

Republic of the Philippines
University of the Philippines Mindanao
Mintal, Tugbok District, Davao City

June 15, 2023

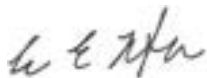
BID BULLETIN NO. 01
Supply of Equipment for the Infectious Diseases Laboratory
(PBM 2023-17)

This Bid Bulletin is issued to inform the bidders of the changes (highlighted in green) in the Technical Specifications:

FROM:	TO:
LOT 1: Cold Storage	LOT 1: Cold Storage
1. Ultra Low Freezer (1 unit)	1. Ultra Low Freezer (1 unit)
Includes 6 sliding drawer racks and 320 pcs cryoboxes, cryo gloves (2 sets)	Includes 6 racks (2 racks capacity of 16 2ml cryoboxes per rack; 4 racks for 15ml cryoboxes) and 320 pcs plastic cryoboxes (100 for 15ml tubes, 50 mL tube, 170 2 ml tube), cryo gloves (2 sets)
Certificate of Conformance, Manual, and Certificate of Calibration upon installation	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation.
2. - 20 Freezer (2 units)	2. - 20 Freezer (2 units)
Manual defrost Non frosted Includes 6 sliding drawer racks and 320 pcs cryoboxes	Non frosted Includes 6 sliding stainless drawer racks and 320 pcs plastic cryoboxes (200 pcs cryoboxes for 10 x 10 1.5-2ml tube capacity; 70 pcs for 15ml cryoboxes; 50 pcs for 50 ml cryoboxes)
Certificate of Conformance, Manual, and Certificate of Calibration upon installation	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation.
3. Refrigerator (2 units)	3. Refrigerator (2 units)
Certificate of Conformance, Manual, and Certificate of Calibration upon installation	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation.
LOT 2: Centrifuge	LOT 2: Centrifuge
1. Biocontainment Microfuge (1 unit)	1. Biocontainment Microfuge (1 unit)
BIOC	Certification: BIOC
Compatible UPS and AVR functions	Compatible 3kVA UPS and AVR functions
Certificate of Conformance, Manual, and Certificate of Calibration upon installation	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation.
2. Refrigerated Centrifuge (1 unit)	2. Refrigerated Centrifuge (1 unit)
Certificate of Conformance, Manual, and Certificate of Calibration upon installation	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation.
3. Minifuge/Quickspin (6 units)	3. Minifuge/Quickspin (6 units)
Certificate of Conformance, Manual, and Certificate of Calibration upon installation	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation.
LOT 3: Biocontainment, Sterilization, and Small Equipment	LOT 3: Biocontainment, Sterilization, and Small Equipment
1. Biosafety Cabinet Class II Type A2 (2 units)	1. Biosafety Cabinet Class II Type A2 (2 units)
UPS and AVR	3kVA UPS and AVR
Certificate of Conformance, Manual, and Certificate of Calibration upon installation	Certificate of Conformance, Manual, and Certificate of Calibration upon installation
2. PCR Hood (2 units)	2. PCR Hood (2 units)
UPS, AVR	3 kVA UPS, AVR
Certificate of Conformance, Manual, and Certificate of Calibration upon installation	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation.
3. Sonicator (1 unit)	3. Sonicator (1 unit)

Certificate of Conformance, Manual, and Certificate of Calibration upon installation	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation.
4. Vortex Mixer (4 units)	4. Vortex Mixer (4 units)
Certificate of Conformance, Manual, and Certificate of Calibration upon installation	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation
5. Heat Block (1 unit)	5. Heat Block (1 unit)
Certificate of Conformance, Manual, and Certificate of Calibration upon installation	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation.
6. Drying Oven (1 unit)	6. Drying Oven (1 unit)
Certificate of Conformance, Manual, and Certificate of Calibration upon installation	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation
7. Autoclave (1 unit)	7. Autoclave (1 unit)
AVR, UPS	AVR, 3 kVA UPS
Certificate of Conformance, Certificate of Calibration upon installation, 1 operation manual, 1 clear folder, 1 screw (for attaching the clear folder)	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation, 1 clear folder, 1 screw (for attaching the clear folder)
8. Bead Mill 24 Homogenizer (1 unit)	8. Bead Mill Homogenizer (1 unit)
Ceramic beads (6 packs), AVR, UPS	Ceramic beads (6 packs), AVR, 3kVA UPS
Weight : 24 kgs	Weight: not more than 25 kgs
	Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation
Lot 4 : Liquid Handling System	Lot 4 : Liquid Handling System
1. Pipet Aide (1 unit)	1. Pipet Aide (1 unit)
1 operation manual, Certificate of Conformance, Certificate of Calibration	1 operation manual, Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation
2. Micropipettor (4 sets)	2. Micropipettor (4 sets)
	Compatible with 10uL pipette tips
Operation manual, Certificate of Conformance, Certificate of Calibration	Operation manual, Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation

For guidance of all concerned.



PROF. ERWIN E. PROTACIO

Vice Chair, Bids and Awards Committee for Goods

Received by the bidder:

Signature over printed name/Date received

Technical Specifications

Item	Specification	Statement of Compliance
	<p style="text-align: center;">General terms for all lots</p> <ol style="list-style-type: none"> 1. The equipment must be supplied by an eligible distributor/supplier in the country with an applications specialist and sales representative in the Philippines for manufacturer's support and after-sales support. 2. Delivery in required/appropriate storage temperature/conditions. 3. Damaged/defective equipment due to manufacturing or transportation conditions upon checking during delivery should be replaced by the supplier within 3 months. 4. Suppliers must submit brochures as reference for specifications. 	<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	Specification	Statement of Compliance
LOT 1: Cold Storage		
Delivery period: Ninety (90) calendar days		
Delivery: CSM, UP Mindanao Mintal, Tugbok District, Davao City		
	1. Ultra Low Freezer (1 unit)	
	• Specifications:	
	○ Type : Ultra-Low Freezer; Upright	
	○ Capacity: at least 816L	
	○ Temperature Range : -50 °C to -86 °C	
	○ Insulation : Vacuum Insulation Panels (VIP) + Water-Blown Polyurethane Foam (SNAP-compliant)	
	○ Interior : Stainless steel	
	○ Electrical: 208-230 V	
	○ Number of Shelves : 3	
	○ Capacity Shelf : 111 kg	
	○ Rack Capacity : 12	

	<ul style="list-style-type: none"> ○ Certifications/Compliance : cULus, ENERGYSTAR ○ Display : Touch-Screen LCD ○ Defrost : Manual ○ Dimensions (Exterior) : 37.6 x 39.6 x 78 in. (DxWxH) ○ Monitoring Options : Alarm, Recorder ○ Amperage : 4/10 A ○ Plug Type : NEMA 6-15 ○ Vial Capacity : 60,000 x 2 mL ○ Compressor : V-Drive Compressor ○ Refrigerant : R290 (1st stage), R170 + R290 mix (2nd stage) ○ With CO2 back up (with refillable tank cylinder) ○ With safety lock/safe alarms ○ Includes 6 racks (2 racks capacity of 16 2ml cryoboxes per rack; 4 racks for 15ml cryoboxes) and 320 pcs plastic cryoboxes (100 for 15ml tubes, 50 mL tube, 170 2 ml tube), cryo gloves (2 sets) ○ Inclusions: <ul style="list-style-type: none"> ○ AVR; 3KVA UPS ○ 1 set of filter ○ At least 1 year warranty on parts and services ○ 1 set Dry Ice Maker <ul style="list-style-type: none"> ● Specifications: ● Benchtop, CO2 Cylinder ● External Dimensions : 390 x 515 x 640 mm (WxDxH) ● Structure and Insulation : Stainless steel inside and outside ● Type of ice : flakes ● Production kg/24h (up to) : 23 ● Bin capacity (kg) : 8 ● Refrigerant : R134a CFC free ● Compliance : 2014/30/CE, 2014/35/CE and following modifications ● At least 1 year warranty on parts and services ● AVR, 3KVA UPS ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 	
	2. - 20 Freezer (2 units)	
	<ul style="list-style-type: none"> ● Specifications: <ul style="list-style-type: none"> ○ Should reach -20°C, between -15°C to -25°C ○ Capacity: at least 659L ○ With CO2 back up (with refillable tank cylinder) ○ Data logs ○ Upright ○ Safety lock/ safe alarms ○ Non frosted ○ Includes 6 sliding stainless drawer racks and 320 pcs plastic cryoboxes (200 pcs cryoboxes for 10 x 10 1.5-2ml tube capacity; 70 pcs for 15ml cryoboxes; 50 pcs for 50 ml cryoboxes) ○ Plug Type : NEMA 6-15 ○ Certifications/Compliance : CE /cUL ○ Dimensions (Exterior) : 38.9 x 28.0 x 78.5 in. (LxWxH) 	

	<ul style="list-style-type: none"> ○ Display : Microprocessor ○ Refrigerant : R290 ○ Shelves : 4 ○ Single Solid door style ○ Inclusions: AVR; 3KVA UPS; at least 1 year warranty on parts and services ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 	
	<p>3. Refrigerator (2 units)</p> <ul style="list-style-type: none"> ● Specifications: <ul style="list-style-type: none"> ○ Digital Monitor Display on the top of the ref ○ Temperature range(°C) : 2 - 8°C ○ With key lock ○ Capacity: 316L-1500L ○ Temperature controller: Microprocessor ○ Single glass door, with movable wheels ○ Inclusions: AVR; 3KVA UPS; at least 1 year warranty on parts and services ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 	
<p>LOT 2: Centrifuge Delivery period: Ninety (90) calendar days Delivery: CSM, UP Mindanao Mintal, Tugbok District, Davao City</p>		
	<p>1. Biocontainment Microfuge (1 unit)</p> <ul style="list-style-type: none"> ● Specifications: <ul style="list-style-type: none"> ○ Platform : microfuge ○ Capacity : 36 x 1.5mL/2 mL tubes (max) ○ Detachable rotor 1.5mL and 2mL microcentrifuge tube with biocontainment lid ○ Autoclavable rotor ○ Fixed angle aluminum rotor with aerosol-tight lid ○ Certification: BIOC ○ With rpm and x g options ○ Max speed : 15,000 rpm; Max g-force: 20627 x g ○ Speed control : ± 50 rpm of set speed ○ Timed Run : To 99 min, 59 sec in one second increments or continuous ○ Max Capacity Volume Range : - 48 ml ○ Inclusions: <ul style="list-style-type: none"> ○ Compatible 3kVA UPS and AVR functions ○ Microcentrifuge tubes with attached flat caps, 1.5 mL, clear, 500 tubes ○ At least 1 year warranty on parts and services (PM; Calibration) ○ Tool Kit ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 	
	<p>2. Refrigerated Centrifuge (1 unit)</p> <ul style="list-style-type: none"> ● Specifications: <ul style="list-style-type: none"> ○ Detachable rotor adaptor of 1.5mL, 2 mL, 5 mL, 15 mL, 50 mL, and 100 mL ○ Swing Bucket Rotor : 4,700 rpm; 4255 x g 	

	<ul style="list-style-type: none"> ○ Compatible with conical and round tubes ○ Fixed-angle Rotor : 18000 rpm; 29756 x g ○ Refrigeration : Yes, CFC Free ○ Maximum Capacity : 4 x 400 mL ○ Run Time : Timed (Up to 9 hrs, 59 mins), Hold, Pulse (short run) ○ Drive : Brushless induction ○ Acceleration/Deceleration Profiles : 10/10 ○ Operating Temperature : +2°C to +40°C ○ Set Temperature Range : -20°C to +40°C ○ Dimensions, lid closed : 46.0 x 70.7 x 37.0 cm (WxDxH) ○ Asynchronous 3-phase direct drive with detachable rotors (1.5 mL, 2 mL, 15 mL, 50 mL, 100 mL, 200 mL) ○ Inclusions: ○ 3KVA UPS ○ Rotor S6096 Microplate rotor ○ At least 1 year warranty on parts and services ○ Heat Block with shaker ○ Specifications: ○ HeatBlock Adaptor: 0.2 mL, 1.5 mL block, 2 mL, and 15 mL ○ Digital ○ Temperature Range : Ambient +5°C to 150°C ○ Temperature Accuracy : ± 0.2°C ○ Timer (temp.) : 99 hour 59 min ○ Heating Method : Cartridge Heater ○ Capacity : 2 Block ○ Material : Heating plate and sample block : Aluminum; Inside : Stainless Steel ○ Dimensions : 238 x 230 x 170 mm (WxDxH) ○ Wattage : 600W ○ Frequency : 50/60 Hz ○ Tool Kit ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 	
	<p>3. Minifuge/Quickspin (6 units)</p> <ul style="list-style-type: none"> ● Specifications: <ul style="list-style-type: none"> ○ Speed : 7200 rpm ○ RCF : 2350 g ○ Dimension : 150 mm x 100 mm ○ Detachable rotors for 0.2 mL tube, 1.5 mL tube, and 2 mL tube ○ Eight position microtube rotor ○ Inclusion: <ul style="list-style-type: none"> ○ 4 x 8 (0.2 mL) PCR tube strip rotor ○ 8 x 1.5/2.0 mL microtube rotor ○ At least 1 year warranty on parts and services ● Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 	
	<p>LOT 3: Biocontainment, Sterilization, and Small Equipment Delivery period: Ninety (90) calendar days</p>	

Delivery: CSM, UP Mindanao Mintal, Tugbok District, Davao City		
	1. Biosafety Cabinet Class II Type A2 (2 units)	
	● Specifications:	
	○ Class II Type A2	
	○ Exhaust air filter and efficiency : ULPA filter with 99.9995% efficiency	
	○ LCD Digital Display	
	○ Air quality : ISO 14644-1, Class 3, worldwide	
	○ Nominal inflow & downflow velocity: 0.53m/sec and 0.35m/sec	
	○ UV Sterilization	
	○ Working area : 1.5m - 2.0m x 1.5m - 2.0m	
	○ External Size : 1300 x 750 x 2250 mm	
	○ Foot rest; Foot switch for window height adjustments	
	○ With lock	
	○ With 2 waterproof socket inside	
	○ Certifications/compliance : EN12469; certified by TUV Nord; NSF49-USA	
	○ Inclusions:	
	○ At least 1 year warranty on parts and services	
	○ Mobile floor stand	
	○ UV lamp	
	○ Electrical outlets;waterproof sockets	
	○ 3kVA UPS and AVR	
	○ One laboratory stool	
	● Certificate of Conformance, Manual, and Certificate of Calibration upon installation	
	2. PCR Hood (2 units)	
	● Specifications:	
	○ LCD Display	
	○ External Size : 800 x 700 x 1770 mm	
	○ Work Surface Height : 750 mm	
	○ Material : Main body - cold-rolled steel with anti-bacterial powder coating; Work table - 304 stainless steel	
	○ Front and Side Windows : Motorized; 5 mm toughened glass, anti-UV	
	○ Max Opening : 300 mm	
	○ Pre-Filter : Polyester fiber, washable	
	○ HEPA Filter : 99.999% efficiency at 0.3µm	
	○ Airflow Velocity : 0.3-0.5m/s, speed adjustable	
	○ UV Lamp: 20Wx2; emission of 253.7 nanometers with UV timer	
	○ Illumination: ≥350lx	
	○ Inclusions:	
	○ 3 kVA UPS, AVR	
	○ UV lamp, fluorescent lamp	
	○ Base stand	

	<ul style="list-style-type: none"> ○ Stainless steel shelf with IV bar and universal caster with leveling feet 	
	<ul style="list-style-type: none"> ○ 2 Waterproof socket 	
	<ul style="list-style-type: none"> ○ One lab stool 	
	<ul style="list-style-type: none"> ○ At least 1 year warranty on parts and services 	
	<ul style="list-style-type: none"> ● Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 	
	3. Sonicator (1 unit)	
	<ul style="list-style-type: none"> ● Specifications: <ul style="list-style-type: none"> ○ Processes 0.2 to 1000 mL ○ 500 watts ○ Programmable from 1 second to 10 hours ○ Pulse mode (1 second to 59 seconds) ○ Energy display ○ Applications include : nanoparticle dispersion, mixing and homogenization ○ Includes : generator, converter, ½ in diameter probe, power cable, wrench set ○ 220/230 V, 20kHz (Ultrasonic Frequency) ○ Dimensions : 15 x 18 x 9 in ● Inclusions: <ul style="list-style-type: none"> ○ At least 1 year warranty on parts and services ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 	
	4. Vortex Mixer (4 units)	
	<ul style="list-style-type: none"> ● Specifications: <ul style="list-style-type: none"> ○ Speed range : variable 1000-3000 rpm (shaking to vortexing) ○ Orbit : 3.7 mm ○ Control : 3 positions slider - (top) intermittent, (middle) off, (bottom) continuous ○ Weight : 3.93 kg ○ Dimensions : 171 x 190 x 197 mm (WxDxH) (with mixing head in place) ○ SGS-US-C, CE, CB Scheme, RoHS 2, PSE, and WEE compliant ○ With horizontal head for 4 x 15 mL, for 2 x 50 mL, for 12 x 1.5/2.0 mL, plate rotor ○ Operating Modes : Touch or Continuous ○ Inclusions: <ul style="list-style-type: none"> ○ At least 1 year warranty on parts and services ● Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 	
	5. Heat Block (1 unit)	
	<ul style="list-style-type: none"> ● Specifications: <ul style="list-style-type: none"> ○ HeatBlock Adaptor: 0.2 mL, 1.5 mL block, 2 mL ○ Digital ○ Certifications/Compliance : CE, cULus, RoHS ○ Controller Type : PID ○ Material : Powder-coated steel ○ No. of places : 2 blocks 	

○ Relative Humidity : <80%	
○ Temperature Range : Ambient +5°C to 130°C	
○ Type : Dry Bath/Block	
○ Fuse: 250V 5A	
○ Heat up Time : ≤ 20 mins 30°C to 130°C	
○ Temperature Accuracy : ≤ ± 0.5°C	
○ Temperature Uniformity : ≤ ± 1°C	
○ Timer : 0 to 99:59 min or continuous	
○ Dimension : 12.5 x 7.9 x 3.9 in (LxWxH)	
○ Voltage : 100/120 V	
○ Frequency : 50/60 Hz	
○ Inclusions:	
○ At least 1 year warranty on parts and services	
○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation.	
6. Drying Oven (1 unit)	
● Specifications:	
○ Temperature Range : 5°C to 250°C	
○ Temperature Sensor : Fe-Const	
○ Control System : Programmable Microprocessor	
○ Temperature Set and Display Sensitivity : 1°C	
○ Temperature Variation at 150°C : ± 2°C	
○ Temperature Fluctuation : ± 1°C	
○ Programmable Alarm Limits : ± 2°C/10°C	
○ Timer : 1 minute - 99,9 hours + hold position	
○ Delayed Start Timer : 1 minute - 99,9 hours	
○ Selectable Recording Frequency on Memory Stick : 1 -999 minutes	
○ Useful volume : 55 L	
○ Number of shelves (standard/max) : 2/7	
○ Internal Material : Stainless Steel	
○ External Material : Epoxy - Polyester Powder Coated Steel	
○ Internal Dimension : 410 x 370 x 360 mm (WxDxH)	
○ External Dimension : 645 x 565 x 710 mm ((WxDxH)	
○ Power Supply : 230 V, 50/60 Hz	
○ CE certified	
○ Inclusion :	
○ 1 year warranty on parts and services	
○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation.	
7. Autoclave (1 unit)	
● Specifications:	
○ Operating temperature range : Sterilizing (105-135°C); Heating (45-104°C); Warming (45-95°C)	
○ Maximum operating pressure : 0.263MPa	
○ Temperature Display : Digital	
○ Pressure Gauge Display : Analog	
○ Pressure Gauge Display Range : 0 - 0.4 MPa	
○ Heat Source : 2.0 kW electric heater	
○ Safety device : water level sensor, current leakage breaker, lid interlock, overheat prevention, over-pressure prevention, open temperature sensor	

	detection, safety valve	
	o Time Display : Digital	
	o Setting Range : Sterilizing/Heating : 0:01-9:59/1-99 hours/1-999 minutes/0:01-9:59,10-99 hours (selectable); Warming : 1-99 hours	
	o Chamber dimensions: 325x733 mm	
	o Chamber capacity: internal volume of the chamber : 58L	
	o Chamber Material : SUS304	
	o Rated Voltage : 230V AC	
	o Power consumption : 2kW	
	o Fine pressure adjustment function, Ion detector for water level detection, microprocessor for controlling temperature, standard equipped cooling fan (2 fans), variable exhaust speed (6 levels), Operation start timer, built-in exhaust bottle (polypropylene), flat internal surface of the chamber, top-open lid, foot pedal to open lid, operation indication lamp, liquid sterilizing course selectable	
	o Inclusions:	
	o 2 Stainless baskets (300 x 181 mm)	
	o 1 chamber bottom plate	
	o 4 caster stoppers	
	o At least 1 year warranty on parts and services	
	o AVR, 3 kVA UPS	
	o 1 Digital warranty information	
	o 1 Inspection sheet	
	o Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation, 1 clear folder, 1 screw (for attaching the clear folder)	
	8. Bead Mill Homogenizer (1 unit)	
	• Specifications:	
	o Type : Homogenizer	
	o For Use With (Application) : DNA/RNA extraction, tissue homogenization, protein purification	
	o Weight : not more than 25 kg	
	o Simultaneously homogenize up to 24 x 2 mL or 0.5 mL tubes	
	o Front-loading tube holder position	
	o No cool-down required between runs (non-stop processing)	
	o Disposable tubes to ensure no threat of cross-contamination	
	o No sample degradation due to quick processing	
	o Smaller footprint to maximize bench space	
	o Run Time : 1 to 99 seconds	
	o Performance Range : 0.8 m/s to 6 m/s in increments of 1.5 m/s	
	o Number of Cycles : 1 - 9	
	o CE Compliant	
	o Inclusions:	
	o Ceramic beads (6 packs), AVR, 3kVA UPS	
	o 1 operation manual, 1 clear folder, 1 screw (for attaching the clear folder)	

	<ul style="list-style-type: none"> ○ At least 1 year warranty on parts and services ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation 	
<p>*Lot 4 : Liquid Handling System Delivery period: Ninety (90) calendar days Delivery: CSM, UP Mindanao Mintal, Tugbok District, Davao City</p>		
	<p>1. Pipet Aide (1 unit)</p> <ul style="list-style-type: none"> ● Specifications: <ul style="list-style-type: none"> ○ Suitable for 0.5 mL to 100 mL pipettes ○ Ergonomically shaped handle ○ Sensitive valves for precise work with low volume pipettes ○ Protected by filter and safety valve ○ Autoclavable nosepiece and pipette holder ○ Filter : Hydrophobic PTFE 0.2uM ○ Pipette Types : Glass or Plastic 0.5-100mL ○ Inclusion: <ul style="list-style-type: none"> ○ Charging Stand ○ At least 1 year warranty on parts and services ○ 1 operation manual, Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation 	
	<p>2. Micropipettor (4 sets)</p> <ul style="list-style-type: none"> ● Specifications: <ul style="list-style-type: none"> ○ Manual pipette ○ 3 sets of 1uL-10uL, 10uL-100uL, 100uL-1000uL single channel ○ 1 set of 1uL-10uL,10uL- 100uL, 30uL- 300uL 8-channel <p>For 1uL-10uLSingle Channel and 8-channel Increments : 0.02µL Color coding : Purple/ Pink Compatible with 10uL pipette tips</p> <p>For 10uL-100uLSingle Channel and 30uL-300uL 8 channel Increments : 0.2µL Color coding : Yellow</p> <p>For 100uL-1000uLSingle Channel Increments : 1 µL Color coding : Blue</p> <ul style="list-style-type: none"> ○ Ergonomically shaped handle ○ Sensitive valves for precise work with low volume pipettes ○ Protected by filter and safety valve ○ Autoclavable nosepiece and pipette holder ○ Filter : Hydrophobic PTFE 0.2uM ○ Compatible with China and US Made tips ○ Inclusion: <ul style="list-style-type: none"> ○ 4 Pipette Stand ○ At least 1 year warranty on parts and services ○ Operation manual, Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation 	

(TECHNICAL SPECIFICATIONS)

BID NO: PBM 2023-17

DATE:

REQUIRED SPECIFICATIONS	OFFERED SPECIFICATIONS (Please write down detailed offered specifications)	REFERENCES (Include supporting documents) (Attach brochure / technical data/ website, etc.)
LOT 1 – Cold Storage		
1. <i>Damaged/defective equipment due to manufacturing or transportation conditions upon checking during delivery should be replaced by the supplier within 3 months.</i>		
2. <i>Suppliers must submit brochures as reference for specifications.</i>		
1. Ultra Low Freezer (1 unit)		
Specifications:		
Type : Ultra-Low Freezer; Upright		
Capacity: at least 816L		
Temperature Range : -50 °C to -86 °C		
Insulation : Vacuum Insulation Panels (VIP) + Water-Blown Polyurethane Foam (SNAP-compliant)		
Interior : Stainless steel		
Electrical: 208-230 V		
Number of Shelves : 3		
Capacity Shelf : 111 kg		
Rack Capacity : 12		
Certifications/Compliance : cULus, ENERGYSTAR		
Display : Touch-Screen LCD		
Defrost : Manual		

<i>Note to Bidders:</i> The terms of payment shall be as follows: <i>upon complete delivery of all items/services.</i>	Signature of Representative _____ Name of Representative _____ Position _____ Company _____ Address _____ Telephone/Fax/Email _____
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Dimensions (Exterior) : 37.6 x 39.6 x 78 in. (DxWxH)		
Monitoring Options : Alarm, Recorder		
Amperage : 4/10 A		
Plug Type : NEMA 6-15		
Vial Capacity : 60,000 x 2 mL		
Compressor : V-Drive Compressor		
Refrigerant : R290 (1st stage), R170 + R290 mix (2nd stage)		
With CO2 back up (with refillable tank cylinder)		
With safety lock/safe alarms		
Includes 6 racks (2 racks capacity of 16 2ml cryoboxes per rack; 4 racks for 15ml cryoboxes) and 320 pcs plastic cryoboxes (100 for 15ml tubes, 50 mL tube, 170 2 ml tube), cryo gloves (2 sets)		
Inclusions:		
AVR; 3KVA UPS		
1 set of filter		
At least 1 year warranty on parts and services		
1 set Dry Ice Maker		
Specifications:		
Benchtop, CO2 Cylinder		
External Dimensions : 390 x 515 x 640 mm (WxDxH)		
Structure and Insulation : Stainless steel inside and outside		
Type of ice : flakes		
Production kg/24h (up to) : 23		
Bin capacity (kg) : 8		
Refrigerant : R134a CFC free		

Note to Bidders:
The terms of payment shall be as follows: *upon complete delivery of all items/services.*

Signature of Representative _____
Name of Representative _____
Position _____
Company _____
Address _____
Telephone/Fax/Email _____

Compliance : 2014/30/CE, 2014/35/CE and following modifications		
At least 1 year warranty on parts and services		
AVR, 3KVA UPS		
Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation.		
2. - 20 Freezer (2 units)		
Specifications:		
Should reach -20°C, between -15°C to -25°C		
Capacity: at least 659L		
With CO2 back up (with refillable tank cylinder)		
Data logs		
Upright		
Safety lock/ safe alarms		
Non frosted		
Includes 6 sliding stainless drawer racks and 320 pcs plastic cryoboxes (200 pcs cryoboxes for 10 x 10 1.5-2ml tube capacity;70 pcs for 15ml cryoboxes; 50 pcs for 50 ml cryoboxes)		
Plug Type : NEMA 6-15		
Certifications/Compliance : CE /cUL		
Dimensions (Exterior) : 38.9 x 28.0 x 78.5 in. (LxWxH)		
Display : Microprocessor		
Refrigerant : R290		
Shelves : 4		

Note to Bidders:

The terms of payment shall be as follows: *upon complete delivery of all items/services.*

Signature of Representative _____

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Position _____

Company _____

Address _____

Telephone/Fax/Email _____

Single Solid door style		
Inclusions: AVR; 3KVA UPS; at least 1 year warranty on parts and services		
Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		
3. Refrigerator (2 units)		
Specifications:		
Digital Monitor Display on the top of the ref		
Temperature range(°C) : 2 - 8°C		
With key lock		
Capacity: 316L-1500L		
Temperature controller: Microprocessor		
Single glass door, with movable wheels		
Inclusions: AVR; 3KVA UPS; at least 1 year warranty on parts and services		
Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		
Lot 2 - Centrifuge		
1. Damaged/defective equipment due to manufacturing or transportation conditions upon checking during delivery should be replaced by the supplier within 3 months.		
2. Suppliers must submit brochures as reference for specifications.		

<p><i>Note to Bidders:</i> The terms of payment shall be as follows: <i>upon complete delivery of all items/services.</i></p>	<p>Signature of Representative _____ Name of Representative _____ Position _____ Company _____ Address _____ Telephone/Fax/Email _____</p>
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1. Biocontainment Microfuge (1 unit)		
Specifications:		
Platform : Microfuge		
Capacity : 36 x 1.5mL/2 mL tubes (max)		
Detachable rotor 1.5mL and 2mL microcentrifuge tube with bio-containment lid		
Autoclavable rotor		
Fixed angle aluminum rotor with aerosol-tight lid		
Certification : BIOC		
With rpm and x g options		
Max speed : 15,000 rpm; Max g-force: 20627 x g		
Speed control : \pm 50 rpm of set speed		
Timed Run : To 99 min, 59 sec in one second increments or continuous		
Max Capacity Volume Range : - 48 ml		
Inclusions:		
Compatible 3kVA UPS and AVR functions		
Microcentrifuge tubes with attached flat caps, 1.5 mL, clear, 500 tubes		
At least 1 year warranty on parts and services (PM; Calibration)		
Tool Kit		

Note to Bidders:
The terms of payment shall be as follows: *upon complete delivery of all items/services.*

Signature of Representative _____
Name of Representative _____
Position _____
Company _____
Address _____
Telephone/Fax/Email _____

Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		
2. Refrigerated Centrifuge (1 unit)		
Specifications:		
Detachable rotor adaptor of 1.5mL, 2 mL, 5 mL, 15 mL, 50 mL, and 100 mL		

Swing Bucket Rotor : 4,700 rpm; 4255 x g		
Compatible with conical and round tubes		
Fixed-angle Rotor : 18000 rpm; 29756 x g		
Refrigeration : Yes, CFC Free		
Maximum Capacity : 4 x 400 mL		
Run Time : Timed (Up to 9 hrs, 59 mins), Hold, Pulse (short run)		
Drive : Brush-less induction		
Acceleration/Deceleration Profiles : 10/10		
Operating Temperature : +2°C to +40°C		
Set Temperature Range : -20°C to +40°C		
Dimensions, lid closed : 46.0 x 70.7 x 37.0 cm (WxDxH)		
Asynchronous 3-phase direct drive with detachable rotors (1.5 mL, 2 mL, 15 mL, 50 mL, 100 mL, 200 mL)		
Inclusions:		

<p><i>Note to Bidders:</i> The terms of payment shall be as follows: <i>upon complete delivery of all items/services.</i></p>	<p>Signature of Representative _____ Name of Representative _____ Position _____ Company _____ Address _____ Telephone/Fax/Email _____</p>
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3KVA UPS and AVR		
Rotor S6096 Microplate rotor		
At least 1 year warranty on parts and services		
Heat Block with shaker		
Specifications:		
Heat Block Adaptor: 0.2 mL, 1.5 mL block, 2 mL, and 15 mL		
Digital		
Temperature Range : Ambient +5°C to 150°C		
Temperature Accuracy : $\pm 0.2^\circ\text{C}$		
Timer (temp.) : 99 hour 59 min		
Heating Method : Cartridge Heater		
Capacity : 2 Block		
Material : Heating plate and sample block : Aluminum; Inside : Stainless Steel		
Dimensions : 238 x 230 x 170 mm (WxDxH)		
Wattage : 600W		
Frequency : 50/60 Hz		
Tool Kit		
Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		

Note to Bidders:

The terms of payment shall be as follows: *upon complete delivery of all items/services.*

Signature of Representative _____

Name of Representative _____

Position _____

Company _____

Address _____

Telephone/Fax/Email _____

3. Minifuge/Quickspin (6 units)		
Specifications:		
Speed : 7200 rpm		
RCF : 2350 g		
Dimension : 150 mm x 100 mm		
Detachable rotors for 0.2 mL tube, 1.5 mL tube, and 2 mL tube		
Eight position microtube rotor		
Inclusion:		
4 x 8 (0.2 mL) PCR tube strip rotor		
8 x 1.5/2.0 mL microtube rotor		
At least 1 year warranty on parts and services		
Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		
Lot 3 - Biocontainment, Sterilization, and Small Equipment		
1. <i>Damaged/defective equipment due to manufacturing or transportation conditions upon checking during delivery should be replaced by the supplier within 3 months.</i>		
2. <i>Suppliers must submit brochures as reference for specifications.</i>		
1. Biosafety Cabinet Class II Type A2 (2 units)		
Specifications:		

Note to Bidders:

The terms of payment shall be as follows: *upon complete delivery of all items/services.*

Signature of Representative _____

Name of Representative _____

Position _____

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Telephone/Fax/Email _____

Class II Type A2		
Exhaust air filter and efficiency : ULPA filter with 99.9995% efficiency		
LCD Digital Display		
Air quality : ISO 14644-1, Class 3, worldwide		
Nominal inflow & down-flow velocity: 0.53m/sec and 0.35m/sec		
UV Sterilization		
Working area : 1.5m - 2.0m x 1.5m - 2.0m		
External Size : 1300 x 750 x 2250 mm		
Foot rest; Foot switch for window height adjustments		
With lock		
With 2 waterproof socket inside		
Certifications/compliance : EN12469; certified by TUV Nord; NSF49-USA		
Inclusions:		
At least 1 year warranty on parts and services		
Mobile floor stand		
UV lamp		
Electrical outlets;waterproof sockets		
3kVA UPS and AVR		

Note to Bidders:
The terms of payment shall be as follows: *upon complete delivery of all items/services.*

Signature of Representative _____
Name of Representative _____
Position _____
Company _____
Address _____
Telephone/Fax/Email _____

One laboratory stool		
Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		
2. PCR Hood (2 units)		
Specifications:		
LCD Display		
External Size : 800 x 700 x 1770 mm		
Work Surface Height : 750 mm		
Material : Main body - cold-rolled steel with anti-bacterial powder coating; Work table - 304 stainless steel		
Front and Side Windows : Motorized; 5 mm toughened glass, anti-UV		
Max Opening : 300 mm		
Pre-Filter : Polyester fiber, washable		
HEPA Filter : 99.999% efficiency at 0.3um		
Airflow Velocity : 0.3-0.5m/s, speed adjustable		
UV Lamp: 20Wx2; emission of 253.7 nanometre with UV timer		
Illumination: $\geq 350lx$		
Inclusions:		
3 kVA UPS, AVR		
UV lamp, fluorescent lamp		

Note to Bidders:

The terms of payment shall be as follows: *upon complete delivery of all items/services.*

Signature of Representative _____

Name of Representative _____

Position _____

Company _____

Address _____

Telephone/Fax/Email _____

Base stand		
Stainless steel shelf with IV bar and universal caster with leveling feet		
2 Waterproof socket		
One lab stool		
At least 1 year warranty on parts and services		
Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		
3. Sonicator (1 unit)		
Specifications:		
Processes 0.2 to 1000 mL		
500 watts		
Programmable from 1 second to 10 hours		
Pulse mode (1 second to 59 seconds)		
Energy display		
Applications include : nanoparticle dispersion, mixing and homogenization		
Includes : generator, converter, ½ in diameter probe, power cable, wrench set		
220/230 V, 20kHz (Ultrasonic Frequency)		
Dimensions : 15 x 18 x 9 in		
Inclusions:		

Note to Bidders:
The terms of payment shall be as follows: *upon complete delivery of all items/services.*

Signature of Representative _____
Name of Representative _____
Position _____
Company _____
Address _____
Telephone/Fax/Email _____

At least 1 year warranty on parts and services		
Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		
4. Vortex Mixer (4 units)		
Specifications:		
Speed range : variable 1000-3000 rpm (shaking to vortexing)		
Orbit : 3.7 mm		
Control : 3 positions slider - (top) intermittent, (middle) off, (bottom) continuous		
Weight : 3.93 kg		
Dimensions : 171 x 190 x 197 mm (WxDxH) (with mixing head in place)		
SGS-US-C, CE, CB Scheme, RoHS 2, PSE, and WEE compliant		
With horizontal head for 4 x 15 mL, for 2 x 50 mL, for 12 x 1.5/2.0 mL, plate rotor		
Operating Modes : Touch or Continuous		
Inclusions:		
At least 1 year warranty on parts and services		
Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		
5. Heat Block (1 unit)		
Specifications:		

Note to Bidders:

The terms of payment shall be as follows: *upon complete delivery of all items/services.*

Signature of Representative _____
Name of Representative _____
Position _____
Company _____
Address _____
Telephone/Fax/Email _____

HeatBlock Adaptor: 0.2 mL, 1.5 mL block, 2 mL		
Digital		
Certifications/Compliance : CE, cULus, RoHS		
Controller Type : PID		
Material : Powder-coated steel		
No. of places : 2 blocks		
Relative Humidity : <80%		
Temperature Range : Ambient +5°C to 130°C		
Type : Dry Bath/Block		
Fuse: 250V 5A		
Heat up Time : \leq 20 mins 30°C to 130°C		
Temperature Accuracy : $\leq \pm 0.5^\circ\text{C}$		
Temperature Uniformity : $\leq \pm 1^\circ\text{C}$		
Timer : 0 to 99:59 min or continuous		
Dimension : 12.5 x 7.9 x 3.9 in (LxWxH)		
Voltage : 100/120 V		
Frequency : 50/60 Hz		
Inclusions:		

Note to Bidders:

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Signature of Representative _____

Name of Representative _____

Position _____

Company _____

Address _____

Telephone/Fax/Email _____

At least 1 year warranty on parts and services		
Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		
6. Drying Oven (1 unit)		
Specifications:		
Temperature Range : 5°C to 250°C		
Temperature Sensor : Fe-Const		
Control System : Programmable Microprocessor		
Temperature Set and Display Sensitivity : 1°C		
Temperature Variation at 150°C : ± 2°C		
Temperature Fluctuation : ± 1°C		
Programmable Alarm Limits : ± 2°C/10°C		
Timer : 1 minute - 99,9 hours + hold position		
Delayed Start Timer : 1 minute - 99,9 hours		
Selectable Recording Frequency on Memory Stick : 1 -999 minutes		
Useful volume : 55 L		
Number of shelves (standard/max) : 2/7		
Internal Material : Stainless Steel		
External Material : Epoxy - Polyester Powder Coated Steel		

Note to Bidders:
The terms of payment shall be as follows: *upon complete delivery of all items/services.*

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Internal Dimension : 410 x 370 x 360 mm (WxDxH)		
External Dimension : 645 x 565 x 710 mm ((WxDxH)		
Power Supply : 230 V, 50/60 Hz		
CE certified		
Inclusion :		
1 year warranty on parts and services		
Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		
7. Autoclave (1 unit)		
Specifications:		
Operating temperature range : Sterilizing (105-135°C); Heating (45-104°C); Warming (45-95°C)		
Maximum operating pressure : 0.263MPa		
Temperature Display : Digital		
Pressure Gauge Display : Analog		
Pressure Gauge Display Range : 0 - 0.4 MPa		
Heat Source : 2.0 kW electric heater		
Safety device : water level sensor, current leakage breaker, lid interlock, overheat prevention, over-pressure prevention, open temperature sensor detection, safety valve		
Time Display : Digital		

Note to Bidders:
The terms of payment shall be as follows: *upon complete delivery of all items/services.*

Signature of Representative _____
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Setting Range : Sterilizing/Heating : 0:01-9:59/1-99 hours/1-999 minutes/0:01-9:59,10-99 hours (selectable); Warming : 1-99 hours		
Chamber dimensions: 325x733 mm		
Chamber capacity: internal volume of the chamber : 58L		
Chamber Material : SUS304		
Rated Voltage : 230V AC		
Power consumption : 2kW		
Fine pressure adjustment function, Ion detector for water level detection, microprocessor for controlling temperature, standard equipped cooling fan (2 fans), variable exhaust speed (6 levels), Operation start timer, built-in exhaust bottle (polypropylene), flat internal surface of the chamber, top-open lid, foot pedal to open lid, operation indication lamp, liquid sterilizing course selectable		
Inclusions:		
2 Stainless baskets (300 x 181 mm)		
1 chamber bottom plate		
4 caster stoppers		
At least 1 year warranty on parts and services		
AVR, 3 kVA UPS		
1 Digital warranty information		
1 Inspection sheet		

Note to Bidders:
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Signature of Representative _____
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Certificate of Conformance and manual upon delivery , Certificate of Calibration upon installation , 1 clear folder, 1 screw (for attaching the clear folder)		
8. Bead Mill Homogenizer (1 unit)		
Specifications:		

Type : Homogenizer		
For Use With (Application) : DNA/RNA extraction, tissue homogenization, protein purification		
Weight : not more than 25 kg		
Simultaneously homogenize up to 24 x 2 mL or 0.5 mL tubes		
Front-loading tube holder position		
No cool-down required between runs (non-stop processing)		
Disposable tubes to ensure no threat of cross-contamination		
No sample degradation due to quick processing		
Smaller footprint to maximize bench space		
Run Time : 1 to 99 seconds		
Performance Range : 0.8 m/s to 6 m/s in increments of 1.5 m/s		

<i>Note to Bidders:</i> The terms of payment shall be as follows: <i>upon complete delivery of all items/services.</i>	Signature of Representative _____
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Number of Cycles : 1 - 9		
CE Compliant		
Inclusions:		
Ceramic beads (6 packs), AVR, 3 kVA UPS		
1 operation manual, 1 clear folder, 1 screw (for attaching the clear folder)		
At least 1 year warranty on parts and services		
Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		
Lot 4 - Liquid Handling System 1. Damaged/defective equipment due to manufacturing or transportation conditions upon checking during delivery should be replaced by the supplier within 3 months. 2. Suppliers must submit brochures as reference for specifications.		
1. Pipet Aide (1 unit)		
Specifications:		
Suitable for 0.5 mL to 100 mL pipettes		
Ergonomically shaped handle		
Sensitive valves for precise work with low volume pipettes		
Protected by filter and safety valve		

Note to Bidders:

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Signature of Representative _____

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Autoclavable nosepiece and pipette holder		
Filter : Hydrophobic PTFE 0.2uM		
Pipette Types : Glass or Plastic 0.5-100mL		
Inclusion:		
Charging Stand		
At least 1 year warranty on parts and services		
1 operation manual, Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		
2. Micropipettor (4 sets)		
Specifications:		
Manual pipette		
3 sets of 1uL-10uL, 10uL-100uL, 100uL-1000uL single channel		
1 set of 1uL-10uL, 10uL- 100uL, 30uL- 300uL 8- channel		
For 1uL-10uL Single Channel and 8-channel Increments : 0.02µL Color coding : Purple/ Pink Compatible with 10uL pipette tips		
For 10uL-100uL Single Channel and 30uL-300uL 8 channel Increments : 0.2µL Color coding : Yellow		
For 100uL-1000uL Single Channel Increments : 1 µL Color coding : Blue		
Ergonomically shaped handle		

<p><i>Note to Bidders:</i> The terms of payment shall be as follows: <i>upon complete delivery of all items/services.</i></p>	<p>Signature of Representative _____ Name of Representative _____ Position _____ Company _____ Address _____ Telephone/Fax/Email _____</p>
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Sensitive valves for precise work with low volume pipettes		
Protected by filter and safety valve		
Autoclavable nosepiece and pipette holder		
Filter : Hydrophobic PTFE 0.2uM		
Compatible with China and US Made tips		
Inclusion:		
4 Pipette Stand		
At least 1 year warranty on parts and services		
Operation manual, Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation		

In compliance with Republic Act No. 9184, Section 18, and the 2016 Revised Implementing Rules and Regulations, Section 18, brand names are used because of compatibility with existing platforms or equipment which will maintain performance, functionality and useful life.

<p><i>Note to Bidders:</i> The terms of payment shall be as follows: <i>upon complete delivery of all items/services.</i></p>	<p>Signature of Representative _____ Name of Representative _____ Position _____ Company _____ Address _____ Telephone/Fax/Email _____</p>
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Price Schedule for Goods Offered from Abroad
[shall be submitted with the Bid if bidder is offering goods from Abroad]

For Goods Offered from Abroad

Name of Bidder _____ Project ID No. _____ Page ___ of ___

1	2	3	4	5	6	7	8	9	10
Item	Description	Country of origin	Quantity	Unit price EXW per item	Transportation and all other costs incidental to delivery, per item	Sales and other taxes payable if Contract is awarded, per item	Cost of Incidental Services, if applicable, per item	Total Price, per unit (col 5+6+7+8)	Total Price delivered Final Destination (col 9) x (col 4)
	Lot 1: Cold Storage								
1	Ultra Low Freezer Specifications <ul style="list-style-type: none"> ○ Type : Ultra-Low Freezer; Upright ○ Capacity: at least 816L ○ Temperature Range : -50 °C to -86 °C ○ Insulation : Vacuum Insulation Panels (VIP) + Water-Blown Polyurethane Foam (SNAP-compliant) ○ Interior : Stainless steel ○ Electrical: 208-230 V 		1 unit						

	<ul style="list-style-type: none"> ○ Number of Shelves : 3 ○ Capacity Shelf : 111 kg ○ Rack Capacity : 12 ○ Certifications/Compliance : cULus, ENERGYSTAR ○ Display : Touch-Screen LCD ○ Defrost : Manual ○ Dimensions (Exterior) : 37.6 x 39.6 x 78 in. (DxWxH) ○ Monitoring Options : Alarm, Recorder ○ Amperage : 4/10 A ○ Plug Type : NEMA 6-15 ○ Vial Capacity : 60,000 x 2 mL ○ Compressor : V-Drive Compressor ○ Refrigerant : R290 (1st stage), R170 + R290 mix (2nd stage) ○ With CO2 back up (with refillable tank cylinder) ○ With safety lock/safe alarms ○ Includes 6 racks (2 racks capacity of 16 2ml cryoboxes per rack; 4 racks for 15ml cryoboxes) and 320 pcs plastic cryoboxes (100 for 15ml tubes, 50 mL tube, 170 2 ml tube), cryo gloves (2 sets) ○ Inclusions: ○ AVR; 3KVA UPS ○ 1 set of filter 								
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	<ul style="list-style-type: none"> ○ At least 1 year warranty on parts and services ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. ○ 1 set Dry Ice Maker <ul style="list-style-type: none"> ■ Benchtop, CO2 Cylinder ■ External Dimensions : 390 x 515 x 640 mm (WxDxH) ■ Structure and Insulation : Stainless steel inside and outside ■ Type of ice : flakes ■ Production kg/24h (up to) : 23 ■ Bin capacity (kg) : 8 ■ Refrigerant : R134a CFC free ■ Compliance : 2014/30/CE, 2014/35/CE and following modifications ■ At least 1 year warranty on parts and services ■ AVR, 3KVA UPS 								
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2	<p>- 20 Freezer</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ Should reach -20°C, between -15°C to -25°C ○ Capacity: at least 659L ○ With CO2 back up (with refillable tank cylinder) ○ Data logs ○ Upright ○ Safety lock/ safe alarms ○ Non frosted ○ Includes 6 sliding stainless drawer racks and 320 pcs plastic cryoboxes (200 pcs cryoboxes for 10 x 10 1.5-2ml tube capacity; 70 pcs for 15ml cryoboxes; 50 pcs for 50 ml cryoboxes) ○ Plug Type : NEMA 6-15 ○ Certifications/Compliance : CE /cUL ○ Dimensions (Exterior) : 38.9 x 28.0 x 78.5 in. (LxWxH) ○ Display : Microprocessor ○ Refrigerant : R290 ○ Shelves : 4 ○ Single Solid door style ○ Inclusions: AVR; 3KVA UPS; at least 1 year warranty on parts and services ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 		2 units						
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3	<p>Refrigerator</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ Digital monitor display on top of the refrigerator ○ Temperature range(°C) : 2 - 8°C ○ With key lock ○ Capacity: 316L-1500L ○ Temperature controller: Microprocessor ○ Single glass door, with movable wheels ○ Inclusions: AVR; 3KVA UPS; at least 1 year warranty on parts and services ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 		2 units						
	Lot 2: Centrifuge								
1	<p>Biocontainment Microfuge</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ Platform : microfuge ○ Capacity : 36 x 1.5mL/2 mL tubes (max) ○ Detachable rotor 1.5mL and 2mL microcentrifuge 		1 unit						

	<p>tube with biocontainment lid</p> <ul style="list-style-type: none"> ○ Autoclavable rotor ○ Fixed angle aluminum rotor with aerosol-tight lid ○ Certification : BIOC ○ WithMax speed : 15,000 rpm; Max g-force: 20627 x g rpm and x g ○ Speed control : ± 50 rpm of set speed ○ Timed Run : To 99 min, 59 sec in one second increments or continuous ○ Max Capacity Volume Range : - 48 ml ○ Inclusions: ○ Compatible 3kVA UPS and AVR functions ○ Microcentrifuge tubes with attached flat caps, 1.5 mL, clear, 500 tubes ○ At least 1 year warranty on parts and services (PM; Calibration) ○ Tool Kit ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 								
2	<p>Refrigerated Centrifuge</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ Detachable rotor adaptor of 1.5mL, 2 mL, 5 mL, 15 mL, 50 mL, and 100 mL ○ Swing Bucket Rotor : 		1 unit						

	<p>4,700 rpm; 4255 x g</p> <ul style="list-style-type: none"> ○ Compatible with conical and round tubes ○ Fixed-angle Rotor : 18000 rpm; 29756 x g ○ Refrigeration : Yes, CFC Free ○ Maximum Capacity : 4 x 400 mL ○ Run Time : Timed (Up to 9 hrs, 59 mins), Hold, Pulse (short run) ○ Drive : Brushless induction ○ Acceleration/Deceleration Profiles : 10/10 ○ Operating Temperature : +2°C to +40°C ○ Set Temperature Range : -20°C to +40°C ○ Dimensions, lid closed : 46.0 x 70.7 x 37.0 cm (WxDxH) ○ Asynchronous 3-phase direct drive with detachable rotors (1.5 mL, 2 mL, 15 mL, 50 mL, 100 mL, 200 mL) ○ Inclusions: ○ 3KVA UPS ○ Rotor S6096 Microplate rotor ○ At least 1 year warranty on parts and services ○ Heat Block with shaker <ul style="list-style-type: none"> ■ HeatBlock Adaptor: 0.2 mL, 1.5 mL block, 2 mL, and 15 mL 								
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	<ul style="list-style-type: none"> ■ Digital ■ Temperature Range : Ambient +5°C to 150°C ■ Temperature Accuracy : ± 0.2°C ■ Timer (temp.) : 99 hour 59 min ■ Heating Method : Cartridge Heater ■ Capacity : 2 Block ■ Material : Heating plate and sample block : Aluminum; Inside : Stainless Steel ■ Dimensions : 238 x 230 x 170 mm (WxDxH) ■ Wattage : 600W ■ Frequency : 50/60 Hz ■ Tool Kit ■ Certificate of Conformance and Manual upon delivery. ■ Certificate of Calibration upon installation. 								
3	<p>Minifuge/Quickspin</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ Speed : 7200 rpm ○ RCF : 2350 g 		6 units						

	<ul style="list-style-type: none"> ○ Dimension : 150 mm x 100 mm ○ Detachable rotors for 0.2 mL tube, 1.5 mL tube, and 2 mL tube ○ Eight position microtube rotor ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. ○ Inclusion: ○ 4 x 8 (0.2 mL) PCR tube strip rotor ○ 8 x 1.5/2.0 mL microtube rotor ○ At least 1 year warranty on parts and services 								
	Lot 3: Biocontainment, Sterilization, and Small Equipment								
1	Biosafety Cabinet Class II Type A2 Specifications <ul style="list-style-type: none"> ○ Class II Type A2 ○ Exhaust air filter and efficiency : ULPA filter with 99.9995% efficiency ○ LCD Digital Display ○ Air quality : ISO 14644-1, Class 3, worldwide ○ Nominal inflow & downflow velocity: 0.53m/sec and 0.35m/sec 		2 units						

	<ul style="list-style-type: none"> ○ UV Sterilization ○ Working area : 1.5m - 2.0m x 1.5m - 2.0m ○ External Size : 1300 x 750 x 2250 mm ○ Foot rest; Foot switch for window height adjustments ○ With lock ○ With 2 waterproof socket inside ○ Certifications/compliance : EN12469; certified by TUV Nord; NSF49-USA ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. ○ Inclusions: ○ At least 1 year warranty on parts and services ○ Mobile floor stand ○ UV lamp ○ Electrical outlets;waterproof sockets ○ 3kVA UPS and AVR ○ One laboratory stool ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 								
2	<p>PCR Hood</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ LCD Display ○ External Size : 800 x 700 x 		2 units						

	<ul style="list-style-type: none"> 1770 mm ○ Work Surface Height : 750 mm ○ Material : Main body - cold-rolled steel with anti-bacterial powder coating; Work table - 304 stainless steel ○ Front and Side Windows : Motorized; 5 mm toughened glass, anti-UV ○ Max Opening : 300 mm ○ Pre-Filter : Polyester fiber, washable ○ HEPA Filter : 99.999% efficiency at 0.3μm ○ Airflow Velocity : 0.3-0.5m/s, speed adjustable ○ UV Lamp: 20Wx2; emission of 253.7 nanometers with UV timer ○ Illumination: \geq350lx ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. ○ Inclusions: ○ 3kVA UPS, AVR ○ UV lamp, fluorescent lamp ○ Base stand ○ Stainless steel shelf with IV bar and universal caster with leveling feet ○ 2 Waterproof socket ○ One lab stool ○ At least 1 year warranty on parts and services ○ Certificate of Conformance 								
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	and Manual upon delivery. Certificate of Calibration upon installation.								
3	<p>Sonicator</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ Processes 0.2 to 1000 mL ○ 500 watts ○ Programmable from 1 second to 10 hours ○ Pulse mode (1 second to 59 seconds) ○ Energy display ○ Applications include : nanoparticle dispersion, mixing and homogenization ○ Includes : generator, converter, ½ in diameter probe, power cable, wrench set ○ 220/230 V, 20kHz (Ultrasonic Frequency) ○ Dimensions : 15 x 18 x 9 in ○ Inclusions: ○ At least 1 year warranty on parts and services ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 		1 unit						

4	<p>Vortex Mixer</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ Speed range : variable 1000-3000 rpm (shaking to vortexing) ○ Orbit : 3.7 mm ○ Control : 3 positions slider - (top) intermittent, (middle) off, (bottom) continuous ○ Weight : 3.93 kg ○ Dimensions : 171 x 190 x 197 mm (WxDxH) (with mixing head in place) ○ SGS-US-C, CE, CB Scheme, RoHS 2, PSE, and WEE compliant ○ With horizontal head for 4 x 15 mL, for 2 x 50 mL, for 12 x 1.5/2.0 mL, plate rotor ○ Operating Modes : Touch or Continuous ○ Inclusions: ○ At least 1 year warranty on parts and services ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 		4 units						
5	<p>Heat Block</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ HeatBlock Adaptor: 0.2 mL, 1.5 mL block, 2 mL 		1 unit						

	<ul style="list-style-type: none"> ○ Digital ○ Certifications/Compliance : CE, cULus, RoHS ○ Controller Type : PID ○ Material : Powder-coated steel ○ No. of places : 2 blocks ○ Relative Humidity : <80% ○ Temperature Range : Ambient +5°C to 130°C ○ Type : Dry Bath/Block ○ Fuse: 250V 5A ○ Heat up Time : ≤ 20 mins 30°C to 130°C ○ Temperature Accuracy : ≤ ± 0.5°C ○ Temperature Uniformity : ≤ ± 1°C ○ Timer : 0 to 99:59 min or continuous ○ Dimension : 12.5 x 7.9 x 3.9 in (LxWxH) ○ Voltage : 100/120 V ○ Frequency : 50/60 Hz ○ Inclusions: ○ At least 1 year warranty on parts and services ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 								
6	<p>Drying Oven</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ Temperature Range : 5°C to 250°C 		1 unit						

	<ul style="list-style-type: none"> ○ Temperature Sensor : Fe-Const ○ Control System : Programmable Microprocessor ○ Temperature Set and Display Sensitivity : 1°C ○ Temperature Variation at 150°C : ± 2°C ○ Temperature Fluctuation : ± 1°C ○ Programmable Alarm Limits : ± 2°C/10°C ○ Timer : 1 minute - 99,9 hours + hold position ○ Delayed Start Timer : 1 minute - 99,9 hours ○ Selectable Recording Frequency on Memory Stick : 1 -999 minutes ○ Useful volume : 55 L ○ Number of shelves (standard/max) : 2/7 ○ Internal Material : Stainless Steel ○ External Material : Epoxy - Polyester Powder Coated Steel ○ Internal Dimension : 410 x 370 x 360 mm (WxDxH) ○ External Dimension : 645 x 565 x 710 mm ((WxDxH) ○ Power Supply : 230 V, 50/60 Hz ○ CE certified ○ Inclusion : ○ 1 year warranty on parts and services 								
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	<ul style="list-style-type: none"> ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 								
7	<p>Autoclave</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ Operating temperature range : Sterilizing (105-135°C); Heating (45-104°C); Warming (45-95°C) ○ Maximum operating pressure : 0.263MPa ○ Temperature Display : Digital ○ Pressure Gauge Display : Analog ○ Pressure Gauge Display Range : 0 - 0.4 MPa ○ Heat Source : 2.0 kW electric heater ○ Safety device : water level sensor, current leakage breaker, lid interlock, overheat prevention, over-pressure prevention, open temperature sensor detection, safety valve ○ Time Display : Digital ○ Setting Range : Sterilizing/Heating : 0:01-9:59/1-99 hours/1-999 minutes/0:01-9:59,10-99 hours (selectable); Warming : 1-99 hours 		1 unit						

	<ul style="list-style-type: none"> ○ Chamber dimensions: 325x733 mm ○ Chamber capacity: internal volume of the chamber : 58L ○ Chamber Material : SUS304 ○ Rated Voltage : 230V AC ○ Power consumption : 2kW ○ Fine pressure adjustment function, Ion detector for water level detection, microprocessor for controlling temperature, standard equipped cooling fan (2 fans), variable exhaust speed (6 levels), Operation start timer, built-in exhaust bottle (polypropylene), flat internal surface of the chamber, top-open lid, foot pedal to open lid, operation indication lamp, liquid sterilizing course selectable ○ Inclusions: ○ 2 Stainless baskets (300 x 181 mm) ○ 1 chamber bottom plate ○ 4 caster stoppers ○ At least 1 year warranty on parts and services ○ AVR, 3kVA UPS ○ 1 Digital warranty information ○ 1 Inspection sheet ○ Certificate of Conformance 								
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	and Manual upon delivery. Certificate of Calibration upon installation, 1 clear folder, 1 screw (for attaching the clear folder)								
8	<p>Bead Mill Homogenizer</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ Type : Homogenizer ○ For Use With (Application) : DNA/RNA extraction, tissue homogenization, protein purification ○ Weight : not more than 25 kg ○ Simultaneously homogenize up to 24 x 2 mL or 0.5 mL tubes ○ Front-loading tube holder position ○ No cool-down required between runs (non-stop processing) ○ Disposable tubes to ensure no threat of cross-contamination ○ No sample degradation due to quick processing ○ Smaller footprint to maximize bench space ○ Run Time : 1 to 99 seconds ○ Performance Range : 0.8 m/s to 6 m/s in increments of 1.5 m/s ○ Number of Cycles : 1 - 9 		1 unit						

	<ul style="list-style-type: none"> ○ CE Compliant ○ Inclusions: ○ Ceramic beads (6 packs), AVR, 3kVA UPS ○ 1 operation manual, 1 clear folder, 1 screw (for attaching the clear folder) ○ At least 1 year warranty on parts and services ○ Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation. 								
	Lot 4: Liquid Handling System								
1	Pipet Aide Specifications <ul style="list-style-type: none"> ○ Suitable for 0.5 mL to 100 mL pipettes ○ Ergonomically shaped handle ○ Sensitive valves for precise work with low volume pipettes ○ Protected by filter and safety valve ○ Autoclavable nosepiece and pipette holder ○ Filter : Hydrophobic PTFE 0.2uM ○ Pipette Types : Glass or Plastic 0.5-100mL 		1 unit						

	<ul style="list-style-type: none"> ○ Inclusion: ○ Charging Stand ○ At least 1 year warranty on parts and services ○ 1 operation manual, Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation 								
2	<p>Micropipettor</p> <p>Specifications</p> <ul style="list-style-type: none"> ○ Manual pipette ○ 3 sets of 1uL-10uL, 10uL-100uL, 100uL-1000uL single channel ○ 1 set of 1uL-10uL,10uL-100uL, 30uL- 300uL 8-channel ○ For 1uL-10uLSingle Channel and 8-channel <ul style="list-style-type: none"> ■ Increments : 0.02µL ■ Color coding : Purple/ Pink ■ Compatible with 10uL pipette tips ○ For 10uL-100uLSingle Channel and 30uL-300uL 8 channel <ul style="list-style-type: none"> ■ Increments : 0.2µL ■ Color coding : Yellow ○ For 100uL-1000uLSingle 		4 sets						

	<p>Channel</p> <ul style="list-style-type: none"> ■ Increments : 1 μL ■ Color coding : Blue <ul style="list-style-type: none"> ○ Ergonomically shaped handle ○ Sensitive valves for precise work with low volume pipettes ○ Protected by filter and safety valve ○ Autoclavable nosepiece and pipette holder ○ Filter : Hydrophobic PTFE 0.2μM ○ Compatible with China and US Made tips ○ Inclusion: ○ 4 Pipette Stand ○ At least 1 year warranty on parts and services ○ Operation manual, Certificate of Conformance and Manual upon delivery. Certificate of Calibration upon installation 								
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Name: _____

Legal Capacity: _____

Signature: _____

Duly authorized to sign the Bid for and behalf of: _____