

Tender Ref. No. CARS/ST/P-384/OTM/2024

Date: ২৭-০৮-১৪৩১ বঙ্গাব্দ
12-12-2024 খ্রিষ্টাব্দ**Invitation for Tender (National)**

Sealed tenders are hereby invited from reputed Suppliers for the Supply, Installation, Testing and Commissioning of Equipment for Genomics and Proteomics Core Facility 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	384		
5.	Procuring Entity District	Dhaka		
6.	Invitation for	Supply, Installation, Testing and Commissioning of Equipment for Genomics and Proteomics Core Facility at the CARS		
7.	Invitation Tender Ref No.	CARS/ST/P-384/OTM/2024		
8.	Date :	12-12-2024		
KEY INFORMATION				
9.	Procurement Method	Open Tendering Method		
FUNDING INFORMATION				
10.	Budget and Source of Funds	Revenue Budget (RB)		
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.	Single		
15.	Tender Package Name	Supply, Installation, Testing and Commissioning of Equipment for Genomics and Proteomics Core Facility at the CARS		
16.	Tender Publication Date	12-12-2024		
17.	Tender Schedule Last Selling Date	08-01-2025 Up to 5.00 PM		
18.	Tender Closing Date and Time	Date :	Time:	
		09-01-2025	10:30 am	
19.	Tender Opening Date and Time	09-01-2025	11:00 am	
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
		N/A	N/A	N/A
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) Bank Solvency Certificate (v) Manufacturer Authorization (vi) Applicant must be owner of the firm or Representative of the firm (authorized by the owner of the Firm, signature with name and seal of the owner) (vii) Country of origin and made in country will be same. If different then explain clearly in black and white		



		viii) Catalogue of the goods (ix) Warranty: As per TDS, Installation and training must be provided by the supplier (free of cost) (x) List of Technical experts with bio data (Service Support Team) (xi) List of applicant Support Team with bio data (xii) Training proposal		
23.	Brief Description of Goods	Supply, Installation, Testing and Commissioning of Equipment for Genomics and Proteomics Core Facility at the CARS		
24.	Brief Description of Related Services	Supply, Installation, Testing and Commissioning of Equipment for Genomics and Proteomics Core Facility at the CARS		
25.	Tender Document Price TK. 20,000.00	The Price of Tender Schedule as mentioned is to be deposited in University of Dhaka, 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 Goods	Location	Tender Security Amount in Taka	Completion Time
	Equipment	CARS, DU	Equipment TK. 20,00,000.00	120 days from the date of opening
PROCURING ENTITY DETAILS				
27.	Name of Official Inviting Tender	Professor Dr. Md. Abdur Rashid		
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 quantities of Equipment 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

Invitation for Tender No:

Date

Tender Package No:

A. List of Goods and Delivery Schedule

Item No.	Description of Item	Unit of Supply	Quantity of Units required	Point of Delivery	Date Required (in weeks)
1	2	3	4	5	6
01	Next Generation Sequencer	No's	01		
02	Next Generation Sequencer (Small)	No's	01		
03	20 T Server	No's	01		
04	NGS DNA Prep, (M) Tagmentation (96 Samples, IPB),	No's	01		
05	NGS DNA/RNA UD Indexes Set A, Tagmentation (96 Indexes, 96 Samples),	No's	02		
06	MiSeq i100 Series 5M Reagent Kit (300 cycles)	No's	10		
07	BRCA1/2 + CHEK2 HS and Thalassemia Sequencing Kit BRCA: 96 rxn, Sample: Qty: 01, Thalassemia: 24rxn:	No's	01		
08	2x Unique Dual Index Primer Plate 96 U01, Sample	No's	01		
09	P3 XLEAP-SBST™ Reagent Kit (300 Cycles)	No's	01		
10	P2 XLEAP-SBST™ Reagent Kit (300 Cycles)	No's	01		
11	Stranded Total RNA Prep, Ligation with Ribo-Zero Plus (16 Samples)	No's	01		
12	RNA UD Indexes Set A, Ligation (96 Indexes, 96 Samples)	No's	01		
13	Blood gDNA Miniprep System, Pack Size:250 Prep	No's	01		
14	Bacterial DNA Isolation Kit, Pack Size: 50 Prep	No's	02		
15	Soil DNA Isolation Kit, Pack Size: 50 Prep	No's	01		
16	QuantiFluor ONE dsDNA System, 500rxn	No's	01		
17	Magnetic Bead for Library Cleanup, 10ml	No's	01		
18	Filter Tips, 10 ul, Pack Size: 96 Tips Per box, 10 Box per Case	No's	01		
19	Filter Tips, 20 ul, Pack Size: 96 Tips Per box, 10 Box per Case	No's	01		
20	Filter Tips, 200 ul, Pack Size: 96 Tips Per box, 10 Box per Case,	No's	01		
21	Filter Tips, 1000 ul, Pack Size: 96 Tips Per box, 10 Box per Case	No's	01		
22	MCT 1.5 , 500 Tube/Pack	No's	01		
23	MCT .5 , 500 Tube/Pack,	No's	01		
24	96 Well PCR Palate, 50Plate/Pack	No's	01		
25	Plate Sealer, 10/Pack	No's	01		
26	Name: Droplet Digital PCR System	No's	01		
27	Bio-Fragment analyzer for NGS QC	No's	01		
28	Single Channel Micropipette	No's	08		



29	Multichannel Micropipette	No's	03		
30	Desktop High-speed Refrigerated Micro centrifuge	No's	01		
31	Spin Centrifuge	No's	01		
32	Biomedical Refrigerator	No's	01		
33	Biomedical Freezer	No's	01		
34	Thermo Shaker	No's	01		
35	Flurometer	No's	01		
36	96-well Magnetic Stand	No's	01		
37	12 well 1.5ml Magnetic Stand	No's	01		
38	Vortex Mixer	No's	02		
39	Compact Horizontal Gel Electrophoresis System Electrophoresis Cell:	No's	01		
40	PCR, 96 well	No's	01		

B. List of Related Services and Completion Schedule

Origin	:	USA/UK/EU/Japan/Equivalent.
Training	:	Training, Installation, & Commissioning will be provided by Supplier certified Engineers at CARS premises free of charge.
Warranty	:	12-month standard warranty, including service, will be provided from the installation date.
Follow Up Supports	:	The backup support will be provided as follows: a) Two years of free servicing by certified Engineer/Technical Expert from the installation date. b) Further, ten (10) years of backup service, including spares, electrical goods, and accessories, at a nominal cost. The cost for spare parts is exclusive to service support.
Availability of Spares	:	Ensure the availability of spare parts and support for ten years from installation.
Annual maintenance contact (AMC)	:	To extend the Instrument's life, our trained engineer should place it under AMC for regular follow-up. The applicable charges will be nominal.



Section 7. Technical Specifications

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

Item No	Name of Item or Related Service	Technical Specification and Standards
1	2	3
01.	<p>Next Generation Sequencer: Model: To be mentioned by the bidder Origin: To be mentioned by the bidder</p> <p>The instrument should have the following features and technical specifications:</p> <ul style="list-style-type: none"> - Streamlined workflows, automated onboard cluster generation, including automated exclusion amplification (ExAmp) chemistry ensure consistent, reproducible run performance - RFID-encoded consumables and load-and-go reagent cartridges for user-friendly experience; reliability of matching run configurations with the proper flow cell and consumable kit minimizes potential incompatibilities - Intuitive software and instrument operation for streamlined run setup and data analysis on premise or in the cloud - First instance of on-board software platform integrated into the sequencer enabling user access to hardware accelerated pipelines via FPGA <p>The instrument must have following technical specification:</p> <ul style="list-style-type: none"> - Instrument Output: Up to 1.8 billion clusters and up to 540 Gb of output per 2 × 150 bp run or better - Instrument Throughput :Generate 540 Gb in ~48 hours using a 2 × 150 bp run & Tunable output using multiple flow cell configurations - Output Range:Up to 540 Gb per run - Read length kit configurations: Must have 1X50, 2X50, 2X75, 2X100, 2X150 and 2X300 cycle run configuration - Sequencing chemistry: Must be SBS or XLAP SBS - Paired-end sequencing: Must have automated paired end run function. - Cluster Generation: Must be Onboard (on-instrument) - Optical System: Two lasers for excitation of fluorophores with wavelengths at 449 nm (2.0 Watt maximum power) and 523 nm (1.2 Watt maximum power), and a third laser at 820 nm for focus tracking, Dual, high-throughput CMOS cameras, dual surface imaging - Instrument Control Computer: Two integrated computers, a Linux based single board computer (SBC) that runs the 	

control software, and a Linux-based compute engine (CE) that runs Real-Time Analysis (RTA) and processes the data

Common Application:

- Whole-genome resequencing
- Targeted resequencing, including, but not limited to, exome panels and custom enrichment panels
- Whole-genome de novo sequencing
- Sequencing of bisulfite-treated DNA (Methyl-Seq)
- RNA sequencing (RNA-Seq), including, but not limited to, mRNA sequencing and total RNA sequencing (coding and noncoding)
- Genotyping by sequencing (GBS)
- Nucleosome positioning and chromatin structure studies
- ChIP-Seq: studying sequence-specific protein-RNA interactions
- Sequencing of ancient DNA samples
- Single-cell applications
- Linked long-read applications
- Additional applications as developed

Software

Instrument Control Software

- Control Software should be an intuitive, easy-to-use interface that requires little to no training to configure, launch, and monitor runs
- Control Software includes RTA software that automatically calls bases and generates quality scores in real time, directly on the instrument computer
- RTA performs base calling and calculates quality scores; data are compressed by more than 55%
- Quality statistics from one or multiple runs can be monitored in real time from any location using BSSH, allowing users to monitor runs through a web browser

Data Analysis Software

- RTA provides real-time, on-instrument image processing with BSSH base calling apps for analysis, including alignment and variant calling
- Multiple standardized data formats (e.g., FASTQ, BAM, VCF, and *.txt) ensure compatibility with third-party downstream analysis and visualization tools
- Fully optimized analysis solutions within BSSH provide easy-to-interpret reports for applications such as whole-genome, exome, and transcriptome

sequencing

- No bioinformatics skills needed to generate SNP and indel lists

Informatics

- First instance of hardware accelerated pipelines should available as integrated solution on a sequencer
- provides rapid, accurate and cost efficient secondary analysis accessible both on instrument and in through BSSH
- Variety of analysis pipelines, including FastQ generation, available for on-instrument for secondary analysis
- hardware accelerated pipelines provide real-time de-multiplexing and alignment metrics

Third-Party Analysis Software

- Data files compatible with third-party applications and pipelines
- Multiple standardized data formats (i.e., FASTQ, BAM, VCF, and *.txt) ensure compatibility with third-party downstream analysis and visualization tools

Laboratory Information Management System (LIMS)

Compatibility

- Seamless integration with BSSH Clarity LIMS (Laboratory Information Management System)
- Automatic generation of a run recipe (*.json file)
- Automatic generation of compatible sample sheet (bc12fastq2)
- Automated tracking of a sequencing run in variety of LIMS systems, including reporting

Direct Integration with BSSH

- Upon selection, automatic upload of data to BSSH is completed at end of run, eliminating time-consuming manual data transfers
- Secured AES-256 encrypted data streaming and storage
- 200 Mps of bandwidth required for streaming individual runs to BSSH
- Dehumidifier, Capacity: 30 L / Day
- UPS : 6 KVA, True Online, 2 Hours Backup, UPS should be of at least European Origin
- Vibration Less Table for the Sequencing instrument, Size: HXD_XW (in)=36X36X48

	<p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Training: For 15 days, training for at least five persons on instrument troubleshooting, operation, application and library preparation should be provided locally at the time of installation by technical experts. A certificate of Technical expert should be provided. - Installation & Training: The system should be installed and commissioned by a certified trained engineer, and engineer certificate should be submitted along with the offer - Warranty: At least a 2-years warranty should be provided; the warranty should cover spare parts, reagent and labour. 	
02.	<p>Next Generation Sequencer (Small) Model: To be mentioned by the bidder Origin: To be mentioned by the bidder The instrument must have the following special features:</p> <ul style="list-style-type: none"> - Fast, flexible sequencing delivers same-day results and helps to scale your studies - World-class technology and support from a proven genomics leader accelerate your subsequent discovery - Simplify data analysis with access to preconfigured DRAGEN pipelines either onboard or in the cloud, minimising the need for bioinformatics expertise - Room temperature storage of consumables with no need to wait for reagents to thaw - Lightweight reagents, buffer cartridges, and waste containers that are easy to handle - Automated onboard flow cell denaturation, onboard cluster generation, and no post-run washing streamline the sequencing workflow - Formamide-free reagents that simplify disposal - Compatible library prep kits from Illumina and third-party vendors that require no additional conversion steps and streamline operations <p>The instrument must have following technical specifications</p> <ul style="list-style-type: none"> - Speed and Performance: Cluster Generation and Sequencing - Up to 30 Gb and 2 × 300 bp runs—with the highest data quality - Read Length: Paired-End (2 × 300 bp) - Approximate Duration: Less than 2 hours for all supported analysis workflows - Reads Passing Filter: Run Type: Single Reads, Reads Passing Filter: 5 M, 100 M, Run Type: Paired-End Reads, Reads Passing Filter: 10 M, 200 M 	



	<ul style="list-style-type: none"> - Radio Frequency Identifier (RFID): Frequency: 13.56 MHz, Power: 200 mW - Sequencing Chemistry: Must be XLEAP-SBS chemistry <p>Analysis software:</p> <ul style="list-style-type: none"> - Onboard DRAGEN secondary analysis features pipeline algorithms with award-winning accuracy to help users overcome bottlenecks in data analysis and reduce reliance on informatics experts. <p>Accessories Include:</p> <ol style="list-style-type: none"> 4. 1 pcs Table 5. 1 pcs Dehumidifier 6. 1 3KVA UPS with standard backup <p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Training: For 15 days, training for at least five persons on instrument troubleshooting, operation, application and library preparation should be provided locally at the time of installation by technical experts. A certificate of Technical expert should be provided. - Installation & Training: The system should be installed and commissioned by a certified trained engineer, and engineer certificate should submitted along with the offer - Warranty: At least a 2-years warrantee should be provided; the warrantee should cover spear, parts, reagent and labour. 	
03	<p>20 T Server with following specification Model: To be mentioned by the bidder Origin: To be mentioned by the bidder</p> <p>Technical Specification:</p> <ul style="list-style-type: none"> - HPE ProLiant DL380 Gen10, - 2 x Intel Xeon-Silver 4208 (2.1GHz/8-core/85W) Processor - 2 x 32GB HPE RDIMM 2R 2933 MT/s - 10 x 2.4TB HPE 12G SAS 10K SFF DS hard drive - NO DVD-RW - HPE Ethernet 1Gb 4-port 366FLR FlexibleLOM Adapter - HPE Smart Array P408i-a SR Gen10 Controller System - SFF Easy install rail kit with Cable Management Arm 	



	<ul style="list-style-type: none"> - HPE iLO Standard with Intelligent Provisioning (embedded), - 8 SFF NC Chassis, 2U Rack - 2 x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit - 3-year parts, 3-year labor, 3-year onsite support with next business day response 	
04	NGS DNA Prep, (M) Tagmentation (96 Samples, IPB), Qty: 01 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
05	NGS DNA/RNA UD Indexes Set A, Tagmentation (96 Indexes, 96 Samples), Qty: 02 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
06	5M Reagent Kit for MiSeq i100 Series (300 cycles): Qty: 10 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
07	BRCA1/2 + CHEK2 HS and Thalassemia Sequencing Kit, BRCA: 96 rxn, Sample: Qty: 01, Thalassemia: 24rxn: Qty: 2 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
08	2x Unique Dual Index Primer Plate 96 U01, Sample: Qty: 01 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
09	P3 XLEAP-SBS Reagent Kit (300 Cycles): Qty: 01 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
10	P2 XLEAP-SBS Reagent Kit (300 Cycles) : Qty: 01 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
11	Stranded Total RNA Prep, Ligation with Ribo-Zero Plus (16 Samples) : Qty: 01 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
12	RNA UD Indexes Set A Ligation (96 Indexes, 96 Samples) : Qty: 01 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
13	Blood gDNA Miniprep System: Pack Size: 250 Prep: Qty: 01 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
14	Bacterial DNA Isolation Kit: Pack Size: 50 Prep: Qty: 02 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
15	Soil DNA Isolation Kit: Pack Size: 50 Prep, Qty: 01 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
16	QuantiFluor ONE dsDNA System: 500rxn, Qty: 01 Model: To be mentioned by the bidder	



	Origin: To be mentioned by the bidder	
17	Magnetic Bead for Library Cleanup: 10ml : Qty: 01 Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
18	Filter Tips: 10 ul, Pack Size: 96 Tips Per box, 10 Box per Case, Required Qty: 1 Case Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
19	Filter Tips: 20 ul, Pack Size: 96 Tips Per box, 10 Box per Case, Required Qty: 1 Case Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
20	Filter Tips: 200 ul, Pack Size: 96 Tips Per box, 10 Box per Case, Required Qty: 1 Case Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
21	Filter Tips: 1000 ul, Pack Size: 96 Tips Per box, 10 Box per Case, Required Qty: 1 Case Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
22	MCT 1.5: 500 Tube/Pack, Required Qty: 1 Pack Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
23	MCT .5 : 500 Tube/Pack, Required Qty: 1 Pack Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
24	96 Well PCR Palate: 50Plate/Pack, Required Qty: 1 Pack Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
25	Plate Sealer: 10/Pack, Required Qty: 1 Pack Model: To be mentioned by the bidder Origin: To be mentioned by the bidder	
26	Droplet Digital PCR System: Model: To be mentioned by the bidder Origin: To be mentioned by the bidder Droplet Digital PCR System, complete as per below mentioned configuration and specifications: Table top model with latest state of the art technology. Complete, ready to use, setup should be quoted and supplied, which should include Droplet generator, droplet reader, necessary start-up kit and consumables, Gradient enabled Thermal Cycler, PC System, Software, all essential accessories, consumables	



attachments etc.

System should be able to :

- Detect rare DNA target copies with high sensitivity,
- Determine SNP mutation with high sensitivity
- Perform absolute quantification of nucleic acids with high precision and sensitivity without the use of reference genes as well as standard curves.
- Determine copy number variation with high accuracy
- Measure gene expression level with high precision.
- Perform NGS Validation and library quantification

Droplet Generator:

- System should be based on water-oil emulsion droplet technology with microfluidics.
- System should be able to generate around 20000 uniform nanoliter droplets of each sample.
- Sample size needed: 20 microliter
- Sample capacity: Flexible ,a min of 8 samples per cartridge to 96 samples per run. The sample capacity should be easily scalable from 1 sample to 96 sample in a single run.
- Droplet generator should be ready to use system, supplied with all standard and essential accessories, attachments, etc.
- Droplet generation should not take more than 3 minutes for 5-10 samples.

Droplet Reader:

- Suitable for counting PCR positive and PCR negative droplets
- Reading capacity: System should be capable of analyzing 1 to 96 samples in one go.
- Compatible for 96- deep well plate.
- Sample illumination/Detection method: System should use two light emitting diodes for illumination and differentially detect emission using two filtered multipixel photon counter.
- Dynamic range: 4 orders or more
- Two channel detection for FAM (Evagreen) and HEX (Vic) dyes.
- The equipment must be able to read multiplexing assays run with probe base as well as dye base chemistry
- The reader must be able to read fluorescence data from each single droplet individually.

Plate Sealer

- Plate Sealer suitable for 96 well plate, with support block, sealing frame and power chord.
- One pack of 100 nos. of compatible seals should be supplied.

Thermal Cycler:

- Gradient 96 well PCR which can be used as a standalone PCR machine and having gradient range of 30-100°C with temperature differential range of 1-24°C
- Model with graphical touch screen cum display should be provided

Software:

Software packages for droplet Digital PCR applications which may include features that provide fraction of negative droplets for each sample to fit to a Poisson algorithm; display of fluorescence amplitude value per droplet for both channels (FAM and Hex(VIC)), show multiplex data per droplet for two channels, Computes Absolute quantitation (copies/ μ l) for each sample; performs copy number variation analysis, Calculates fractional abundance of mutant target in wild-type background for mutation detection; setting automatic/manual threshold values for entire sample plate or for individual samples, merging results from replicate wells, graphical and tabular representation of data, Data acquisition and analysis, report generation, export results, etc.

Latest available, Licensed version of the software should be supplied

The software should not require manual setting of exposure & camera gain for the optics bench during run set up to avoid run to run variation.

The Software should not use any reference dye to detect and count positive and negative droplets to avoid bias

Computer

Latest available and factory recommended computer workstations should be provided for control, acquisition+analysis, etc. Computer system should be inclusive of all required hardware, drivers, adequate storage and RAM modules, etc.

Computer system should have sufficient memory to store at least 1000 previous runs data

Consumables:

Consumables Sufficient to run atleast 200 samples should be provided.

Preferred parameters

Flexibility to take Time-breaks during workflow; droplet generation-PCR-Readout

	<p>No Special temperature window for instrument operation.</p> <p>Flexibility to use small or high number of samples throughput without wasting consumables All Workflow components manufactured by same vendor for consistent performance delivery More than 6000 Publications in reputed international journal as proof of technology More than 50 installations in India of the Product quoted with more than 15 in clinical setup</p> <p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Training: For 5 days, training for at least five persons on instrument troubleshooting, operation, application and library preparation should be provided locally at the time of installation by technical experts. - Installation & Training: The system should be installed and commissioned by a certified trained engineer - Warranty: At least a 2-years warranty should be provided; the warranty should cover spare, parts, and labour. 	
27	<p>Bio-Fragment analyzer for NGS QC: Model: To be mentioned by the bidder Origin: To be mentioned by the bidder Bio-Fragment analyzer for NGS QC</p> <p>Features and technical Specification:</p> <ul style="list-style-type: none"> - The system occupy a minimal lab footprint and should be offered as a complete instrument system with automated sample intake, and separation, and should provide a standard format report. - The one channel portable system offer robust capillary electrophoresis or equivalent with flexibility for supporting diverse applications such as PCR product screening, Genomic DNA analysis, & NGS sample QC. - It provide high resolution – 1 to 4 bp resolution. - The DNA analysis workflow allow automated operation, without user intervention, for sample injection & separation on analyzer, and support unattended operation for 1 to 15 samples. - The operation is simple, user- friendly without any manual gel preparation step. - The analyzer should be able to analyze large-size DNA ranging up to 50 kb, with a separation voltage range from 1-8kV. - System offer a user-friendly sequencing experience, such as 	



	<p>RFID tracking and pre-mixed/pre-filled ready-to-use cartridge for minimal user intervention.</p> <ul style="list-style-type: none"> - The system have high sensitivity with LOD down to picogram level - The System have a range of sample volume of 2 -20ul for detection, with 3-7 min run time per sample. - The complete system will be installed, tested for its performance as per the manufacturer's SOP/guidelines and demonstrated to the Institute's Users. In-depth training on maintenance, usage, and applications should be provided to the Institute's users. <p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Installation: The system should be installed and commissioned by a certified trained engineer - Training: For 5 days, training for at least five persons on instrument troubleshooting, operation, and application - Warranty: At least a 1-year warranty should be provided; the warranty should cover spare parts and labour. 	
28	<p>Single Channel Micropipette: Model: Pipetteman L/ Resurch Plus Origin: Gilson-France, Eppendorf-Germany</p>	
29	<p>Multichannel Micropipette: Model: Pipetteman L Multi / Resurch Plus Multi Origin: Gilson-France, Eppendorf-Germany</p>	
30	<p>Desktop High-speed Refrigerated Micro centrifuge: Model: To be mentioned by the bidder Origin: To be mentioned by the bidder</p> <p>Technical Specification:</p> <ul style="list-style-type: none"> - Max speed (r/min): 18,500 ±10 - Max RCF (xg): 30130 - Sound level (dB): ≤ 52 - Temperature Setting Range(°C): -20~40 - Speed Accuracy (rpm) - Timer: 1s~99 hours 59 mins 59s <p>Rotor: 1: Fixed-angle rotor</p> <ul style="list-style-type: none"> - Capacity: 24X1.5/2.0ml - RPM: 17500 <p>Rotor: 2: Plate Rotor (Swing-out Rotor)</p> <ul style="list-style-type: none"> - Capacity: 2X96 Well Plate - RPM: 4500 <p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Installation: The system should be installed and 	



	<p>commissioned by a certified trained engineer</p> <ul style="list-style-type: none"> - Training: For 3 days, training for at least five persons on instrument troubleshooting, operation, and application - Warranty: At least a 1-year warranty should be provided; the warranty should cover spare parts and labor. 																					
31	<p>Spin Centrifuge: Model: To be mentioned by the bidder Origin: To be mentioned by the bidder Technical Specification :</p> <ul style="list-style-type: none"> - Speed: 5500 rpm / 2000 xg - Capacity: 12 x 1.5/2.0 ml, 32 x 0.2 ml, 4 x PCR Strips - Deceleration: 4 seconds - Dimensions: 5.75 x 8 x 4.25 in., (14.6 x 20.3 x 10.8 cm) - Weight: 1 kg - Electrical: 230V 50-60 Hz 250W - Warranty 2 Years <p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Installation: The system should be installed and commissioned by a certified trained engineer - Training: For 3 days, training for at least five persons on instrument troubleshooting, operation, and application - Warranty: At least a 1-year warranty should be provided; the warranty should cover spare parts and labour. 																					
32	<p>Biomedical Refrigerator: Model: To be mentioned by the bidder Origin: To be mentioned by the bidder Technical Data</p> <table border="0"> <tr> <td>- Type:</td> <td>Pharmacy Refrigerator</td> </tr> <tr> <td>- Capacity(L/Cu.Ft):</td> <td>410 L or more</td> </tr> <tr> <td>- Cabinet Type:</td> <td>Upright</td> </tr> <tr> <td>- Climate Class:</td> <td>Must be N</td> </tr> <tr> <td>- Cooling Type:</td> <td>Forced air cooling</td> </tr> <tr> <td>- Defrost Mode:</td> <td>Auto</td> </tr> <tr> <td>- Refrigerant:</td> <td>CFC-Free</td> </tr> <tr> <td>- Noise Lever (dB):</td> <td>43 or less</td> </tr> <tr> <td>- Performance</td> <td></td> </tr> <tr> <td>- Temperature Range(°C):</td> <td>2~8</td> </tr> </table>	- Type:	Pharmacy Refrigerator	- Capacity(L/Cu.Ft):	410 L or more	- Cabinet Type:	Upright	- Climate Class:	Must be N	- Cooling Type:	Forced air cooling	- Defrost Mode:	Auto	- Refrigerant:	CFC-Free	- Noise Lever (dB):	43 or less	- Performance		- Temperature Range(°C):	2~8	
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	<ul style="list-style-type: none"> - Control - Controller: Microprocessor - Display: LED <p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Installation: The system should be installed and commissioned by a certified trained engineer - Training: For 3 days, training for at least five persons on instrument troubleshooting, operation, and application - Warranty: At least a 1-year warranty should be provided; the warranty should cover spare parts and labour. 	
33	<p>Biomedical Freezer: Model: To be mentioned by the bidder Origin: To be mentioned by the bidder</p> <p>Technical Specification:</p> <ul style="list-style-type: none"> - Type: -25°C Biomedical Freezer - Capacity: 300 L or more - Cabinet Type: Upright - Climate Class: Must be N class - Cooling Type: Direct Cooling - Defrost Mode: Manual - Refrigerant: CFC-Free - Noise Level (dB): 44 or less - Performance - Cooling performance(°C): -25 - Temperature Range(°C): -10~-25 - Control - Controller: Microprocessor - Display: LED <p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Installation: The system should be installed and commissioned by a certified trained engineer - Training: For 3 days, training for at least five persons on instrument troubleshooting, operation, and application - Warranty: At least a 1-year warranty should be provided; the warranty should cover spare parts and labour. 	
34	<p>Thermo Shaker: Model: To be mentioned by the bidder Origin: To be mentioned by the bidder</p> <p>Technical Data</p>	

	<p>Temperature control</p> <ul style="list-style-type: none"> - Temperature range: Ambient + 5 °C up to 100 °C or better - Temperature settings: + 25 °C to 100 °C - Temperature control accuracy: ± 0,1 °C - Uniformity within the block: - (temperature range + 25 °C to + 40 °C): ± 0.1 °C - (temperature range + 40 °C to + 80 °C): ± 1.0 °C - (temperature range + 80 °C to + 100 °C): ± 2.0 °C - Heating rate: Approx. 4 °C / min (7 min from ambient to 37 °C) - Temperature calibration: ± 6 % of the selected temperature <p>Mixing function</p> <ul style="list-style-type: none"> - Mixing frequency: 1 400 rpm/min or better - Mixing orbit: 2 mm - Adjustment of mixing frequency: 10 rpm steps <p>Display</p> <ul style="list-style-type: none"> - Display: LCD, double spaced - Display set/actual values: Temperature, mixing frequency, time - Display resolution: 0,1 °C <p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Installation: The system should be installed and commissioned by a certified trained engineer - Training: For 3 days, training for at least five persons on instrument troubleshooting, operation, and application - Warranty: At least a 1-year warranty should be provided; the warranty should cover spare parts and labour. 	
35	<p>Fluorometer: Model: To be mentioned by the bidder Origin: To be mentioned by the bidder</p> <p>Technical Specifications :</p> <ul style="list-style-type: none"> - Detectors: Must Solid state silicon sensor - Display: Large 3-inch liquid crystal display screen - Sample Type: Double Stand DNA, Single Stand DNA, RNA & Protein. - Measurement Time: Less than 5 sec - Linear Dynamic Range : Five (5) orders of magnitude, 	



	<p>assay-dependent</p> <ul style="list-style-type: none"> - Limit of Detection : 1pg/ml double-stranded DNA with dsDNA Dye (50pg/ml using standard protocol), 3.9pg/ml RNA using QuantiFluor® RNA Dye - Wavelengths : <ul style="list-style-type: none"> o Excitation Filters: Red, 640nm short pass; Blue, 495nm short pass, o Emission Filters: Red, 660–720nm; Blue, 510–580nm - Calibration Type: Single-point (blank and standard) - Warm-up Time: No warm-up time. - - Sample Tube: 0.5ml PCR tubes (We recommend Axygen (Cat.# PCR-05-P) - Automatic Sleep Mode: After 1 hour of inactivity <p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Installation: The system should be installed and commissioned by a certified trained engineer - Training: For 3 days, training for at least five persons on instrument troubleshooting, operation, and application - Warranty: At least a 1-year warranty should be provided; the warranty should cover spare parts and labour. 	
36	<p>96-well Magnetic Stand Origin: Thermo or better</p>	
37	<p>12 well 1.5ml Magnetic Stand Origin: Promega or better</p>	
38	<p>Vortex Mixer: Model: To be mentioned by the bidder Origin: To be mentioned by the bidder</p> <p>Technical Specification :</p> <p>Speed Range : 200 to 3200 rpm or better Operating Modes : Touch or continuous Operating Temp. Range : +4 to +65°C Electrical: 230V, 50-60Hz 500W</p> <p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Installation: The system should be installed and commissioned by a certified trained engineer - Training: For 3 days, training for at least five persons on instrument troubleshooting, operation, and application - Warranty: At least a 1-year warranty should be provided; the warranty should cover spare parts and labour. 	



<p>39</p>	<p>Compact Horizontal Gel Electrophoresis System: Model: To be mentioned by the bidder Origin: To be mentioned by the bidder</p> <p>Electrophoresis Cell:</p> <ul style="list-style-type: none"> - Overall dimensions: 183mm(W)×56mm(H)×164mm(L) or bigger - Material: UV transparent plastic - Solution volume: Approx. 270-320 ml - Multi-sample: Multichannel-pipette compatible - Multi gel option: Yes <p>Power Supply:</p> <ul style="list-style-type: none"> - Weight : 410 g - Input voltage : AC100~240V, AC50/60Hz - Output voltage: Constant peak voltage of 140V and duty control - Timer : Timer operation 0 - 99 min. and continuous mode Pause function supported - Safety switch: Micro-switches in the power supply without safety lid, no output of Power - Memory function: Automatic memory (the last used V & T) <p>Comb:</p> <ul style="list-style-type: none"> - Multiple number of wells: 13 or 26 wells (13wells: 9mm spacing 26wells: 4.5mm spacing) <p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Installation: The system should be installed and commissioned by a certified trained engineer - Training: For 3 days, training for at least five persons on instrument troubleshooting, operation, and application - Warranty: At least a 1-year warranty should be provided; the warranty should cover spare parts and labour. 	
<p>40</p>	<p>PCR, 96 well: Model: To be mentioned by the bidder Origin: To be mentioned by the bidder</p> <p><u>Technical Specification:</u></p> <ul style="list-style-type: none"> - Capacity: 96 x 0.2 ml tubes, 96 Well Plate, 12X8 well Strip - Block material: Aluminium or better 	



<ul style="list-style-type: none"> - Block surface coating: Special alloy - Maximum heating rate: 4 °C/sec or better - Maximum cooling rate: 3.7 °C/sec or better - Gradient Span: 0.1 to 20.0 °C or better - Temperature uniformity: 95 °C ± 0.60 °C after 15 s, 70 °C ± 0.30 °C after 15 s, 55 °C ± 0.20 °C after 15 s or better - Gradient Temperature range: 4 °C to 99 °C - Temperature range: 3 °C to 99 °C - Control accuracy: ± 0.1 °C <p>Warranty and Training clauses :</p> <ul style="list-style-type: none"> - Installation: The system should be installed and commissioned by a certified trained engineer - Training: For 3 days, training for at least five persons on instrument troubleshooting, operation, and application - Warranty: At least a 1-year warranty should be provided; the warranty should cover spare parts and labour. 	
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