Sasya Shyamala Krishi Vigyan Kendra

Ramakrishna Mission Vivekananda Educational and Research Institute

(Deemed-to-be University as declared by Government of India under Section 3 of UGC Act, 1956)

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Ref no. : RKMVU/ SSKVK / RKVY/ Lab Est- 217 /2017-'18 **Date: 27 November, 2017**

Subject: Seeking Quotations for supplying / installation of Instruments for Fish Disease Diagnostic Laboratory.

Interested firms are requested to submit sealed quotations for supplying of the **Instruments**.

Details of the **Instruments** are given below -

Sl. No.	Particular	Specification
1.	Micro-pipettes	10µl brand specific 4 digit with warranty
2.	Micro-pipettes	20µl brand specific 4 digit with warranty
3.	Micro-pipettes	100µl brand specific 4 digit with warranty
4.	Micro-pipettes	200µl brand specific 4 digit with warranty
5.	Micro-pipettes	1000µl brand specific 4 digit with warranty
6.	pH meter	pH 700 brand specific 4 digit with warranty
7.	Weighing balance	brand specific 4 digit with warranty
8.	Magnetic strrier	Glass ceramic heating plate
9.	Autoclave	Automatic type, with safety lock, auto purging, digital temperature and pressure indicator
10.	Microcentrifuge	- Maximum RCF 21,000xg - Maximum Speed above 14,600 RPM - Supplied with Rotor 24x1.5ml/2ml with click seal lid. The rotor should be tested and approved by HPA, Porton Down, UK for Biocontainment. - Large LED display for Time, Speed and Temperature - Max Noise Level: 50 dBA - Temperature set range from minus 9 °C to plus 40°C - Accelaration/Deccelaration time 12Sec/13 Sec - Time set range 1 to 99 min, 1 min increments - Toggle between RPM and RCF. - Induction maintenance free rotor - Wide selection of following rotors for future upgrade - Dual Row rotor 18x2 plus 18x0.5ml for simultaneous run of two different volumes without using adapters: - 36x0.5ml rotor, PCR4x8 (32x0.2ml) rotor with Click seal Biocontainment lid,& PCR 8x8(64x0.2ml) rotor - Warranty : Minimum 02 Year Must Have Kolkata Based Service Centre
11.	Mini-centrifuge	Temp range: -5^{O}C - ambient, volume 2ml, 14000 rpm, digital display
12.	Freezer	Eco-friendly refrigerant, Digital temperature controller-cum-indicator, Temperature range: -16°C ~ -24°C, Defrost: Manual (Static cooling) Capacity: 350 Litres, drawers/compartments
13.	Refrigerator	Fridge RT 26- 253ltr, double door type, refrigeration and cooling technology- R-600A
14.	UV chamber	Direction of Flow: Vertical Flow, Model No: BCAD-V-322, Inner Working Size W 915 x D 600 x H 600 mm, Overall Size: W 1000 x D 650 x H 2050 mm, Particle Retention: 0.3 Micron & Above, Front Door by 5 mm Clear Acrylic Sheets – Vertical Sliding Type, U V lamp 15W, 1.5 Feet, Ultra Violet Lamp, Illumination 18W, 2 Feet, Fluorescent tubes – 2 Nos, 0 – 25 mm range to monitoring HEPA condition
15.	Vortex mixer	Vortex Shaker
16.	Water bath	10 ltr

Sl. No.	Particular	Specification
17.	Bio-photometer	230 V/50 – 60 Hz
18.	Micro-oven	Stainless steel cavity and LED display, Clock with timer, 10 power levels, Cooling feature and keep warm, Operating Voltage: 230 volts, Combi-Tec: 2 - (Grill + Microwave) and 4 - (Convection + Microwave), 1 year warranty on product and 3 years on magnetron and cavity
19.	Electrophoresis unit with power pack	E-Gel Power Snap Firmware Upgrade E-Gel High Throughput DNA Electrophoresis E-Gel Imager E-Gel Precast Agarose Gels E-Gel DNA Ladders & Sample Loading Buffer E-Editor 2.0 Software Labware Definitions Firmware Upgrade Instrument Registration
20.	Gel doc system	• The system should have Small footprint to conserve benchtop space. • It should allow the use of safe blue-light transillumination without the risks of UV light transillumination. • The Camera Hood should have 1.3Mp, 16-bit, CMOS, sensor chip coupled to a specially designed lens and mounted above an interchangeable filter tray. • Provision for Sensors to permit illumination only when the Imager Camera Hood is properly positioned over the Light Base unit. • It should be Compatible with a wide range of fluorescent and visible dyes (e.g. Qdot®, SYBR Safe®, ethidium bromide). • Compatible with different gel formats including precastgels and pour-it-yourself gels (agarose, or polyacrylamide). • It should perform Real-time sample imaging allowing detailed sample viewing. • It should come with white light screen for protein analysis. • It should eliminate the need for film or processing chemicals. • Electrical Requirements: 100–240 V, 50/60Hz, 0.6A • Temperature: Ambient ± 5oC to 40˚ C • Viewing surface dimensions should be : 42 mm × 83 mm • It should do direct camera to PC image transfer. • Gel capture and data analysis software should be provided. • Warranty : Minimum 03 Year • Minimum 30 Installation in Eastern India • Must Have Kolkata Based Service Centre (Engineer email Id & contact no should be provided)
21.	Computer	I5 processor ,8 GB ram, Graphics card, 1 TB hard Disk 19 inch monitor, UPS, keyboard mouse and others
22.	plankton net	Collection of plankton for live feed culture
23.	ASTM Water Purification System	**Pre filter:** Suitable pre filter must be quoted. The Complete Ultrapure Water system must produce ASTM Type I

Sl. No.	Particular	Specification
		ultrapure water from a single system. Water purification methods: Adsorption by means of spherical activated carbon, catalyst, reverse osmosis, ion exchange, optional UV irradiation, and end-position particle | sterile filtration. • The system should handle Conductivity < 1500 µS/cm, TOC < 2000 ppb, Free chlorine < 4 ppm, Fouling Index (SDI) < 10. • The unit should be ideal for a daily consumption of up to 10 liters of ultrapure water with 8l/hr. pure water production rate. • Pretreatment Cartridge should be a combination of spherical, catalytic-effective, activated carbon, a catalyst and a downstream reverse osmosis membrane. • The system should come with closed bag system (replaceable) of 5 liter inbuilt to store consistently high quality pure water for prolonged period and prevent Contamination by ambient air. Should have technology to avoid time consuming cleaning process as well as use of chemicals. • System should have a horizontally mounted integrated UV lamp with dual wavelength 185 and 254nm for optimized temperature gradient and reliable results. • Deionization cartridge should consist of spherical, catalytic activated carbon with ultrapure mixed bed ion exchange resin in semiconductor quality to deliver long lasting performance and low-maintenance operation. The flow inside the cartridge should be top-down to produces ideal purification kinetics and prevents any mixing of cleaning media. • Final Filter should be 0.45+ 0.2µm pleated double layered sterile grade PESU membrane and should be validated according to HIMA & ASTM F-838-83 guidelines. • System should have touch screen display with intuitive menu navigation facility for easy operation. It should have demo mode which is essential for easy opertion. • Re-circulation feature in standby mode to maintain the purity of the water. • The system should have the volume-controlled dispensing function from 50 ml to 5 l (in 50-ml-increments) to obtain accurate results. • System should be Designed, Developed and Produced under DIN/ISO 9001 certificate Quality Management system. Also ISO-9001 company. **Product Water Quality-Type-III** Production output: Up to 8 l/h, Typical Conductivity: < 20 µS/cm, Typical ion retention: Up to 98%, Retention of dissolved organic substances: > 99 %, (MW > 300 Dalton), Particle and microorganism retention: > 99 % **Product Water Quality-Type-I** Water dispensing flow rate: Up to 1.0 l/min, Conductivity: 0.055 µS/cm compensated to 25°C, Resistivity: 18.2 MΩxcm compensated to 25°C, TOC content (system with UV lamp) < 5 ppb, Microorganism content5 < 1 CFU/1,000 ml, Particle content (> 0.2 µm) < 1/ml, DNAse/RNAse free.
24.	Fluorescence Microscope	• Single compact integrated unit including: cell imaging system, digital camera, computer, high power fluorescence lighting system and LCD display

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		• Should have 3 independent high output LED illuminators with integrated hard coated fluorescence bandpass excitation and emission filters • Fluorescence LED illuminators must have a lifetime of 50,000 hours at 100% power • Fixed objective with Overall Magnification should be 460X (optical)–1840X (with digital zoom) • Focus assist software to easily focus your sample • LED illuminators must have independent intensity control • System must be able to accommodate 3 fluorescent LED light source • Must provide a 1-click RGB channel overlay • System must be able to sequentially acquire a phase contrast image and a fluorescence image with a single mouse click, then overlay them automatically for Transfection analysis • System must include free software with different protocols of 20 different applications for fluorescence experiments • System must provide the following output file formats: jpg, bmp, tif, and png Objective:Fixed 20X plan fluorite; = 0.45;working distance (WD) = 5.9 mm. • Color Channels: 4 channels (relief phase, blue, green, and red fluorescence) • Illumination: LED (50,000 hour life), adjustable intensity • Excitation: Blue channel: 390/40 nm; Green channel: 482/18 nm; Red channel: 586/15 nm • Emission: Blue channel: 446/33 nm; Green channel: 532/59 nm; Red channel: 646/68 nm • Captured Images: 16-bit monochrome, TIFF, PNG, JPG, or BMP (1296 × 964 pixels) • LCD display: 15-inch color; display resolution 1366 x 768 pixels; image resolution 1296 x 964 pixels; adjustable tilt System should easily access detailed information on over 160 reagents in 20 application areas directly from the user interface. Each reagent has a quick reference protocol with icons and concise text for ease of use. These reagents have been validated for spectral compatibility with the instrument, so you can obtain optimal images.
25.	Incubator	Gravity and mechanical convection models in 11.2 cu. ft. capacities with 6 shelves, a double-door design, internal glass window, silicone gasket and 3" fiberglass insulation
26.	Hot Air Oven	• Size -3ft x 3ft x 3ft; • Double walled construction • Outer Body - MS duly powder coated • Inner Body- SS • Temp range : ambient to 250^{O}C; digital display, • Forced air circulation by means of a motorized blower • Digital temperature controller/indicator with Pt100 sensor with resolution:10C & Accuracy ±0.5 ^{0}C • Electrically operated on 230 V AC • rack in internal chamber
27.	BOD Shaker Incubator	• Temp. range 5°C to 60°C

Sl. No.	Particular	Specification
		• Shaking speed range 20-250 RPM • Clamps for holding conical flask Capacity 250 ml. /100ml • Brushless Induction Motor with variable frequency drive suitable for continuous operation • Step less variable frequency drive ensures gentle shaking start and maintains set speed • Maximum shaking capacity –up to 35 nos (250 ml) • Powerful fan motor for forced air circulation to maintain uniform conditions inside chamber • Heating by long life SS tubular heaters • Microprocessor controller with 4" LCD display for display of shaking speed & temperature • High temperature safety cut off & alarms for high/low set temperature • Electrical circuit breaker • Set Temperature ± 2°C, Audio Visual Alarm • Internal Body Material : Stainless Steel – 304 grade (Standard Models), • External Body Material : Powder Coated CRCA Steel (Standard Models), Electrical : 220-240 volts, 50Hz, Single Phase
28.	Laminar flow (horizontal)	Internal chamber (3ftX2ftX2.0ft) with Hepa Filter, working steel top, gas burner point, two plug point within internal chamber
29.	Inverted microscope:	• Completely integrated "all-in-one" inverted cell imaging system • Single compact unit including: inverted microscope, digital color camera and LCD display • Long life LED illumination (up to 50,000 hours) • Color camera built-in to the microscope base • 4-position objective turret • Fluorite LWD objectives (10x, 20x 40x and 100xoptional) • Rack and pinion focus mechanism • Optional mechanical stage for microplates or other vessels • Compact footprint; the entire system can be easily moved into a cell culture hood or • glove box • Low power consumption (less than 20 Watts/hr) • Two USB output ports • Direct output to USB storage device • Supported output file formats: .jpg, .bmp and .tif
30.	Balances	50 Kg Capacity Digital
31.	PCR	• PCR System must have a triple Block Format of 0.2ml independent control • PCR System must be used by 3 different users at 3 different / same time to perform 3 different experiments. • System should have an interchangeable & flexible block configuration which accepts four types of thermal blocks for optimization and throughput – 1x96 / 2x96 / 2x384 for future updates of the machine

Sl. No.	Particular	Specification
		• PCR Instrument should be Wi-Fi enabled and remote connected. • Blocks needed to provide a gradient / better than gradient approach for PCR optimization. With six separate Peltier Blocks, one can precisely set and control the temperature in each block. • Run up to 6 separate temperatures in the same plate with user defined time to determine the • optimal annealing temperature • Minimum Block ramp rate is 6 degree C/sec • Minimum Sample Rate is 4.50 degree C/sec. • Temperature Accuracy is +-0.25 degreeC(35-99C) • Temperature Range is 0C to 100C. • Temperature Uniformity is <0.5C(20sec after reaching 95C) • PCR Volume Range is 10-80ul. • Instrument Memory-USB on Board. • Display Interface is 8.4" color TFT LCD • Warranty : Minimum 02 Year • Minimum 50 Installation in Eastern India • Must Have Kolkata Based Service Centre (Engineer email Id & contact no should be provided)
32.	Hot Plate/Stirrer	Stir and heat volume: 5000ml Top material: superfine ceramics Stir speed: 0~ 2000rpm Top: ceramic plate Top Ceramic Dimension: 180 x 180 • Temperature range: ambient to 400 degree • Stir display: digital display +/- 1 rpm • product function: magnetic stirrer with hot plate • Temp Display: digital display ,+/- 1 degree
33.	Thermometer	Digital
34.	Spirit Lamp	Medium
35.	Sensor Auto Filtration System	Iron filter and accessories with water purification by sensor
36.	Tissue Processor	Processes up to 300 cassettes ¸ Enclosed system ¸ Reagent management system
37.	Tissue Tek Embedding Center	Embedding console and cryoconsole ¸ Temperature control from 50 – 70 °C ¸ Large refrigerated surface
38.	Microtome	Rm2125 Rts High quality manual sectioning ¸ Fast specimen trimming ¸ Section thickness settings from 1- 60 µm
39.	Paraffin Sections	HI1210 Water Bath Surface with high thermal conductivity¸ Scratch resistant¸ Protection from overheating
40.	Cryostat1	Two separate cooling systems ¸ Cryo-chamber down to -35 °C ¸ Section thickness settings from 1- 60 µm
41.	Dual Head Microscope	Dual Head Leica DMLB Microscope
42.	Trinocular Research Microscope	With SLR Digital Camera With Grabber Card Attachment For Storage Transfer And Simultaneous Imaging
43.	Air condition	1.5 lt cap
44.	Aerator	Paddle wheel aerator – 4 wheel
45.	p^H Meter	
46.	Do Meter	

Sl. No.	Particular	Specification
47.	p^H Pen	
48.	TDS Meter	
49.	Ammonia Analyser	
50.	Sacchi Disc	
51.	Refractometer	
52.	Digital Camera with water case	Sensor Ultra-Compact Camera with Waterproof and Shockproof Design (DSCRX0)
53.	Blood Cell Counter	9 Units (Clay -Adams Type Yorco
54.	Feed Machines Mini	Mixer grinder, pelletizer, excruder
55.	GPS System	
56.	Fire Extinguisher	
57.	Bar Code Scanner & Printer	
58.	Travelling small laptop, Travelling projector, Travelling Colour Printer and Travelling Microscope	
59.	Inverter	
60.	Auto Titration Solutions	

They are requested to submit quotations mentioning make and specifications. They must quote the price of all the items with GST, inclusive of it, wherever applicable (should be clearly mentioned). The authority will have the right to reject any quotation without showing any reason. For further details please contact with the office of the under signed during office hours (9.30 am to 5.30 pm). Last date of submission is within 15 days of issue of this notification.

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(N.C. SAHU)