb Throughput	11,15 samples	Amount of gel:	1~2 piece	NO. of samples	11~30	Buffer Volume	750ml	Standard Accessories	Body tank with electrode*1, Gel casting base*1, Notched glass plates*4, 0.75mm bonded glass spacer*2, 1.0mm bonded glass spacer*2, 1.5mm bonded glass spacer*2, 0.75 mm thickness 11 wells comb*2, 1.0mm thickness 11 wells comb*2, 1.5mm thickness 11 wells comb*2, 0.75mm thickness 15 wells comb*2, 1.0mm thickness 15wells comb*2, 1.5mm thickness 15wells comb*2, Gel shovel*1, Clamp version*2, Dummy plate*1	External Size (L*W*H)	150*120*115mm	Package Size(L*W*H)	370*300*220mm	Gross weight	~2 Kg			
(W*L)																										
Gel Trays(W*L):	82X88mm																									
Comb Thickness	0.75, 1.0 &1.5mm																									
Comb Throughput	11,15 samples																									
Amount of gel:	1~2 piece																									
NO. of samples	11~30																									
Buffer Volume	750ml																									
Standard Accessories	Body tank with electrode*1, Gel casting base*1, Notched glass plates*4, 0.75mm bonded glass spacer*2, 1.0mm bonded glass spacer*2, 1.5mm bonded glass spacer*2, 0.75 mm thickness 11 wells comb*2, 1.0mm thickness 11 wells comb*2, 1.5mm thickness 11 wells comb*2, 0.75mm thickness 15 wells comb*2, 1.0mm thickness 15wells comb*2, 1.5mm thickness 15wells comb*2, Gel shovel*1, Clamp version*2, Dummy plate*1																									
External Size (L*W*H)	150*120*115mm																									
Package Size(L*W*H)	370*300*220mm																									
Gross weight	~2 Kg																									
02	Mini Run Gel Electrophoresis System : Integrated Power Supply, AC100V-110V, 50-60Hz DC50V/DC100V, 250ml (for each chamber), Comb Size(s)-6 wells (9mm spacing), 12 wells (9mm spacing), Gel Migration area-60 x 55 mm or 110 x 55 mm, 192x130x60mm (L x W x H)	„	No's	01																						
01	He-Ne Laser Operating Wavelength : 632.8 nm Polarization : 500:1 Output Power : 30mW Longitudinal Mode : 163MHz Beam Diameter (1/e2) : 1.22 mm Beam Profile : Gaussian/TEM ₀₀ @ 632.8 nm Beam Divergence Full Angle : 0.66 mrad Beam Drift, Long Term : <0.05 mrad Noise : ≤ 1.0% Power : 220VAC, 50Hz CDRH Class : IIIb	NLOL	No's	01																						
02	Optical Microscope with CMOS camera : Type : Biological Mobility : Desktop Magnification : ≥ 1000 Number of cylinders : Binoculars Resolution : ≥ 15Mega Pixel Interfacing : USB Mounting : With Binocular Microscope head Software : Compatible with Windows 7, 8 and 10, both 32 and 64bits configurations. Besides capturing of images and videos, this software allows measurements on still and live images and	„	No's	01																						

	performing annotations on captured images.			
03	Power/energy meter kit : Resolution (% of Full Scale) : 18 bits plus sign Accuracy(A) : $\pm 0.25\%$ Sampling Rate (Hz) : 15 Display Type : LCD/LED Detector : 818-UV/DB Wavelength Range (nm) : 200 to 1100 Power Density (W/cm^2) : 30 Calibration Uncertainty : $<5\%$ Calibration Uncertainty (without Attenuator) : $<10\%$ Measurable Power : $\geq 0.2W$ Measurable Power without Attenuator : 0.3 mW Minimum Detectable Power : $\leq 100\text{ pW}$ Maximum Pulse Energy : To be mention With/Without attenuator	''	No's	01
04	Quick press pellet kit for sample preparation : Hand Press : Hand Press for 7-mm, 3-mm, and 1-mm pellets Includes: 7-mm, 3-mm, and 1-mm die sets, anvils, die collars, anvil ejectors and Dual Pellet Holder	''	No's	01
01	De-ionized water system plant : deionized pure water conductivity: 0.055 micro-siemens/cm, resistivity: 18.2 megohm.cm TOC: 400 ppb Absorbance at 254nm/cm path length: N.S.	MSRL	No's	01
02	Dehumidifier (for SEM & XRD lab) Capacity: 20 L 220 V, 50 Hz	''	No's	02
03	Conductivity/resistivity meter (High sensitivity) Ranges:0 to 200 $\mu S/cm$, 0 to 2 mS/cm , 0 to 20 mS/cm , 0 to 200 mS/cm & 0 to 1000 mS/cm Resolution: 0.01 μS , 0.1 μS , 1 μS , 0.01mS, 0.1mS Accuracy: $\pm 0.5\%$ ± 2 digits Temperature compensation: 0 -50°C	''	No's	01
01	-20°C biomedical Freezer Type: -20°C Biomedical Freezer, Draw system, Vertical type Capacity: 262 L or more Cabinet Type: Upright Climate Class: N Cooling Type: Direct Cooling Defrost Mode: Manual Refrigerant: CFC-Free Noise Level (dB): 44 Performance : Cooling performance(°C): -25 Temperature Range(°C): -10~-25 Two types of alarm indications : audible buzzing and visible flashing light Two Alarm Functions High/low temperature, Sensor error Adjustable Temperature Lockable Design Door With Lock, Safety Control Door with lock , safeguard the storage	TCRL	No's	01

	Intelligent Alarm Human Technology, Safe Service High density foam insulation for rigidity and stable storage temperature LED digital display for clear observation Power input: 220V, 50Hz,			
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Lot- 4 : Computer & UPS.

Sl. No.	Product Specification	Lab. /Name	Pack size	Qty.
01	Computer for Workstation Processor: Core i7, up to 4.60/4.70 GHz Motherboard: Z390 aorus elite DDR4 9 th gen LGA1151 socket. RAM: 3200MHz 16GB DDR4 HDD: 1TB SSD MP510NVMe M2 240GB 24x DVD Writer Monitor: SE2219HX 22" Full HD LED. Graphics Card: MSI RX 570 armor 8GBGDDR5 Casing: Spec-05 Power Supply : VS550 550Watt 80Plus Bronze Non-Modular Keyboard: USB port, Reputed Brand Mouse: USB port, Optical, Reputed Brand.	SDRL	No's	03
02	Switch SG350-28, 28 port Managed Switch.	„	No's	01
03	UPS 1200 VA Brand : Reputed Model : Need Capacity : 1200VA Back Up : 15+ Minutes	„	No's	03
01	Desktop PC for microscope imaging system : Processor Type Intel Core i7 Processor (12MB Cache, 3.0 up to 4.80 GHz, 8 cores, 8 threads) Processor Speed 12MB Cache, 3.0 up to 4.80 GHz RAM 8GB DDR4 2666MHz SDRAM Hard Disk 1 TB 7200 rpm HDD Graphics Card Intel UHD Graphics 630 Audio 2 W internal speaker, universal audio jack, headset and headphone front ports (3.5 mm), multi-streaming capable Operating system Free DOS Interface SD 3.0 with 4-in-1 interface Supports SD, SDXC, SDHC, UHS-I Intel Ethernet I210-T1 PCIe x1 Gigabit Network Interface Card Realtek RTL8111HSH-CG Gigabit Network (GbE) connection (standard) Monitor: LED 22" 6 USB port in front and 6 USB port back, DVD rom for CD recording External Speaker for audio.	TCRL	No's	01
02	6 KVA Online Ups Brand : Mention Model : Mention Capacity : 6 KVA Back Up : 30 minimum	„	No's	01
01	Online Ups Battery Brand : Mention Capacity : 12 Ah 12 Volt	NLOL	No's	16

Warranty :

1. 24 Months from the date of installation for the all equipments, computer and UPS.
2. Consumables & Glassware's 12 Months from the date of delivery.
3. Expiry date is needed at least 12 months from the date of delivery for chemicals.

Country of Origin : USA/UK/EU/Japan/Australia/Canada/Singapore/Equivalent.

B. List of Related Services and Completion Schedule**Installation and Commissioning**

1. installation and operation of the instrument Must be ensured by the Bidder. Installation Must be free of charge. The Local Agent Must have a track record of handling and installing such high tech equipment and submit evidence thereof.
2. The Bidder Must ensure the installation environment quality, operational quality and system performance quality be qualified instrumentation and application personnel having proven record of experience in the instrument installation.

Training

3. After installation of the equipment, training must be provided by the Bidder free of charge to three persons nominated by the University of Dhaka within sixty days at site of installation. Subsequent follow up of the training Must also be performed by them to ensure the proper operation of the machine. If necessary, further training must be imparted by them. The training Must include theory, instrumentation, analysis, application and routine maintenance.

Section 7. Technical Specifications

The Goods and Related Services shall comply with following Technical Specifications :

Item No 1	Name of Item or Related Service 2	Technical Specification and Standards 3
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Lot-1 : Chemicals.

Sl. No.	Specification
01	Methanol, HPLC Grade
02	Acetonitrile, HPLC Grade
03	Standard vitamin D3 (25-Dihydroxy), 1 unit = 1 gm.
04	Hexane HPLC Grade
01	Acetone (Reagent Grade), accuracy of 98%
02	Methanol (HPLC Grade)
03	Acetonitrile (HPLC Grade)
04	Dimethyl Sulfoxide (DMSO)
05	DI-Basic Potassium Phosphate, accuracy of 96%
06	Mono-Basic Potassium Phosphate, accuracy of 96%
07	DI-Basic Sodium Phosphate, accuracy of 97%
08	Mono-Basic Sodium Phosphate, accuracy of 97%
09	Sodium Hydroxide Pellet, accuracy of 98%
10	Enterobacter Sakazakii agar
01	Acetonitrile (HPLC grade)
02	Methanol (HPLC grade)
03	Isopropyl alcohol (IPA, 1-propanol) (HPLC grade)
04	Hexane (HPLC grade)
05	Sodium hydroxide(Crystal)
06	n-Hexane, reagent grade, accuracy of 94%
07	Ethanol, accuracy of 96%
08	Ferric chloride, accuracy of 97%
09	Sodium chloride, accuracy of 99%
10	Glycerol, accuracy of 99%
11	L-Sorbose, accuracy of 99%
12	Triton-X-100
13	Bromocresol Blue
14	Bromocresol purple
15	Di-Methile Sulfoxide(DMSO), accuracy of 98%
16	Ringer's Solution
17	Sodium Bio-sulphate, accuracy of 98%
18	Lead Nitrate, accuracy of 98%
19	Sodium Thio-sulphate, accuracy of 98%
20	Phenol red
21	Hydrochloric Acid, accuracy of 37%
22	Potassium Chloride, accuracy of 98%
23	Phosphate Buffer solution
24	Methanol, accuracy of 98%
25	PH 4.0 standard solution
26	PH 7.0 standard solution
27	Potassium permanganate, accuracy of 98%
28	Silver nitrate (Reagent Grade)
29	Ferric Pyrophosphate
30	Formalin
31	Tryptic Soy Agar (TSA)
32	Tryptic Soy Broth (TSB)
33	Cetrimide Agar

34	Buffered charcoal yeast extract agar(BCYE)
35	Difco Legionella Agar Base with Cysteine supplement
36	Alpha-keto glutarate monopotassium shulphate
37	MRS Broth
38	Sorbitol Mac conkey Agar(SMAC)
39	ACES reagents for legionella
40	Listeria Selective Agar
41	Mannital salt Agar
42	Alkaline peptone Water
43	Xylose Lysine Deoxycholate Agar
44	Dichloran Rose Bengal chloramphenicol
45	Yeast Extract
46	Lab Lemco Powder
47	Tryptone Bile Glucuronic (TBX) Agar
48	EC Broth
49	Agar Powder
50	Muller Hinton Agar
51	E.coli: O157:H7 serology test kit, 1 box=25 test
52	Nalidixic acid, 5 disc/pack.
53	Cefixime, 5 disc/pack.
54	Rifampicin, 5 disc/pack.
55	Ceftazidime, 5 disc/pack.
56	Bacitracin, 5 disc/pack.
57	Blank disc, 5 disc/pack.
58	Gentamycin, 5 disc/pack.
59	Oxacillin, 5 disc/pack.
60	Piperacillin, 5 disc/pack.
61	Polymyxin B, 5 disc/pack.
01	PCR Components(Taq polymerase, Buffer, Mgcl2,dNTPs)
02	Exo-Sep-IT-II (100 REACTIONS)
03	Mboll (300U)
04	Hinf1(5000 U)
05	Glacial Acetic Acid(500 ml)
06	Absolute ethanol (1L)
07	Saturate phenol (400ml)
08	Eppendorf Tube (1.5ml) 500 pieces/ packet
09	Nano tips(0.5-10ul)1000 pcs /packet
10	Yellow tips 1000 pcs/ packet
11	Blue tips 500 pcs/ packet
12	Whatman Filter paper (110 mm), intake.
01	Ethanol, reagent grade, 99%
02	Acetone,reagent grade, 95%
03	Tryptone soya broth
04	Gram staining solution
05	SDA
06	PDA
07	Mcconkey agar
08	BSA
09	PCA
01	30% Polyacrylamide, suitable for electrophoresis
02	Glycine, for Molecular Biology, 98%
03	Tricine, for Molecular Biology, 98%
04	Tris-Base, for Molecular Biology, 98%
05	EDTA, for Molecular Biology, 98%
06	TEMED, suitable for electrophoresis, 98%
07	Ammonium persulfate, Electrophoresis, 98%
08	SDS, Electrophoresis, 98%
09	Protein marker, for electrophoresis, 1 kit = 250 µl

10	Peptide marker, for electrophoresis, 1 kit =240 µl, per vial for 100 test.
11	DTT, Molecular biology
12	Glycerol, Molecular biology,98%
13	Bromophenol blue, Protein biology
14	Coomassie Brilliant Blue stain (G250), Protein biology
15	Phosphoric acid, Molecular biology
16	Ethanol, reagent grade, 99%-100%
17	Aluminum (III) sulfate, Molecular biology,98%
18	Ethidium Bromide, Molecular biology,98%
01	Acetonitrile (HPLC Grade)
02	Methanol (HPLC Grade)
03	Ethanol (Reagent Grade)
04	Dichloromethane (Analytical Grade)
05	Ethyl Acetate (Reagent Grade)
06	n-Hexane (Reagent Grade)
01	Potassium Bromide (FTIR grade)
02	Methanol (HPLC grade)
03	Absolute Ethanol (HPLC grade)
04	Acetone (Reagent Grade)
01	DMEM with glutamine& sodium bicarbonate (1 year life time at least)
02	Cell Counting kit -8 (CCK-8), 2 years life time at least.
03	Electrophoresis Agarose
04	FBS (Fetal Bovine Serum)
05	Ethanol

Lot- 2 : Consumables & Glassware's.

Sl. No.	Specification
1	Beaker 50ml
2	Beaker 100ml
3	Beaker 250ml
4	Eppendorf tube(1.5 mL) DNase, RNase free (1Box = 500Pcs)
1	Measuring cylinder (glass) 1000ml
2	Measuring cylinder (glass) 500ml
3	Measuring cylinder (glass) 250ml
4	Measuring cylinder (glass) 100ml
5	Volumetric Flask 5ml
6	Volumetric Flask 10ml
7	Volumetric Flask 20ml
8	Volumetric Flask 50ml
9	Volumetric Flask 100ml
10	Volumetric Flask 250ml
11	Volumetric Flask 500ml
12	Glass thermometer
13	Test tube rack (SS)
14	Parafilm
15	Glass test tube
16	Magnifying glass
17	Conical flask 500ml
18	Conical flask 250 ml
19	Anaerobic Gas Pack
20	Anaerobic indicator
21	Eppendorf
22	Glass vial 1.5 ml
23	Glass vial 2 ml
24	Measuring boat

25	Autoclavable test tube rack
26	Aluminium foil
27	Glass pipette (10 ml)
28	Biohazard Bag
29	Syringe Filter paper (0.45Micrometer)
30	Syringe Filter paper (0.22 Micrometer)
31	Ziplock bag, size: 20X50 cm.
32	Weighing paper
33	Beaker100 mL
34	Beaker 50 mL
35	Funnel (medium)
36	Nylon-membrane filter paper 47 mm (0.22 µm)
37	Whatman filter paper 125 mm, intake.
38	Disposable syringe 5 mL
39	Reagent bottle 500 mL
40	Reagent bottle 250 mL
01	Glass test tube, Size: 15 cm.
02	Duran bottle 500 ml
03	Duran bottle 1000 ml
04	Conical flask, 500 ml
05	Conical flask 250 ml
06	Conical flask 100 ml
07	Conical flask 50 ml
08	Whatman filter paper, Size 1
09	Tips 1 ml Packet :500pcs
10	Tips 100 µl Packet :500pcs
11	Falcon tube (50 ml)
12	Falcon tube (15 ml)
13	Stomacher bag, sterilized
01	Dream Taq Green DNA Polymerase (5U/ uL)
02	10m MdNPs
03	PCR product purification kit (100 preps/ packet)
04	Primer (25nmol)127bp
01	Glass fiber filter paper, 22 cm/15 cm
02	Slide
03	Cover slip
04	PTFE filter paper 0.22 nm
05	Whatman Filter paper 91
01	Syringe Filter PTFE, 25 mm, 0.22 µm (100 Pcs/01Packet)
02	Membrane Filter Nylon, 47 mm, 0.22 µm (100 Pcs/01 Packet)
03	IC guard column cartridge (10 Pcs/01 Packet)
01	Column (Glass)
02	Crucible Tongs
03	Glass rod
04	Porcelain crucible (30 mL)
05	Pipette tips (1 mL - 5 mL)
01	Syringe Filter 0.45µm (Individually packed)
02	Syringe Filter 0.2 µm (Individually packed)
03	10 ml serological pipette (Cell culture grade, individually packed)
04	96 well plate (Flat bottom, sterilized, individually packed)
05	48 well plate (Flat bottom, sterilized, individually packed)
06	50ml Falcon tubes (Autoclaveable)

07	Yellow tips
08	Blue 1000 µl tips
09	Biohazard bag
10	Hand gloves (Medium) (Powder free)
11	Hand gloves (Large) (Powder free)
12	1.5 ml eppendorf tube
13	PCR tubes (0.2 ml)

Lot- 3 : Equipment.

Sl. No.	Specification
01	<p>Micro incinerator Temp ranges (c) 5⁰ to 40⁰ C Maximum Temp 815⁰ Chamber Height 39164''</p>
02	<p>Desktop pH meter Rang : -2.00 to 16.00 p^H Power Supply : 12 V DC Dimension : 230x160x95mm Weight : 0.9 kg Environment : 0 to 50⁰ C</p>
01	<p>Vacuum pump Specification :</p> <ul style="list-style-type: none"> • Suction capacities between 62 m³/h and 144 m³/h • Ultimate vacuum at continuous operation 400mbar abs (62 and 122 Active) and 100 mbar abs (62 and 122 Passive) • Passive and Active Cooling options available • Heavy Duty options available with ProCoat™ finish • IE3 Motor • 50 Hz Motor options; 1.25kw, 1.5kW & 2.7kW • 60 Hz Motor options; 1.5Kw, 1.8Kw and 3Kw
02	<p>O₃ Scrubber net Specification: Dimensions: (H x W x D) 22 x 5 x 5 inches (54 x 13 x 13 cm). Weight Net: 8 lbs (4 kg) Gross 15 lbs (7 kg), in shipping container. Power: 120V AC, 50/60 Hz, 40W 220V AC, 50/60 Hz, 40W Fuse: 1.5 amp Flow Rate: 25 to 30 cubic feet per minute.</p>
03	<p>O₃ light source, Range 400 to 700 nanometer (nm) Specification: Components: .185 nm UV lamp, Ballast or transformer to power lamp, Fan or air pump to move air through the generator Ozone Concentration: range of 240 – 280 nm VUV lamp: UV wavelengths in the band of 100-200 nm.</p>
01	<p>Electrophoresis package A) Power pack Features : » 10 electrophoresis methods can be stored. » Automatic memory function. » Buzzing alarm for misoperation & faults. » Unibody design, touch keys, dual core microprocessor control. » Display preset value and actual output value at the same time. » Automatic detection of no-load, over-load, short circuit, rapid resistance change, ground leak and system overheating Technical Parameters :</p>

Voltage Range 3~300V, Current Range 1~400mA, Power Range 1~120W 1~300W, Increment 1V, 1mA, 1W, Type of Output Constant-voltage, current or power, Display LCD, Output Port Four sets, Timing 1min~9h59min, Power recovery function; Non-proliferation field function, Power Supply AC220V+10%, 50/60Hz; 110V+10%, 60Hz, External Size(LWH) 280,237,118mm, Package Size(LWH) 380340230 mm Gross Weight 4kg.

B) Vertical gel electrophoresis unit (Protein) :
 1. Easy installation
 2. Auto-switch off when the lid is removed
 3. Recommended common power supply. 4. Gel casting tray should be supplied.

C) Horizontal gel electrophoresis unit (DNA/RNA) :
Features :
 1. Auto-switch-off when the lid is removed.
 2. Recommended common power supply.
 3. Gel casting tray should be supplied.

D. Gel casting tray :
 Size : According to the bath.

Gel Tray (W*L)	100X100mm
Gel Trays(W*L):	82X88mm
Comb Thickness	0.75, 1.0 &1.5mm
Comb Throughput	11,15 samples
Amount of gel:	1~2 piece
NO. of samples	11~30
Buffer Volume	750ml
Standard Accessories	Body tank with electrode*1, Gel casting base*1, Notched glass plates*4, 0.75mm bonded glass spacer*2, 1.0mm bonded glass spacer*2, 1.5mm bonded glass spacer*2, 0.75 mm thickness 11 wells comb*2, 1.0mm thickness 11 wells comb*2, 1.5mm thickness 11 wells comb*2, 0.75mm thickness 15 wells comb*2, 1.0mm thickness 15wells comb*2, 1.5mm thickness 15wells comb*2, Gel shovel*1, Clamp version*2, Dummy plate*1
External Size (L*W*H)	150*120*115mm
Package Size(L*W*H)	370*300*220mm
Gross weight	~2 Kg

02 **Mini Run Gel Electrophoresis System :**
 Integrated Power Supply, AC100V-110V, 50-60Hz
 DC50V/DC100V, 250ml (for each chamber), Comb Size(s)-6 wells (9mm spacing), 12 wells (9mm spacing), Gel Migration area-60 x 55 mm or 110 x 55 mm, 192x130x60mm (L x W x H)

01 **He-Ne Laser**

Operating Wavelength	:	632.8 nm
Polarization	:	500:1
Output Power	:	30mW
Longitudinal Mode	:	163MHz
Beam Diameter (1/e2)	:	1.22 mm

	<p>Beam Profile : Gaussian/TEM₀₀ @ 632.8 nm</p> <p>Beam Divergence Full Angle : 0.66 mrad</p> <p>Beam Drift, Long Term : <0.05 mrad</p> <p>Noise : ≤ 1.0%</p> <p>Power : 220VAC, 50Hz</p> <p>CDRH Class : IIIb</p>
02	<p>Optical Microscope with CMOS camera :</p> <p>Type : Biological</p> <p>Mobility : Desktop</p> <p>Magnification : ≥ 1000</p> <p>Number of cylinders : Binoculars</p> <p>Resolution : ≥ 15Mega Pixel</p> <p>Interfacing : USB</p> <p>Mounting : With Binocular Microscope head</p> <p>Software : Compatible with Windows 7, 8 and 10, both 32 and 64bits configurations. Besides capturing of images and videos, this software allows measurements on still and live images and performing annotations on captured images.</p>
03	<p>Power/energy meter kit :</p> <p>Resolution (% of Full Scale) : 18 bits plus sign</p> <p>Accuracy(A) : ±0.25 %</p> <p>Sampling Rate (Hz) : 15</p> <p>Display Type : LCD/LED</p> <p>Detector : 818-UV/DB</p> <p>Wavelength Range (nm) : 200 to 1100</p> <p>Power Density (W/cm²) : 30</p> <p>Calibration Uncertainty : <5%</p> <p>Calibration Uncertainty (without Attenuator) : <10%</p> <p>Measurable Power : ≥0.2W</p> <p>Measurable Power without Attenuator : 0.3 mW</p> <p>Minimum Detectable Power : ≤100 pW</p> <p>Maximum Pulse Energy : To be mention</p> <p>With/Without attenuator</p>
04	<p>Quick press pellet kit for sample preparation :</p> <p>Hand Press : Hand Press for 7-mm, 3-mm, and 1-mm pellets Includes:</p> <p>7-mm, 3-mm, and 1-mm die sets, anvils, die collars, anvil ejectors and Dual Pellet Holder</p>
01	<p>De-ionized water system plant :</p> <p>deionized pure water conductivity: 0.055 micro-siemens/cm, resistivity: 18.2 megohm.cm TOC: 400 ppb Absorbance at 254nm/cm path length: N.S.</p>
02	<p>Dehumidifier (for SEM & XRD lab)</p> <p>Capacity: 20 L</p> <p>220 V, 50 Hz</p>

03	<p>Conductivity/resistivity meter (High sensitivity) Ranges:0 to 200 uS/cm, 0 to 2 mS/cm, 0 to 20 mS/cm, 0 to 200 mS/cm & 0 to 1000 mS/cm Resolution: 0.01µS, 0.1µS, 1µS, 0.01mS, 0.1mS Accuracy: ±0.5% ±2 digits Temperature compensation: 0 -50°C</p>
01	<p>-20°C biomedical Freezer Type: -20°C Biomedical Freezer, Draw system, Vertical type Capacity: 262 L or more Cabinet Type: Upright Climate Class: N Cooling Type: Direct Cooling Defrost Mode: Manual Refrigerant: CFC-Free Noise Level (dB): 44 Performance : Cooling performance(°C): -25 Temperature Range(°C): -10~-25 Two types of alarm indications : audible buzzing and visible flashing light Two Alarm Functions High/low temperature, Sensor error Adjustable Temperature Lockable Design Door With Lock, Safety Control Door with lock , safeguard the storage Intelligent Alarm Human Technology, Safe Service High density foam insulation for rigidity and stable storage temperature LED digital display for clear observation Power input: 220V, 50Hz,</p>

Lot- 4 : Computer & UPS.

Sl. No.	Specification
01	<p>Computer for Workstation Processor: Core i7, up to 4.60/4.70 GHz Motherboard: Z390 aorus elite DDR4 9th gen LGA1151 socket. RAM: 3200MHz 16GB DDR4 HDD: 1TB SSD MP510NVMe M2 240GB 24x DVD Writer Monitor: SE2219HX 22" Full HD LED. Graphics Card: MSI RX 570 armor 8GBGDDR5 Casing: Spec-05 Power Supply : VS550 550Watt 80Plus Bronze Non-Modular Keyboard: USB port, Reputed Brand Mouse: USB port, Optical, Reputed Brand.</p>
02	<p>Switch SG350-28, 28 port Managed Switch.</p>
03	<p>UPS 1200 VA Brand : Reputed Model : Need Capacity : 1200VA Back Up : 15+ Minutes</p>
01	<p>Desktop PC for microscope imaging system : Processor Type Intel Core i7 Processor (12MB Cache, 3.0 up to 4.80 GHz, 8 cores, 8 threads) Processor Speed 12MB Cache, 3.0 up to 4.80 GHz RAM 8GB DDR4 2666MHz SDRAM Hard Disk 1 TB 7200 rpm HDD Graphics Card Intel UHD Graphics 630 Audio 2 W internal speaker, universal audio jack, headset and headphone front ports (3.5 mm), multi-streaming capable Operating system Free DOS Interface SD 3.0 with 4-in-1 interface Supports SD, SDXC, SDHC, UHS-I Intel Ethernet I210-T1 PCIe x1 Gigabit Network Interface Card</p>

	Realtek RTL8111HSH-CG Gigabit Network (GbE) connection (standard) Monitor: LED 22" 6 USB port infront and 6 USB port back, DVD rom for CD recording External Speaker for audio.
02	6 KVA Online Ups Brand : Mention Model : Mention Capacity : 6 KVA Back Up : 30 minimum
01	Online Ups Battery Brand : Mention Capacity : 12 Ah 12 Volt

Warranty :

1. 24 Months from the date of installation for the all equipments, computer and UPS.
2. Consumables & Glassware's 12 Months from the date of delivery.
3. Expiry date is needed at least 12 months from the date of delivery for chemicals.

Country of Origin : USA/UK/EU/Japan/Australia/Canada/Singapore/Equivalent.