



GC WOMEN UNIVERSITY SIALKOT

Office of the Purchase Officer

Tel# 052-9250649

TENDER FORM FOR LABORATORY EQUIPMENT

TENDER OPEN DATE 05-04-2018 TIME 12:00 PM

NOTE:

- Vendors must quote their rates on the company letter pad / tender form according to the specifications. Hand written quoted rates will not be accepted.
- The Procurement will be in accordance with the rules 38A (Single stage – two envelope procedure) of Punjab Procurement rules 2014.

SR .#	NAME OF ITEM	QTY .	PRICE WITH GST
1.	<u>ATR-FTIR</u> FR-IR spectrometer with built-in Zinc Selenide optics and diamond ATR window Spectral range: 500-6,000 cm ⁻¹ Available measurement techniques: transmission, ATR, reflection Spectrometer power: 100-240VAC, 50-60Hz Software package with Library, Computer, Laser Printer & UPS	01- Nos	
2.	<u>COD Apparatus</u> Power Requirements: Suitable to operate on 220 V, single phase, 50 Hz, AC supply Technical Specification: Temperature Range: 5°C above ambient to 150°C Temperature Sensitivity: ± 1°C Temperature Sensor: Platinum 100 (RTD Probe) Temperature Controller: Micro-processor based PID Digital Temperature Controller Cum Indicator – Feather Touch Controls LED Dual Display Both for Process Value (PV) and SET Value(SV) Rating (kw): 1.0 kw Heating Block: Thick Polished Aluminum Block Sample Capacity: 15 Holes for accommodating 15 Glass Tubes of 38 mm Diameter Sample Size: 20 ml Glass Air Condenser: 15 Holes for 15 Air Condensers Optional: Spare Digestion tubes with condenser (Advanced Accessories): Microprocessor based PID Controller with Built in Timer. Temperature is controlled by Dual Display PID Controller exhibiting PV (Process Value) and SV(Set Value). Once the Set Value is achieved the In Built Auto Digital Timer Mode starts functioning & the equipment now operates for the process/time Set by the user or as required by the user & on completion of the process switches 'off' the heaters automatically & gives a Buzzer sound indicating that the process is complete.	01- Nos	



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3.	<p><u>Digital Autoclave Vertical</u> PARAMETERS: Specifications: Inner Dimensions: (Dia x Height) 550x750mm Inches Conversion: 22 x 30 Capacity: 152 ltrs Working Load: 6.0 KW Gasket: Made of Neoprene Rubber: Sterilizing pressure: 1.2 kgf / cm (15psi)at 121°C Pressure Gauge: 0-2.1 kgf / cm² (30 psi) Operating pressure: From 15 to 20psi (Adjustable) Inner Pressure Tank: Stainless Steel (SS-304) Top Lid: Mild Steel Plate lined with Stainless Steel from inside Basket: Made of Stainless Steel Lid Tightening: Radial Locking system worked by handle Lid Opening: Paddle lifting device Water Level Indicator: Fitted on the outer chamber Boiler – Hydraulically Tested: Upto 40 psi Accuracy: 3 psi Controller (PLC Based): µProcessor Based Fully Automatic Fuzzy Logic Control System. Display: 16x4 line Alphanumeric Digital LCD with backlet display with Set value (SV) and Process Value (PV)</p>	01-Nos	
4.	<p><u>Energy Saver</u> Specification: 1.5 Ton Room Size: 140sqft to 225 sqft</p>	01-Nos	
5.	<p><u>Water distillation Unit with Glass Container</u> Type:Pressure Steam Sterilization Equipments POWER:4.5KW Output:1500ml/h Power:220V, 50Hz Dimension:78*45*90cm(L*W*H) Weight:15.8KG (May vary)</p>	01-Nos	
6.	<p><u>Freezer (-20 to -80 Celsius)</u> Temperature up to -20°C to -80°C Power: 220V AC Supply with 110V</p>	01-Nos	
7.	<p><u>Glass Soxhelt Extractor Body; condenser and 250 ml Round bottom Flasks</u> 1, Volume: 250ml 2, Material: borosilicate glass 3.3 3, Joints size: 24/29,40/38</p>	01-Nos	
8.	<p><u>Hot Air Oven</u> Up to 250°C temperature: Temperature safety as per DIN 12880 Class 3.1 Precise and even heat distribution: Noise-less fan Safe for operator and samples: Double walled construction</p>	01-Nos	



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	Removable stainless steel shelves: Digital temperature controller Over heat and over current protection: Forced air circulation Ventilation of gases: Imported heating element		
9.	<u>Ionolab Level 3</u> (Complete with all accessories)	01- Nos	
10.	<u>Lovibond Comparator</u> More than 400 different test discs Compensation for colored and turbid samples Constancy of the colored glass standards Integrated prism	01- Nos	
11.	<u>Micropipettes single channels</u> Variable Volume Single Channel (0.2µl-10ml) Fixed Volume Single Channel (1µl-10ml) Good Laboratory Pipetting (GLP) Kits	02- Nos	
12.	<u>Orbital Shaker</u> Speed control range 20-250* RPM (increment 5 rpm) * max. speed depends on the load and vessels' shape Digital speed control + Maximum continuous operation time 168 hrs Orbit 20 mm Digital time setting 1 min–96 hrs / non–stop (increment 1 min) Maximum load 8 kg Overall dimensions (W×D×H) 410x410x130 mm Weight 11.7 kg Input current/power consumption 12 V, 3.2 A / 40 W External power supply Input AC 100–240 V; 50/60 Hz; Output DC 12 V Top of Form Cat. Nr. Bottom of Form	01- Nos	
13.	<u>Quartz Cuvetts</u> material Suprasil® quartz parameter 200-2500 nm spectral range H × W × D 35 mm × 12.5 mm × 12.5 mm aperture center H 8.5 mm chamber volume 140 µL pathlength 2.5x5 mm	01- Nos	
14.	<u>Water Deionization Plant 200</u> Water yield: 0.25 m ³ -100m ³ RO membrane pore size: 0.00001-0.0001µm Ion removal rate: ≥99% Endotoxin, bacterial removal rate:	01- Nos	



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	<p>>= 99%</p> <p>Recovery:</p> <p>> = 75%</p> <p>Desalination rate:</p> <p>>= 99%</p> <p>Working pressure:</p> <p>0.2-0.4 Mpa</p> <p>Application:</p> <p>Produce ro pure water</p> <p>Technology:</p> <p>Reverse osmosis system</p>		
15.	<p><u>Shaking water bath</u></p> <p>Adjustable stroke length (0.5", 1" or 1.5"), giving the user the ability to affect the degree of agitation. With a RPM range of 20-200</p>	01-Nos	
16.	<p><u>Sound Level meter</u></p> <p>Specifications</p> <p>Sound Level Meter Standards</p> <p>ANSI S1.4 Type 2</p> <p>IEC 60651 Type 2</p> <p>IEC 61672 Class 2</p> <p>Technical Specification</p> <p>Measurement ranges 30 to 100 and 60 to 130 dB</p> <p>Noise floor < 33dB(A)</p> <p>Time weightings Fast, Slow, Impulse</p> <p>Freq. weightings A and C</p> <p>Battery power 3 x AA Alkaline for >35 hours operation</p> <p>External power 5V via USB Mini B socket</p> <p>Dimensions 72 x 212 x 31mm, 245g</p> <p>Tripod mount 1/4" socket</p> <p>AC output 0.85V RMS @ FSD "A" weighted</p> <p>DC output 0 to 3.3V DC for FSD on selected range (FOC option)</p> <p>Operating conditions RH: 5 to 90% (non condensing)</p> <p>Temperature: 0 to 40°C</p> <p>Atmos. pressure 65 to 108kPa</p>	01-Nos	
17.	<p><u>UV Spectrophotometer UV Scanning</u></p> <p>Wavelength range 190 to 1100 nm</p> <p>Spectral bandwidth 1nm (190 to 1100 nm)</p> <p>Wavelength display 0.1-nm increments</p> <p>Wavelength setting 0.1-nm increments (1-nm increments when setting scanning range)</p> <p>Wavelength accuracy ±0.1 nm at 656.1nm D2</p>	01-Nos	



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	<p>±0.3 nm (190 to 1100 nm) Wavelength repeatability ±0.1 nm Stray light less than 0.02% NaI at 220 nm, NaNO₂ at 340 nm less than 1.0% KC l at 198 nm Photometric system Double Beam Photometric range Absorbance: -4 to 4 Abs Transmittance: 0% to 400% Photometric accuracy ±0.002 Abs (0.5 Abs) ±0.004 Abs (1.0 Abs) ±0.006 Abs (2.0 Abs) Photometric repeatability less than ±0.001 Abs (0.5 Abs) less than ±0.001 Abs (1 Abs) less than ±0.003 Abs (2.0 Abs) Baseline stability less than 0.0003 Abs/H at 700 nm (one hour after light source turned ON) Baseline flatness within ±0.0006 Abs (190 to 1100 nm, one hour after light source turned ON) Noise level Within 0.00005 Abs RMS value (at 700 nm) Dimensions (W×D×H) 450(W) x 490(D) x 270(H) Weight 15 kg Printers DPU, ESC/P, PCL printers, USB I/F Windows-compliant printers are available with USB memory and PC software Memory USB memory (option) Saved as text and UVPC file Performance for PC USB memory+UVProbe (standard) Win XP</p>		
18.	<p><u>UV-VIS Spectrophotometer</u> Optical System : Double Beam with sample and reference cell holder Wavelength Range : 190nm to 900nm or better Working Mode : PC controlled Spectral Band Width : Fixed or Variable (0.5, 1, 2, 4 or 5nm) Scanning Speed : 3000 nm/min or more Monochromator : Czerny Turner mounting with 1200 lines/mm Wavelength Accuracy : + 0.1nm @656.1nm D2 : + 0.3nm entire range (190 to 900nm or better) Wavelength Repeatability : 0.1nm Stray light :</p>	01-Nos	
19.	<p><u>UV Glasses UVX</u> ESP lens: ESP, Extra Sensory Perception. An innovative coating to reduce dazzle and the harmful effects of blue light. The ESP coating filters: • 57% of blue light • transmits 64% of visible light • 99.99% of UVA/UVB As a reminder, Bolle clear lenses filter: • 10% of blue light</p>	06-Nos	



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	<ul style="list-style-type: none"> • 10% of visible light 		
20.	<p><u>Vacutainers Lab ware</u> Modified Tuohy point should be designed to provide enhanced tactile feel Unique one-piece plastic style should be fitted to prevent tissue coloring and should be lighter to enhance tactile feel during insertion Calibrated needle depth markings assist in awareness of needle placement depth Needle length: 127mm (5 in.) Needle gauge: 17 G Self-life: 1825 days Modified point Fixed wings Single-use Thin wall Sterile</p>	01-Nos	
21.	<p><u>Water Distillation System with Reservoir</u> Types of Water Distillers: There are two basic types of distiller systems: either manual or automatic. Manual: Manual water distillers usually produce 1 gallon of water at a time. After the first gallon of water is produced, you will have to manually refill the system to produce the next gallon of water. Automatic: Automatic water distillers are attached to a water line to continually produce pure water. Systems are monitored by electronics or float valves to stop production once the holding tanks are at a certain level.</p> <p>Water Production Rates of Distiller Systems: Manual and automatic systems differ in their production rate specifications based on the size of the boiling tank and the size of the storage tank. The capacity of a manual system is based on how many gallons of water they will produce per hour. The capacity of an automatic system is rated based on the production capacity per day.</p> <p>Total Holding Capacity: This is the amount of water that can be stored after distillation. Manual distillation systems generally use either a plastic or glass jar with a capacity of 1 gallon. Automatic distillation systems can store 3-25 gallons of water in a stainless steel reservoir.</p> <p>Construction Materials: An 18/8 304 food grade stainless steel is utilized on all of our automatic water distillers. A 316 stainless steel is used on the condensation coil. Some countertop distillers are made with a plastic exterior and a stainless steel boiler tank. Dispenser Type and Distiller Post Filters: Manual dispensers are constructed of a non-leaching polypropylene #5, as well as stainless</p>	01-Nos	



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	<p>steel. Distiller carbon post filters are designed to reduce any residual tastes or odors that might have been pushed over in the distillation process. The most effective placement of a carbon post filter is after the distillation process, before it enters reservoir.</p>		
22.	<p><u>Fume Hood</u> Introduction: Cabinet Structure: Material: All steel (1.0mm cold-rolling steel or 1.0mm stainless steel) covered with electrostatic spraying after folding, welding, polishing, acid cleaning, phosphorization, chemical resistance. Inner liner panel: Imported from America, 6mm compact panel, acid and alkali resistance, temperature-resistance, anti-moisture. Guide plate: Imported from America, 6mm compact panel, reasonable and knock-down guide structure. Concentrated and effective discharge air, letting off different poisonous gas. Operation Table board: lab-grade phenolic resins worktop, or epoxy resin worktop, or ceramic worktop and stainless steel as worktop. Window: 6mm thickness steel safe glass, balancing form elevation and subsidence, it can be stopped at any position by pulling. Lighting equipment: 30W antiseptis daylight lamp, lamp house is insulated with gas. Lightness on table not lowers than 400LUX. Operation panel: lighting switch, ON/OFF switch, two sets of 220V/10A versatile electric socket. Ventilation equipment: selecting rust-resistance, low wasting, low noise and famous fan and special wind tube. Noise can be reduced at about 55 DB. Accessories: vertical and single test cock: made by yellow brass, the surface is treated by EPOXY baking paint. Cup slot: acid and alkali resistance, PP water cup.</p>	01-Nos	
23.	<p><u>Portable pH meter</u></p> <ul style="list-style-type: none"> • Graphic display with on-screen instructions • 50-set memory (pH, temp, date and time stamp) • Automatic calibration and buffer recognition • IP67 waterproof housing • User-replaceable single- or double-junction electrode 	01-Nos	
24.	<p><u>Pocket combo-meter multi measurement water quality</u> COM-100 Waterproof EC/TDS/Temp Combo Meter 0 - 9990 μS 0 - 9.99 mS</p>	01-Nos	



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	<p>0-8560 ppm 0 - 8.56 ppt 0 to 80 °C 32 to 176 °F n/a n/a</p>		
25.	<p><u>Water quality test equipment</u> pH Specifications Range 0.0 to 14.0 pH Resolution 0.1 Method N/A Number of Tests life of the meter CTK Type electronic pH tester Alkalinity Specifications Range 0 to 100 mg/L (ppm) CaCO₃; 0 to 300 mg/L (ppm) CaCO₃ Resolution 1 mg/L (0 to 100 mg/L range); 3 mg/L (0 to 300 mg/L range) Method phenolphthalein / bromophenol blue Number of Tests 110 CTK Type titration Chloride Specifications Range 0 to 100 mg/L (ppm) Cl⁻; 0 to 1000 mg/L (ppm) Cl⁻ Resolution 1 mg/L (0 to 100 mg/L range); 10 mg/L (0 to 1000 mg/L range) Method mercuric nitrate Number of Tests 110 CTK Type titration Hardness Specifications Range 0.0 to 30.0 mg/L (ppm) CaCO₃; 0 to 300 mg/L (ppm) CaCO₃ Resolution 0.3 mg/L (0.0 to 30.0 mg/L range); 3 mg/L (0 to 300 mg/L range) Method EDTA Number of Tests 100 CTK Type titration Iron Specifications Range 0 to 5 mg/L (ppm) Resolution 1 mg/L Method phenanthroline Number of Tests 50 CTK Type colorimetric Sulfite Specifications Range 0.0 to 20.0 mg/L (ppm) Na₂SO₃; 0 to 200 mg/L (ppm) Na₂SO₃ Resolution 0.2 mg/L (0.0 to 20.0 mg/L range); 2 mg/L (0</p>	01-Nos	



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	<p>to 200 mg/L range) Method iodometric Number of Tests 110 CTK Type titration Specifications CTK Type Titration, Colorimetric, Multiparameter Dimensions 440 x 330 x 100 mm (17.3 x 13.0 x 3.9") Weight N/A Ordering Information HI3817 test kit includes all of the necessary reagents and accessories to perform over 100 tests for every parameter, with the exception of iron, which include reagents for 50 tests, electronic pH tester, hard carrying case and instructions.</p>		
26.	<p><u>Portable pH Meter</u> PH-80 Economically priced water resistant pH meter measures pH & temperature with auto-off, data-hold function, and low-battery indicator. PH: 0-14 Temperature 33-176°F; 1-80 °C</p>	01- Nos	
27.	<p><u>UPS Power Bank</u> Power Rating (kVA/kW)¹ 10 / 9 3-high w/32 battery and input isolation transformer 480/208</p>	01- Nos	

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