

## MINUTES OF PRE BID MEETING

### Tender for Supply, Delivery, Installation & Commissioning of Laboratory Equipment for Department of Biosystems Technology, Faculty of Technological Studies

**Tender No** : UWU/AHEAD/18/TS/BST/01

**Date & Time** : 08<sup>th</sup> August 2018 & 2.00 p.m.

**Venue** : Admin Board Room

The Following decisions were made at the Pre Bid Meeting.

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

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

Item No	Item	Revised Item name	Specification	Reference Annexure
01	Fume cupboard		-(Automatic door + cupboard + chemical resist) -Low energy consumption. around 700 cfm when shash is fully open with around 60 fpm face velocity for maximum energy efficiency. or better performances. - Exterior dimension approx. 1500 x 1000 x 18000 mm (WxDxH) - Should be able to provide item number 2, 3, 7 and 8 simultaneously.	Annexure 01
02	Bio safty cabinet		-0 <sup>0</sup> to 10 <sup>0</sup> vertical Slope	
03	wall duct systems for Fume cupboard and biosafty cabinets	wall duct systems for Fume cupboard and bio-safety cabinets and Chemical storage cabinet	-U PVC 225” dusting to 5 feet above roof - Should be able to provide item number 1, 3, 7 and 8 simultaneously and install the ducting system by connecting these equipment	
04	Deionized water plant	Ultra-pure water plant	-Solid inbuilt storage tank ~7.5L - Power consumption ~ 500-1000 W -15-20 L per 8 h capacity or similar.	
05	Distilled water plant		-Storage Tank ~7.5 L If available -4 to 10 L per hour or higher - Power consumption ~ 5 kW	
07	Acid storing cupboard		- Exterior dimension approx. 1200 x 600 x 1800 - 2000mm (WxDxH)	
09	Laboratory workstation		- (6 power supply + 4 gas supply + 6 cupboards and drawers + 2 sink + glassware holders + chemical resist top) - Exterior dimension approx. (WDH)	

			<p>3000mm*1200mm*900mm - 5 years warranty</p> <p><b>WORK TOPS</b> Material L: Chemical and Heat resistant PP or Epoxy Resin (Epoxy preferred) Thickness :19 mm or more Color : Gray or White. Tested Method Should be supplied as Following details</p> <ol style="list-style-type: none"> <li>1. Compressive Strength (~136.5 MPa)</li> <li>2. Flexural Strength (~55.1 MPa)</li> <li>3. Heat Distortion Temperature(~125°C)</li> <li>4. Rockwell 'M' Hardness ~90</li> <li>5. Fire Resistance ( ASTM D635 Self Extinguishing)</li> <li>6. Water Absorption (ASTM D570 0.022%)</li> <li>7. Density (~1.95g/cm<sup>3</sup>)</li> <li>8. Chemical resistance details</li> </ol> <p>Table material : Steel thickness ~ 2.0 mm Coating Should be Epoxy Powder Coated Epoxy coat thickness ~ 70 µm or better</p> <p><b>UNDER BENCH CABINET, DRAWERS</b></p> <p>Coating Should be Epoxy Powder Coated Steel sheet thickness ~0.8 mm or better Epoxy coated steel thickness ~ 70 µm or better Double skinned doors and drawers Should be available</p> <p><b>LAB SINK</b> Material Polypropylene Accessories Laboratory bottle trap and laboratory sink waste</p> <p><b>WATER TAP</b> Water Taps Three way water taps Material Solid high quality brass Joints Joints are brazed using 40% silver Valve &amp; Handle Ergonomically designed and injection moulded in chemical resistant polypropylene Finishing Epoxy powder coated Colour White Manufacturer Authorization</p>	
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Deputy Director Procurement,  
Uva Wellassa University

## Annexure 01 - Technical Specifications

### Supply, Delivery, Installation & Commissioning of Laboratory Equipment for Department of Biosystem Technology, Faculty of Technological Studies - UWU/AHEAD/18/TS/BST/01

No	Item	Specifications	Bidders' Response
1	Fume cupboard	<p>-(Automatic door + cupboard + chemical resist)                      -Low energy consumption. around 700 cfm when shash is fully open with around 60 fpm face velocity for maximum energy efficiency. or better performances.                      -Chemical Resistant Fiber glass, Epoxy resin or PP inner liner.                      -Automatic programmable sash with manual control facility when required.                      -Safety mechanism for automatic sash movement.                      -Base cabinet for acid or solvent storage. Digital air flow monitor.                      -Additional user friendly Options                      -comply with the relevant international standards                      - Exterior dimension approx. 1500 x 1000 x 18000 mm (WxDxH)                      - Should be able to provide item number 2, 3, 7 and 8 simultaneously.</p>	
2	Bio safty cabinet	<p><u>Air circulation System:</u>                      -Duel HEPA air flow supply system                      -Heavy duty Ventilator / Blower motor 25000 hours or more use and less noise                      -Filter Type: HEPA with Efficiency: 99.9% MPPS or closest                      -low energy consumption ~ 150 W                      -sensors to detect pressure change air flow control with sash opening to maintain uniform flow Fully cleanable sash opening                      -HEPA – filtered supply / recirculation and -HEPA – filtered exhaust air to the room.                      Air flow system should be close to 70% recirculation and 30% exhaust  <u>Indicators:</u>                      -High precision real time air flow / air pressure indicator gauge                      -Airflow alarm and door safety alarm for worker safety  <u>Chamber features:</u>                      -0<sup>0</sup> to 10<sup>0</sup> vertical Slope                      -Front access opening                      -Chamber material should be Chemicals and Corrosion resistant and Chemical Resistant Fiber glass, Epoxy resin or PP inner liner                      -Service Valve for gas supply to the working chamber                      -Service Socket to the working chamber for the Electric Sterilizer</p>	

		<p><u>General features:</u></p> <ul style="list-style-type: none"> <li>-Voltage: 230V, Hertz: 50/60Hz</li> <li>-Dimensions: 4ft, or closest Cabinet</li> <li>Length x Width x Height, Exterior: 80 cm x 130 cm x 1160 cm or closest</li> <li>Height Max. Opening: 50 cm or closest</li> <li>-Factory installed UV light for sterilization</li> <li>-Maximum personnel, environment and product protection</li> </ul> <p><u>Accessories:</u></p> <ul style="list-style-type: none"> <li>- Adjustable Base Stand with wheels (Wheels should be lockable)</li> <li>- Electric Sterilizer with Adjustable temperature. Temp. Range: +80 to 250o C or closest Chamber Diameter should be close to 20 mm or higher, Voltage and Hertz: 50/60</li> </ul> <p><u>Special notes :</u></p> <ul style="list-style-type: none"> <li>- Certification should be specified</li> <li>- Warranty for the whole Unit, Ventilator Motor and HEPA filters should be given separately.</li> <li>- Replacement time for the HEPA filters and Ventilator Motor has to be specified.</li> </ul>	
3	wall duct systems for Fume cupboard and bio-safety cabinets and Chemical storage cabinet	<ul style="list-style-type: none"> <li>-Link to the for Fume cupboards and bio-safety cabinets and Chemical storage cabinet</li> <li>-U PVC 225” dusting to 5 feet above roof</li> <li>- Comply with the relevant international standards</li> <li>- Should be able to provide item number 1, 3, 7 and 8 simultaneously and install the ducting system by connecting these equipment</li> </ul>	
4	Ultra-pure water plant	<ul style="list-style-type: none"> <li>-deionized water with 0.055 uS/cm conductivity or better</li> <li>-Solid inbuilt storage tank ~7.5L</li> <li>-prepare ultra-pure water from distilled water</li> <li>- Power consumption ~ 500-1000 W</li> <li>-15-20 L per 8 h capacity or similar.</li> <li>- Interior and exterior in chemical resistant Fiber glass, Epoxy resin or PP inner liner</li> </ul>	
5	Distilled water plant	<ul style="list-style-type: none"> <li>-Fully glass cabinet structure</li> <li>-silica sheathed heater</li> <li>-all contact point with water with borosilicate glass</li> <li>-Storage Tank ~7.5 L If available</li> <li>-safety cut off for overheat when there is water supply issue</li> <li>-automatic cut off of water with power down and auto start with power resume</li> <li>-sensor to automatic control of water level in tank and auto restart with level decrease</li> <li>- Other parts chemical resistant Fiber glass, Epoxy resin or PP inner liner.</li> <li>-4 to 10 L per hour or higher</li> <li>- Power consumption ~ 5 kW</li> </ul>	
6	Ice flakes machine	<ul style="list-style-type: none"> <li>- Ice flake production 120 kg/day or similar</li> <li>- Chemical Resistant Fiber glass High quality SS, epoxy or PP inner and outer materials</li> <li>-storage bin ~ 26 Kg or nearest</li> </ul>	

7	Acid storing cupboard	<ul style="list-style-type: none"> <li>-Acid base cabinet should be tested according to the EN 14727 and EN14470 under GS standard or similar standards</li> <li>-Cabinet should be complies with guidelines of The Technical Rules for Hazardous Substances (TRGS 510) and working safety in laboratories (DGUV-1 213-850) or similar</li> <li>-Outer body of the cabinet should be constructed using powder coated steel or epoxy or PP resin coated steel for durability.</li> <li>-interior of the cabinet should be made of melamine or phenolic resin or Epoxy resin with flame retardant plate to prevent corrosion and increase safety</li> <li>-Cabinet should have metal free duct system for corrosion free air circulation and exhaust system should facilitate at least 25 times air change inside the cabinet in order to create acid fume free environment inside the cabinet</li> <li>-The unit should supply 8 pull-out shelves with removable plastic sump</li> <li>-Lockable door</li> <li>- Exterior dimension approx. 1200 x 600 x 1800 - 2000mm (WxDxH)</li> <li>-Customized color finished (Pure white or Gray or Other specified color)</li> </ul>	
8	Chemical storage cupboard	<ul style="list-style-type: none"> <li>-Cabinet should be complies with guidelines of The Technical Rules for Hazardous Substances (TRGS 510) and working safety in laboratories (DGUV-1 213-850) or similar</li> <li>- ventilation holes bottom of the cabinet and should support for the mechanical exhaust system as well</li> <li>-should have leveling feet to install in event of uneven floor of the site</li> <li>-Lockable door</li> <li>-Direct installed fume extraction unit with very low noise.~2000 rpm motor to exhaust all fumes collected inside of the cabinet</li> <li>-Exterior dimension approx. 1200 x 600 x 1800 - 2000mm (WxDxH)</li> <li>-Local supplier should have supplied and installed and services after supply.</li> </ul>	
9	Laboratory workstation	<ul style="list-style-type: none"> <li>- (6 power supply + 4 gas supply + 6 cupboards and drawers + 2 sink + glassware holders + chemical resist top)</li> <li>-Customized color finished (Pure white or Gray or Other specified color)</li> <li>-Customized shapes according to the requirements.</li> <li>- Exterior dimension approx. (WDH) 3000mm*1200mm*900mm</li> <li>- 5 years warranty</li> </ul>	

## WORK TOPS

Material L: Chemical and Heat resistant PP or Epoxy Resin (Epoxy preferred)

Thickness :19 mm or more

Color : Gray or White.

Tested Method Should be supplied as Following details

1. Compressive Strength (~136.5 MPa)
2. Flexural Strength (~55.1 MPa)
3. Heat Distortion Temperature(~125°C)
4. Rockwell 'M' Hardness ~90
5. Fire Resistance ( ASTM D635

Self Extinguishing )

6. Water Absorption (ASTM D570 0.022%)

7. Density (~1.95g/cm<sup>3</sup>)

8. Chemical resistance details

Table material : Steel thickness ~ 2.0 mm

Coating Should be Epoxy Powder Coated

Epoxy coat thickness ~ 70 µm or better

## UNDER BENCH CABINET, DRAWERS

Coating Should be Epoxy Powder Coated

Steel sheet thickness ~0.8 mm or better

Epoxy coated steel thickness ~ 70 µm or better

Double skinned doors and drawers Should be available

## LAB SINK

Material Polypropylene

Accessories Laboratory bottle trap and laboratory sink waste

## WATER TAP

Water Taps Three way water taps

Material Solid high quality brass

Joints Joints are brazed using 40% silver

Valve & Handle Ergonomically designed and injection moulded in chemical resistant

polypropylene

Finishing Epoxy powder coated

Colour White

Manufacturer Authorization