

DECISION OF PRE BID MEETING

Tender for Supply, Delivery, Installation & Commissioning of Laboratory Equipment for Faculty of Animal Science and Export Agriculture Department of Export Agriculture

Tender No : UWU/G/NCB/17/03

Date & Time : 10th July 2017 at 10.00 am

Venue : Finance Division

At the Pre Bids Meeting following clarification were made against the bidders' questions.

- a. Changes in specifications – Specifications of following items were change at the Pre Bid Meeting(Refer annexure for new specification)

Item No	Description	Reference Annexure
6	Horizontal Gel Electrophoresis Unit	Annexure 01
7	Power Supplies	
9	Mini Micro Centrifuge	
18	Standard Fume hood	
20	Refrigerated centrifuge (for cell cultures)	
23	UV-Visible spectrophotometer	
24	Water double distillation unit	
25	Precision Balance	
26	Thickness Gauge	
27	Glass Capillary Viscometer (Ubbelohde Viscometer)	
29	Hydraulic Press	
31	Specimen dies/molds	
32	Pressure Plate Apparatus	

Chairman,
Department Procurement Committee
Uva Wellassa University

Technical Specifications

SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF EQUIPMENT FOR FACULTY OF ANIMAL SCIENCE AND EXPORT AGRICULTURE - DEPARTMENT OF EXPORT AGRICULTURE- UWU/G/NCB/17/03				
No	Item	Specifications	Qty	Bidders' Response
1	Analytical Balance	Capacity up to 200 g \pm 0.0001 weighing modes (gram and mg) stainless steel weighing plate Internal Calibration: Automatic In-use cover A/C power 230 V, with Stable temperature behavior Short stabilization time: Steady weight values (approx. 3 sec. laboratory conditions) and Shock proof construction Warranty – Two years Manufacturer authorization	2	
2	Bench Top PH Meter	Calibration data display of pH or mV value Calibration buffers pH range 1 to 14 mV range +/- 1999 mv Temperature range 0 to 90 °C Warranty - 2 years Manufacturer authorization	2	
3	Dry Bath Incubator	LED display Temperature increment 0.1 °C With a timer Temperature accuracy at 37 °C about (-0.25 °C to +0.25 °C) Temperature control range 5 °C above ambient to 100 °C Warranty - 2 years Manufacturer authorization	1	
4	Refrigerator	Cooling temperature from (+2 °C to +10 °C) with static cooling, Double Door lockable Refrigerant- CFC free Automatic defrost system Cooling capacity range (~350 L) Adjustable grids, Number of grids (3 to 5), Alarms Warranty - 2 years Manufacturer authorization	1	
5	Freezer	Upright freezer Freezing temperature up to -80 °C (adjustable -60 °C / -86 °C) Digital display, LED display and warning lamps, Lockable door Capacity around 200 Liters Adjustable grids Refrigerant- CFC Free Warranty - 2 years Manufacturer authorization	1	
6	Horizontal	Horizontal gel tank		

	Gel Electrophoresis Unit	Safety lid with integral power leads Removable gel casting tray (size - 10 cm x 10 cm) Buffer volume (300 ml to 350 ml) Warranty - 2 years Manufacturer authorization		
7	Power Supplies	Automatic programs via timer setting Suitable for horizontal and vertical gels 250 Voltage, current and output stable Warranty - 2 years Manufacturer authorization	1	
8	Micro Centrifuge	Bench top Max. speed RPM 6000 min ⁻¹ Capacity for 12 or 18 micro centrifuge tubes 1.5/2.0 ml Digital display Impulse function for centrifuge samples Speed RCF 7000xg to 14000xg 2 years warranty Manufacturer authorization	1	
9	Mini Micro Centrifuge	24 x 1.5/2.0 ml g For minimum 6 micro centrifuge tubes Max. speed 6000 RPM Emergency lid lock facility Warranty - 2 years Manufacturer authorization	3	
10	Vortexer	Shaking mooting circular vibration Continues and touch operation Speed range (0 to 3000 rpm) For mixing small sample such as test tubes, micro centrifuge tubes Warranty - 2 years Manufacturer authorization	1	
11	Microwave Oven	Interior volume (15 L to 20 L) Removable glass rotary plate Housing with heat resistant coating 2 years warranty Manufacturer authorization Using absorbance based nucleic acid quantification method With the license of software 2 years warranty Manufacturer authorization	1	
	Micro pipettes 04 types	Channels: Single channel, pipetting key and tip ejector, Centrally placed pipetting key and separate tip ejector, Color-coding for easy tip selection, should available, Piston and ejector corrosion resistant (ceramic plunger) Fully autoclavable, should allow continuous autoclaving, Other: Adjustable volume, ergonomic finger rest adapts to hand for a relaxed grip, UV resistant, Pipette body should tolerance to solvents, Non grease design, Warranty: 2 years		
12	Micropipette	0.5 to 10 µl		

	0.5 to 10 µl	Systemic error ±0.20 (µl), Random error <0.10 (µl) Manufacturer authorization		
13	Micropipette 2 to 20 µl	2 to 20 µl Systemic error ±0.20 (µl), Random error <0.10 (µl) Manufacturer authorization	03	
14	Micropipette 10 to 100 µl	10 to 100 µl Systemic error ±0.20 (µl), Random error <0.10 (µl) Manufacturer authorization	03	
15	Micropipette 100 to 1000 µl	100 to 1000 µl Systemic error ±0.20 (µl), Random error <0.10 (µl) Manufacturer authorization	03	
16	DNA Quantifier	Fast and accurate for nucleic acid using absorbance based nucleic acid quantification method, with the license software Warranty: 2 years Manufacturer authorization		
17	Portable Dewar	For liquid N ₂ , 2 L Capacity Narrow neck Static holding around 24 hours Lockable lid, for easy moving Warranty - 2 years Manufacturer authorization	2	
18	Standard Fume hood	Cabinet structure with chemical resistant and temperature Resistant anti moisture, acid resistant interior material Length - (1 m to 1.5 m) 4 feet Width – (0.75 m to 1 m) With 2 power units, water and gas supplies Warranty - 2 years Manufacturer authorization	1	
19	UPS	Power supply for instrument 1 KVA Warranty - 2 years Manufacturer authorization	2	
20	Refrigerated centrifuge (for cell cultures)	LED display Temperature 4°C to 40 °C Max speed up to 13000 rpm Different Rotar for 1.5/2 ml, 15 ml, 50 ml, 250 ml (swing bucket rotar), MTP 96 wells plate Warranty – 02 years Manufacturer authorization With compatible UPS Calibration buffers pH range – 1 to 14 mV range +/- 1999mv Temperature range – 0 to 90 °C With Manufacturer warranty Manufacturer authorization	1	
21	Micro Centrifuge	24 x 1.5/2.0 ml / eppendorf tube Max. speed 14,000 rpm Automatic lid opening Warranty – 02 years Manufacturer authorization	1	

22	Nano Drop Spectrophotometer	For accurate nucleic acid and protein quantification	1	
		Minimum sample volume 0.5µl		
		wave length range from 190 nm to 840 nm		
		Detection range dsDNA: 2 ng/µL (with defined path length of 1mm)		
		Warranty – 02 years		
		Manufacturer authorization		
		With compatible UPS		
		Narrow neck		
23	UV-Visible spectrophotometer	Operating principle must be with two beams: Absorption single-beam spectrophotometer with the reference beam.	1	
		Instrument should operate moment switched on with no warming up time.		
		sample volume ranging from 400 µL to 4 mL.		
		wave length range from 200 nm to 830 nm, with spectral scanning feature.		
		System should also allow using conventional quartz/ glass/ plastic cuvettes. (10mm)		
		Must have evaluation methods with factor, standard or standard series		
		Must have Multi – wavelength, Dual-wavelength applications with subtraction and division analysis.		
		• Pre-programmed methods for a quick start.		
		• Direct operation on the device, with no requirement for PC.		
		• Measuring results (>1,000) can be saved directly on the device.		
		• >100 method programs in memory		
		• Spectral band width : < 4 nm		
		• Photometric measuring range : 0 A to 3.0 A at 260 nm		
		• Random error: ≤ 0.002 if A = 0, ≤ 0.005 (0.5 %) if A = 1		
		• Systematic error: ±1% if A = 1		
• Manufacturer Warranty – 02 years & authorization				
24	Water double distillation unit	Distillation capacity : 3 to 15 L/h	1	
		Resistivity: 10 – 15 MW x cm at 25 °C		
		Feed Source: Portable tap water		
		Warranty – 02 years		
25	Precision Balance	Capacity- 620g or better	1	
		Readability- (d) 0.001g		
		Repeatability – 0.001g		
		Linearity +/- 0.001g		
		Weighing modes weight measurement, parts counting, percentage weighing		
		Pan size 110 mm or more diameter with stainless steel pan		

		Calibration self-calibration according to temperature changes or pre-set conditions Warranty – 02 years		
26	Thickness Gauge	<ul style="list-style-type: none"> · For thickness measurements using constant pressure method · Should complies with Tensile Standards BS 903 and Compression Standards ISO 815 Digital Display · Base > 140 mm for placement of the test piece · Measurement range : 0 – 20 mm · Facility for easy location test piece · Indicator Travel > 24.5 · Resolution : 0.01 mm · Specimen Cutting Dies and Press · Thickness Gauge should come with required anvils, weight/s, specimen preparation press and dies Warranty – 02 years	1	
27	Glass Capillary Viscometer (Ubbelohde Viscometer)	<ul style="list-style-type: none"> · Need to measure the kinematic viscosity of Natural Rubber dissolves in organic solvents · Filling volume 10-20 ml, measurement accuracy 99.9 % · Clear glass made · Stop watch · No need water bath to heat the capillary viscometer Warranty – 02 years	1	
28	Metrolac	<ul style="list-style-type: none"> · Should be able to measure 20 % to 40 % Dry rubber content (DRC) in Natural Rubber Latex with 99.9 % accuracy 	3	
29	Hydraulic Press	<ul style="list-style-type: none"> · Press capacity: 25 – 250 kN · Hydraulic pressure: adjustable within the range of 30 – 350 bar · Heated Platens two (02) · Temperature up to 300 °C from ambient temperature (99% accuracy) · Platen Size 200 x 200 mm · Number of day lights: 1 · Day light height: 100 mm · Pressure cylinder: 1 (with double acting) · Closing speed: 25 mm/s - 30 mm/s · Opening speed: 15 – 25 mm/s · For Compression Moulding of Rubber, Plastic..etc · Programmable Controller with Touch Screen Operator Interface · 230V/50 Hz, 3 phase · Operational Manual · Warranty : Two Year · Comply with ISO 2393 and ASTM D3182 standards · Extra lubricant oil and Hydraulic oil are accepted 	1	

		<ul style="list-style-type: none"> · Training is required 		
30	Two Roll Mill	<ul style="list-style-type: none"> · Material of Upper and Lower Rollers : Chilled cast iron alloy · Roller diameter x length : > 150 x 310 mm · Turning speed : ≥ 17.5 rpm · Surface linear speed > 8 m/min · Space between rollers : should not be more than 4.5 mm · Shear Ratio : 1 : 1.35 · Roller temperature regulating device/internal cooling system · For use of rubber/plasticity/compound mixing · Quantity per Batch : 100 g – 1000 g · Should have a device for emergency stop · Should be able to immediately stop and the movement of all drives by an emergency switch · Over current protector · Power Supply : 240 V, 3 phase · Operational Manual · Installation/Commissioning and Training to be provided by an Engineer from the manufacturer · Warranty and service: Two Year · Other relevant tools are accepted (Lubricant, cleaning brush etc.) · Training is required 	1	
31	Specimen dies/molds	<ul style="list-style-type: none"> · Tensile test specimen mold with 6 cavities 	1	
		Comply with ASTM D412-16		
		<ul style="list-style-type: none"> · Tear test specimen mold with 6 cavities 	1	
		Comply with ASTM D624 - 00(2012)		
		<ul style="list-style-type: none"> · Hardness test specimen mold with 6 cavities 	1	
		Comply with ASTM D2240 - 15		
		<ul style="list-style-type: none"> · Compression test specimen mold with 6 cavities 	1	
		Comply with ASTM D575 - 91(2012)		
		<ul style="list-style-type: none"> · Abrasion test specimen mold with 6 cavities 	1	
		Comply with ASTM D5963 - 04(2015)		
		Warranty – 02 years		
32	Pressure Plate Apparatus	<input type="checkbox"/> To determine soil moisture retention curve (pF curve) using ceramic plates	1	
		Specification		
		<input type="checkbox"/> 15 bar Extractor with 4 Ceramic Plates (15 bar)		
		<input type="checkbox"/> 5 bar Extractor with 4 Ceramic Plates		
		1 bar - 3 Ceramic Plates		
		5 bar - 1 Ceramic Plate		
		<input type="checkbox"/> Pressure Control Panel complete with 2Nos manometers		
		<input type="checkbox"/> Compressor, 220-240 V/50 Hz, 20bar (Compatible)		
		<input type="checkbox"/> Hoses for connecting of 15 bar Extractor, 5 bar Extractor and Compressor for Pressure Control Panel		
		<input type="checkbox"/> Soil Sample Rings, a Set of 12 rings		
<input type="checkbox"/> Letter of Manufacturer Authorization				

		Warranty – 02 years		
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Note: After sales service agreement for five (05) years is expected for following items; Item numbers 5, 18, 20, 22, 23, 24, 29, 30, and 32.