



Republic of the Philippines  
 Department of Agriculture  
**BUREAU OF SOILS AND WATER MANAGEMENT**  
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**BSWM- BIDS AND AWARDS COMMITTEE  
 SUPPLEMENTAL BID BULLETIN NO. 2**

**CONTRACT: Supply and Delivery of various Technical and Scientific  
 Equipment Batch 2 for CY 2023-IB NO: BSWM-2023-11-064**

This Addendum is being issued in accordance with Section 22.5.2 of the IRR of RA 9184, to clarify and modify some provisions of the Bidding Document.

**AMENDMENTS ON THE BIDDING DOCUMENT:**

ORIGINAL	AMENDED
Item No. 7: UV-Vis with sipper  Photometric System – Double beam with rear beam access / with holmium oxide filter Monochromator – Double monochromator / Monochromator with imaging grating and aspheric quartz coated optics Source – Xenon / Halogen (Tungsten) - D2 Lamp Wavelength Range – 190-1100 nm	Item No. 7: UV-Vis with sipper  Photometric System – Double beam with rear beam access / with holmium oxide filter Monochromator – Double monochromator / Monochromator with imaging grating and aspheric quartz coated optics <b>or other similar technologies</b> Source – Xenon / Halogen (Tungsten) - D2 Lamp Wavelength Range – 190-1100 nm

- o A complete set of **Bidding Document** may be acquired by interested Bidders until **December 4, 2023, 8:00AM** from the address and website.

**DEADLINE/SCHEDULE OF SUBMISSION AND OPENING OF BIDS:**

**Deadline of submission of bid proposals is on December 4, 2023, 9:00AM.**

**Opening of Bids is on December 4, 2023, 9:30AM** at BSWM Convention Hall and via videoconferencing (Zoom).

For guidance and information of all concerned.

**(Sgd)DENISE A. SOLANO**  
 BAC Chairperson



# ANNEX A

## Technical Specifications

Item	Specification	Statement of Compliance
<p><i>[Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder’s statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.]</i></p>		

Item No.	Unit	Item Description	Quantity	Statement of Compliance
		<b>Lot 1 - Provision of Technical and Scientific Equipment for the soil chemical analysis of 5 SUCs</b>		
1	Unit	<b>Analytical Balance</b>	1	
		Specifications:		
		Capacity: 220 g		
		Minimum Display: 0.1 mg		
		Repeatability (Standard Deviation): ≤0.1 mg		
		<b>Linearity: ±2.1 mg</b>		
		<b>Response Time: Approx. 2.5 seconds</b>		
		Operating Ambient Temperature: 5-40°C 20-85%		
		Temperature Coefficient Sensitivity (ppm/°C): ±2ppm/°C(no condensation)		
		<b>Pan Size (mm) approx.: Φ90</b>		
		<b>Main Body Dimensions: as per manufacturer’s specifications</b>		
		<b>Power requirement (adapter): 12V, 1A</b>		
		with ISO Calibration Certificate		
		Delivery site: University of Southern Mindanao		
2	Unit	<b>Bottletop Dispenser, digital/analog (50mL)</b>	1	
		Specifications:		
		Specifications:		
		<b>Capacity: 5-50 mL</b>		
		Subdivision: 1.0 mL		
		Accuracy: ≤ +/-0.5%		
		<b>Precision: ≤ 0.2%</b>		
		with container bottle and adapters		
		with recirculation and discharge valve		
		with ISO Calibration Certificate		
		Delivery site: University of Southern Mindanao, Cotabato		
3	Unit	<b>Reciprocating Shaker</b>	1	
		Specifications:		
		Operating Speed: Variable speed 60 – 260 osc/min		
		Stroke: 1.5” Horizontal		
		Type of mounting: Benchtop, Suction cup feet to prevent creeping		
		Load Capacity: up to 50lbs		
		Power: 230V, 60Hz		

		Size and weight: approx L-24.5", W-13.5", H-10", 76lbs		
		Includes: Utility box carrier with anti-slide surface and one (1) rubber coated crossbar is available to hold various combinations of beakers, flasks, etc with Calibration Certificate		
		Delivery site: University of Southern Mindanao, Cotabato		
4	Unit	<b>Fumehood</b>	1	
		Specifications		
		• Nominal Width: 30"		
		• Blower Requirements: Integral blower included		
		• Conformance: ASHRAE 110, ASTM E84, CAN/CSA C22.2, CE, NFPA 45, SEFA 1, UL		
		• Lighting: vapor-proof incandescent		
		• Style: Benchtop		
		• <b>Dimensions: minimum 28.0"-32.0" w x 30.0" - 30.5" d x 50.0"h -55.0 "h</b>		
		• <b>Dimensions: minimum metric (LxWxH): (76.0 cm - 77.0 cm) x (76.0 cm - 77.0 cm) x (130 cm x 135 cm)</b>		
		• Electrical: 230 volts, 60 Hz		
		Description		
		• By-pass airflow design.		
		• Built-in corrosion-resistant, direct drive exhaust blower capable of over-coming a maximum external static pressure of 0.12" H2O at 310 CFM (100fpm)		
		• Pre-wired 100-watt, vapor-proof incandescent lighting, light & blower switches.		
		• 6.7" ID fiberglass exhaust connection.		
		Delivery site: University of Southern Mindanao, Cotabato		
5	Unit	<b>Flame Photometer</b>	1	
		Specifications:		
		Elements: Sodium, Potassium, Calcium, Lithium and Barium		
		Reproducibility: ≤2%		
		Response Time: <8 seconds		
		Sample Uptake Volume (ml): <6ml/minute		
		Printer: Integral Thermal Printer		
		USB Data Output: Yes		
		Display: 7-inch Colour LCD Touch Screen		
		Gases: LPG, Natural Gas, Propane Butane		
		Standard Accessories:		
		Air Compressor (Oil Free)		
		Standards		
		Desktop PC unit with printer and UPS with Gas and cylinder tank		
		Delivery site: Apayao State University		
6	Unit	<b>pH Meter</b>	1	
		Specifications:		
		pH		
		Range: -2.00 to 16.00 pH		
		Resolution: 0.1/0.01/0.001 pH		
		Accuracy: ±0.002 pH		
		Cal. Points: Up to 5		
		Buffer Sets: NIST (1.68, 4.01, 6.86, 9.18, 12.45)		
		Temperature		
		Range (Meter): 0.0 to 100.0 °C / 32.0 to 212.0 °F		
		Resolution: 0.1 °C / 0.1 °F		
		Accuracy: ±0.3 °C / ±0.5 °F		
		Compensation: ATC / MTC		
		Power Requirements: 9 V DC adapter, 1.3 A (100/240 VAC, SMPS)		
		Accessories:		
		Integral Electrode Holder & 100/240 VAC Adapter		
		pH Electrodes, ATC probe		
		4, 7, 10 pH buffer standards		
		ISO Calibration Certificate		

		Delivery site: Apayao State University		
7	Unit	<b>UV-Vis with sipper</b>	1	
		Specifications:		
		<b>Photometric System – Double beam with rear beam access / with holmium oxide filter</b> <b>Monochromator – Double monochromator / Monochromator with imaging grating and aspheric quartz coated optics or other similar technologies</b> <b>Source – Xenon / Halogen (Tungsten) - D2 Lamp</b> <b>Wavelength Range – 190-1100 nm</b>		
		<b>Detectors – Silicon photodiode detectors for simultaneous measurement of all channels</b> <b>Wavelength accuracy (nm) ± 0.2</b> <b>Wavelength reproducibility (nm) &lt; 0.025</b> <b>Limiting Resolution – 0.1nm</b> <b>Spectral bandwidth 0.1 to 5 nm at 0.01 nm</b> <b>Data collection rate 250 data points per second</b>		
		Wavelength accuracy (nm) ± 0.2 Wavelength reproducibility (nm) < 0.025		
		Photometric accuracy (Abs)NIST 930E filter at 1 Abs - ± 0.005 Photometric range (Abs) 4.0 Photometric reproducibility (Abs) 0.005 Photometric stability (Abs/hour) 0.0003		
		with UV workstation software		
		with sipper		
		with PC, printer and complete genuine office and OS		
		with 2KVA AVR		
		with 2 years warranty and free PMS within period		
		Delivery site: Apayao State University		
8	Unit	<b>Block Digester</b>	1	
		Specifications:		
		<b>Sample positions: Interchangeable between 8 pcs (250 mL) and 20 pcs (100 mL)</b>		
		<b>Dimensions: (48 cm-50 cm) x (48 cm-52 cm) x (70 cm- 80 cm)</b>		
		<b>Temperature range Ambient - 450°C</b>		
		Temperature setting repeatability 1°C		
		Temperature readout Digital		
		Heater indication LED		
		Heater warning Text in display		
		Over temperature protection Yes		
		Temperature stability at 100°C ± 2°C		
		Temperature stability at 400°C ± 1°C		
		Heating time 20 to 400°C at 230 V ~35 min		
		Time setting per step 1 - 999 min		
		Typical sample capacity		
		Delivery site: Central Mindanao University, Bukidnon		
9	Unit	<b>Distilling Apparatus</b>	1	
		Specifications:		
		Measuring range: 0.1-200mg nitrogen		
		Recovery is greater than 99.5% at N levels between 1 and 200mg		
		Distillation time: approx. 3.5 min at 30mg N (6.5 min at 200mg N)		
		Distillation capacity: approx 40mL/min		
		Self-adjusting cooling water control		
		Automatic dilution, alkali addition, distillation and tube emptying		
		Alkali resistant plastic splash head and tube emptying vessel		
		Burette volume: approx. 35mL		
		Burette resolution: 2.4µl/step		
		Burette speed: >0.5ml/second		
		With 1 set of tanks with level sensors for waste, alkali and water		

		With receiver flask and 20 pcs 250mL distillation tube		
		reagent bottle approximately 2.5L;		
		burette with continuous titration,		
		General requirements: with voltage regulator, warranty of 12 months; training on operation and basic trouble shooting		
		Delivery site: Central Mindanao University, Bukidnon		
10	Unit	<b>Fumehood, ductless</b>	1	
		Specifications:		
		Specifications:		
		External Size (W*D*H): (950-1050)*(800-860)*(2100-2180)mm		
		Internal Size (W*D*H): (900-920)*(680-710)*(730-750)mm		
		Work Surface Height: 870-910mm		
		<b>Max.Opening: 650-700 mm</b>		
		Air Velocity: 0.4~0.6m/s		
		Airflow Volume: 136m <sup>3</sup> /h		
		Noise: ≤58dB(A)		
		Fluorescent Lamp: 14W*2		
		UV Lamp(optional): Emission of 253.7 nanometers for most efficient decontamination		
		Blower: Built-in centrifugal blower, speed adjustable		
		Front Window: Acrylic window; Manual; Reversal design		
		Power Supply: AC220V±10%, 50/60Hz; 110V±10%, 60Hz		
		Consumption: 400W		
		Exterior Material: Cold-rolled steel with anti-bacteria powder coating		
		Side Window Material: Acrylic Window		
		Work Table Material: Chemical resistant phenolic resin		
		<b>Delivery site: Central Mindanao University, Bukidnon</b>		
11	Unit	<b>Plant Tissue Grinder</b>	1	
		Specifications:		
		Specifications:		
		complies with ASTM C409		
		features a 1/3hp single-phase, geared motor mounted to a rigid, cast-aluminum base with rubber feet for stability		
		grinding mill head construction is made of sturdy, durable cast iron		
		mill head can be easily removed and disassembled for cleaning		
		without the use of any special tools		
		grinding plates are made of a hard iron alloy		
		Plate-to-plate clearance is easily adjusted by hand		
		Output capacity is up to 40lbs (18kg) per hour		
		material hopper provides 50in <sup>3</sup> (820ml) approximately 2lb (0.9kg)		
		with the dry grinding feeder and disk set		
		<b>Delivery site: University of Southern Mindanao, Cotabato</b>		
12	Unit	<b>Analytical Balance</b>	1	
		Specifications:		
		Capacity: 220 g		
		Minimum Display: 0.1 mg		
		Repeatability (Standard Deviation): ≤0.1 mg		
		Linearity: ±0.2 mg		
		Response Time: Approx. 3.0 seconds		
		Operating Ambient Temperature: 5-40°C 20-85%		
		Temperature Coefficient Sensitivity (ppm/°C): ±2ppm/°C(no condensation)		
		<b>Pan Size (mm) approx.: Φ90</b>		

		<b>Main Body Dimensions (mm) approx.: 210-215 (W) x 350-355 (D) x 330-340 (H)</b>		
		Power requirement: 12V, 1A		
		with ISO Calibration Certificate		
		Delivery site: Central Luzon State University, Nueva Ecija		
13	Unit	<b>Moisture Analyzer</b>	1	
		Specifications:		
		<b>Capacity (g): 35g</b>		
		Readability (g): 0.001g		
		<b>Repeatability: 0.05% (5g sample)</b>		
		(Std dev) (g): 0.015% (10g sample)		
		Moisture Range: 0.01% to 100%; (0.01% to 1000% for regain mode)		
		<b>Temp. Setting: 40°C to 160°C</b>		
		Temp Increment Setting: 1°C intervals		
		Output: Bidirectional RS-232 with GLP/GMP		
		<b>Timer: 0.1-100 min.</b>		
		<b>Heater Type: Halogen / Infrared Heating</b>		
		Temp range: 50° to 200°C in 1°C increments		
		<b>Power: 230V</b>		
		Tare range: To capacity by subtraction		
		<b>Operating temperature range: 10°C to 30°C</b>		
		Calibration Weight: 20 gram ASTM Class 1		
		Display type: 128 x 64 pixel graphical backlit LCD display		
		Displays: % moisture, % solids, time, temperature, weight, test ID, drying curve		
		Pan Size (in/mm): 3.5 / 90		
		Dimensions (WxHxD) : (7.0-8.0) x (6-6.5) x (13.5-14.5) inch / (18-20) x (15.0-15.5) x (35-36) cm		
		Delivery site: Central Luzon State University, Nueva Ecija		
14	Unit	<b>Convection Oven</b>	1	
		Specifications:		
		Controller Type: Microprocessor control with vacuum fluorescent display		
		Temperature Stability: ±0.4°C		
		Timer: ON / OFF		
		<b>Temperature: 50°C to 200°C</b>		
		<b>Capacity: 220L</b>		
		Type: Gravity Convection		
		No. of Shelves: 2 min - 19 max.		
		<b>Electricals: 230V, 50-60-Hz</b>		
		Wattage: 3360 w		
		Dimensions: approx (L x W x H) (29.0-30.0) x (25.0-25.5) x (36.0 - 36.5) in. (73.0-74.0) x (63.5-64.5) x (91-93) cm		
		Delivery site: Central Luzon State University, Nueva Ecija		
15	Unit	<b>Horizontal Reciprocating Shaker</b>	2	
		Specifications:		
		Motor DC 250W		
		Shaking type : Horizontal/vertical		
		Speed 0~350 rpm		
		Stroke 40 mm		
		Timer 0~60 min.		
		Control Step-less speed adjust system		
		Size: minimum 430 x 430 x 580 mm		
		Weight (kg): minimum 59		
		Funnel holder (ml x pcs) :		
		100 x 6		
		200 x 6		
		300 x 4		
		500 x 4		
		1000 x 3		
		with accessories:		
		Funnel Holder 100ml up to 1000ml		
		Triangular Flask Holder		
		Centrifuge Tube Holder		

		Test Tube rack Holder		
		with 3 years warranty		
		with PMS and service visits within warranty period		
		with ISO 17025 Calibration Certificate		
		Delivery site: BSWM, Quezon City		
16	<b>Unit</b>	<b>Hot Plate</b>	2	
		Specifications:		
		<b>Type: Digital Corrosion Resistant Hot Plate</b>		
		Solid ceramic heater surface for excellent chemical resistance		
		<b>Heater plate mounted in ceramic frame that remains cool for safety</b>		
		<b>Heater Temperature Range: 100 C to 400 C</b>		
		<b>Heater Plate Size: minimum 10" x 10"</b>		
		<b>Heater Power: max 1440 watts</b>		
		<b>Temperature Control: +/- 2.0 C of setting</b>		
		<b>Indicator is required</b>		
		<b>Operating Voltage: 230 VAC</b>		
		with fuse		
		with detachable line cord		
		with 3 years warranty		
		with PMS and service visits within warranty period		
		with ISO 17025 Calibration Certificate		
		Delivery site: BSWM, Quezon City		
		<b>Compliance with Section VI. Schedule of Requirements</b>		

Name and Signature of Authorized Representative

Company Name

Date Signed