

MINUTES OF PRE BID MEETING

Bid for Supply, Delivery, Installation & Commissioning of Laboratory Equipment for DOR Project

Tender No : UWU/AHEAD/DOR/FAS/NCB/GOODS/LE/01

Date & Time : 21st August 2019 & 11.30 a.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.	Page No.	Item	Specification	Reference Annexure
01	19	CHNS Elemental Analyzer	Productivity Features: Automatic Wight Transfer: Included; Instrument should quote with micro balance 0.0001 mg (minimum unit)	Annexure 01
01	23	CHNS Elemental Analyzer	Branded PC i5/ 4 GB RAM / 1 TB HDD plus a printer (B/W/ laser printer) should be include	
03	25	Hand auger sampler	Stainless steel or non-corrosive material	
04	28	Global Positioning System (GPS)	Navigation: Waypoints: 4000 or more Tracks: 200 or more Track log points: 10000 or more Routes: 200 or more	

Deputy Director Procurement
AHEAD/OTS
Uva Wellassa University

Annexure 01 - Technical Specifications

Supply, Delivery, Installation and Commissioning of Laboratory Equipment for DOR Project

UWU/AHEAD/DOR/FAS/NCB/GOODS/LE/01

Item	Specifications			Bidders' Response
1. CHNS Elemental Analyzer	Instrument Design			
	Combustion Approach	Static and Dynamic	A mixture of two combustion techniques to ensure complete sample combustion	
	Furnace Design	Vertical		
	Combustion Furnace Temp.	100 – 1100 °C		
	Reduction Furnace Temp.	100 – 1100 °C		
	Pyrolysis Furnace Temp.	100 – 1100 °C		
	Sample Temp.	≥1800 °C	High heat, oxygen environment (static & dynamic introductions before and after the sample drops), the presence of combustion reagents and the beneficial exothermic reaction of the tin capsule makes for the most advanced and flexible combustion processes available	

	Separation Technique	Frontal Chromatography	Selective retention of the gases to produce a steady-state, stepwise signal allows for a simpler, more reliable and accurate determination of the combustion gases	
	Detector	TCD (Thermal Conductivity Detector)		
	Gas Requirements			
	Carrier Gas	Helium		
	Combustion Gas	Oxygen	CHNS Mode	
	Cost Saving Features			
	Gas Saver	Included	Instrument should have the feature for gas saver to reduce	
	Flexible Carrier Gas	Helium		
	Optimized Combustion	Included	Allows for customizable combustion conditions to ensure complete combustion while minimizing oxygen use	
	Copper Reduction Agent Regeneration	Optional	Connection to hydrogen gas mixtures facilitates reduction of copper reducing agent for reuse	
	Productivity Features			
	Autosampler	50-60 position	Pneumatic auto drop	
	Automatic Weight Transfer	Included	Instrument should quote with micro balance 0.0001 mg (minimum unit)	

	Automatic Shutdown and Wake-up	Included	For reducing furnace temperatures at user defined times and dates as well as reheating and calibration	
	Column Switching Accessory	Optional	For convenient switching between Oxygen and CHN/CHNS modes	
	Software Features			
	Advanced Calculations	Elemental Ratio, simplest Empirical Formula, % Polymer, Solvent of Crystallization, Dry Basis and Heating Value	A series of calculations providing information such as the CN ratio or the calculated amount of heat released upon combustion	
	Record of Analysis	Sample; optimize combustion conditions background (blank) and calibration (Kfactor) values		
	Statistical Analysis	Average, Standard Deviation,		
		Variance and Relative Standard Deviation		
	Diagnostic Recording	Included	Providing permanent record of instrument timing, leak testing and condition monitoring	
	Performance			
	Accuracy	≤0.3%	In Helium carrier gas and certified reference materials	
	Precision			
		≤0.2%	In Helium carrier gas and certified reference materials	

	Analysis Times			
	CHN	6 mins		
	CHNS	8 mins		
	Oxygen	4 mins		
	Sample Size			
	Range	0 to 500 mg	Sample type dependent	
	Analytical Range			
	C	0.001-3.6 mgs		
	H	0.001-1.0 mgs		
	N	0.001-6.0 mgs		
	S	0.001-2.0 mgs		
	O	0.001-2.0 mgs	Provide the price separately	
	Site Requirements			
	Weight	Less than 50 kg		
	Power requirements	200 – 240V (50/60 Hz),		
	UPS	Suitable smart UPS (20 kVA, 30 min back up or better) to run the system and any other recommended items or support system not explicitly mentioned above but are parts of the basic configuration. The batteries should be maintenance free		
	Other Requirements			
	Silver capsule	1000		
	Led capsule	1000		

	Fibber cuvettes	800		
	Oxygen gas 47 L cylinder	Should be supply one cylinder	High Purity (99.999%) Oxygen Gas Cylinder	
	Helium gas 47 L cylinder	Should be supply two cylinder	High Purity (99.9995%) Helium Gas Cylinder	
	High Purity Zero Compressed Air Cylinder			
	Dual Stage Regulators for He / Oxygen / Zero Air			
	Helium regulator imported with high pressure	Should be provided		
	Nitrogen gas cylinder and regulator	Should be provided		
	Air gas cylinder and regulator	Should be provided		
	Power	100-230 VAC		
	Warranty	12 months from the date of installation		
	Training	Training is required at in house manufacturer or regional operational area		
	Finally, the instrument should contain following items;			
	Description / Model	Quantity		
	CHN/S System	1		
	CHN Analysis Kit	1		
	Includes:			

	CHN Oxidation Tubes / Reagents			
	CHN Reduction Tubes / Reagents			
	OXYGEN ANALYSIS Kit	1		
	CHNS ANALYSIS KIT	1		
	Calibration / Column Conditioning Standards	1		
	Includes:			
	Acetanilide Calibration Standard (2g)			
	BENZOIC ACID (4g)			
	CYSTINE (4g)			
	SULFAMIC ACID (10g)			
	Ultra Micro Balance	1		
	Pyrolysis Gas Regulator	1		
	Branded Pc	1		
	i5 / 4 GB RAM / 1 TB HDD plus a printer (B/W/ laser printer) should be include			
19" Monitor				
2. Ground Penetrating Radar (GPR) / GROUND GPR DETECTOR	Sensor Frequency	250MHZ Ultra Wide Band		
	Signal Enhancement	DynaQ (optimizes data quality with cart speed). spatial filting.		
	Data Analysis	In field analysis		
	Touch Screen Display	Size: 21cm (8") diagonal		

	Power	Consumption: 1025V Battery: 12V, 9AH Lead Acid		
	Spatial interval	5 cm (2")		
	Depths range	Up to 8m (27') maximum		
	Display depths scale	1m-8m (3'-30')		
	Languages supported	English		
	Geo-referenced data	Display the position of your surveys in Google Earth™ and other geo-referencing programs.		
	Screen captures	Add markers via the touch screen display to highlight features of interest.		
	Depth Slices	View horizontal slices at different depths to display cables, pipes and other utilities in unprecedented clarity.		
	On-site Map View	View your identified features in plan map view using the optional external GPS.		
	Innovative tools for finding buried utilities			
	<p>Ground penetrating radar is an innovative tool for finding buried utilities. It provides locate professionals, surveyors and other users with the tool they need to trace and mark the position of all types of cable and pipe, including plastic and ceramic. Built in as standard is the ability to take Screenshots which are saved to internal memory for immediate emailing via Wi-Fi or later export to USB memory stick. GPS positioning is captured for integration into Google Earth.</p> <p>GPR takes utility locating to the next level, offering users easily interpreted Depth Slices as well as traditional Line Views. Use proprietary FrequenSee™ technology to highlight small/shallow, medium or large/deep buried utilities.</p>			
	Sensor Frequency	250MHZ Ultra Wide Band (Includes FrequensSee)		
	Signal Enhancement	DynaQ (optimizes data quality with cart speed).spatial filting.		
	Data Analysis	In field analysis (Post-processing analysis)		

	Touch Screen Display	Size:21cm (8") diagonal (Enhanced: Upgraded Display Unit package)		
	Power	Consumption: 1025V (Battery life typically 4-6hrs)		
		Battery: 12V,9AH Lead Acid		
	Spatial interval	5 cm (2")		
	Depths range	Up to 8m (27') maximum (Ground conditions dependent)		
	Display depths scale	1m-8m (3'-30')		
	Languages supported	English		
	Dimensions(H×W×D)	About 100 × 70 × 115cm		
	Weight	About 25Kg		
	Standard warranty	1 year		
3. Hand auger sampler	Peat sampler set to a depth of 10 m			
	General Characteristics	The stainless steel peat sampler is in fact a kind of gouge auger. The peat sampler is pushed into the soil manually. The sample containing part is a half cylinder. The peat sampler distinguishes itself from the standard gouge auger as its cone is massive.		
		The sample containing section is sealed off by a plate (fin) that can pivot around the axle in the middle of the sampler and that is fitted with a cutting edge on one side. Having arrived at the correct sampling depth the complete sampler is given half a turn clockwise (180°). During the turning the fin remains in position which allows the half cylinder to be filled and closed again.		
		The half circular sample cylinder is kept closed by the other side of the fin during extraction.		
	Technical specification			

	Connection	screwthread		
	Maximum sample depth	10 m		
	Product material	stainless steel or non-corrosive material		
	Sample diameter	52 mm or above		
	Sample length	50 cm or above		
	Sample specification	Un-disturbed or semi-disturbed		
	Sample volume	530 ml or above		
	Sampler position	vertical		
	Package size	117 x 27 x 23 cm (not compulsory)		
	Weight	Less than 40 kg prefer		
4. Global Positioning System (GPS)	DISPLAY			
	Diagonal Size	4 in - widescreen		
	Display Resolution	272 x 480 pixels		
	Diagonal Size	(metric) 10.2 cm		
	Display Width	2 in		
	Display Height	3.5 in		
	Color	Support color		
	Widescreen			
	Features:	sunlight readable, transflective		
	MISCELLANEOUS			
	Color Category	black		
	Included GPS Accessories	AC power adapter, USB cable		
	Waterproof	Yes		
	CONNECTIONS			
	Interfaces	USB 2.0		
	GPS Connection	USB 2.0		

	BATTERY			
	Rechargeable Battery	rechargeable		
	Included Qty	1		
	Technology	lithium ion		
	Run Time	(Up To) 16 hour(s)		
	POWER			
	Technology	lithium ion		
	Included	Qty 1		
	GPS SYSTEM			
	Type GPS/GLONASS navigator			
	Connectivity	NMEA 0183, USB 2.0		
	Features	Connect compatible, Geocaching, Point of Interest (POI), area calculation, automatic routing, custom POIs, hunt/fish calendar, photo viewer, sun and moon information, unit-to-unit transfer		
	Compatible with GPS Software			
	CE INPUT DEVICE			
	Type	touch sensitive screen		
	FEATURES			
	Sensors	altimeter, barometric altimeter, digital compass		
	INTERNAL STORAGE			
	Type	flash		

	DIGITAL CAMERA			
	Features	Geo-tagging, autofocus		
	Sensor Resolution	8 megapixels		
	FLASH MEMORY			
	Installed Size	8 GB		
	CARD READER			
	Supported Flash Memory Cards microSD			
	NAVIGATION			
	Waypoints	4000 or more		
	Tracks	200 or more		
	Tracklog Points	10000 or more		
	Routes	200 or more		