

## ***Section VII. Technical Specifications***

### **Notes for Preparing the Technical Specifications**

A set of precise and clear specifications is a prerequisite for Bidders to respond realistically and competitively to the requirements of the Procuring Entity without qualifying their Bids. In the context of Competitive Bidding, the specifications (e.g. production/delivery schedule, manpower requirements, and after-sales service/parts, descriptions of the lots or items) must be prepared to permit the widest possible competition and, at the same time, present a clear statement of the required standards of workmanship, materials, and performance of the goods and services to be procured. Only if this is done will the objectives of transparency, equity, efficiency, fairness, and economy in procurement be realized, responsiveness of bids be ensured, and the subsequent task of bid evaluation and post-qualification facilitated. The specifications should require that all items, materials and accessories to be included or incorporated in the goods be new, unused, and of the most recent or current models, and that they include or incorporate all recent improvements in design and materials unless otherwise provided in the Contract.

Samples of specifications from previous similar procurements are useful in this respect. The use of metric units is encouraged. Depending on the complexity of the goods and the repetitiveness of the type of procurement, it may be advantageous to standardize the General Technical Specifications and incorporate them in a separate subsection. The General Technical Specifications should cover all classes of workmanship, materials, and equipment commonly involved in manufacturing similar goods. Deletions or addenda should then adapt the General Technical Specifications to the particular procurement.

Care must be taken in drafting specifications to ensure that they are not restrictive. In the specification of standards for equipment, materials, and workmanship, recognized Philippine and international standards should be used as much as possible. Where other particular standards are used, whether national standards or other standards, the specifications should state that equipment, materials, and workmanship that meet other authoritative standards, and which ensure at least a substantially equal quality than the standards mentioned, will also be acceptable. The following clause may be inserted in the Special Conditions of Contract or the Technical Specifications.

#### **Sample Clause: Equivalency of Standards and Codes**

Wherever reference is made in the Technical Specifications to specific standards and codes to be met by the goods and materials to be furnished or tested, the provisions of the latest edition or revision of the relevant standards and codes shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national or relate to a particular country or region, other authoritative standards that ensure substantial equivalence to the standards and codes specified will be acceptable.

Reference to brand name and catalogue number should be avoided as far as possible; where unavoidable they should always be followed by the words "*or at least equivalent.*" References to brand names cannot be used when the funding source is the GOP.

Where appropriate, drawings, including site plans as required, may be furnished by the Procuring Entity with the Bidding Documents. Similarly, the Supplier may be requested to provide drawings or samples either with its Bid or for prior review by the Procuring Entity during contract execution.

Bidders are also required, as part of the technical specifications, to complete their statement of compliance demonstrating how the items comply with the specification.

# Technical Specifications

Item No.	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>
<b>LOT 1 – CADAVER PRESERVATION AND DISSECTION TANK</b>		
3	<p><b>CADAVER PRESERVATION AND DISSECTION TANK</b></p> <p>Specially designed according to the requirement of public security first class demonstration criminal science and technology, using stainless steel SUS high quality sheet metal molding, precision manufacturing, acid and alkali resistance and overall luxurious atmosphere.</p> <p><b>PRODUCT FEATURES:</b></p> <ul style="list-style-type: none"> <li>▪ The operating table can me manually remove to facilitate cleaning</li> <li>▪ The table cover can be pulled open on both sides of the table</li> <li>▪ The table can be directly lifted to dissect corpse and can be lowered again to stored with Formalin</li> </ul> <p>- Dimension : 2200 x 720 x 840mm                      = Material : 304 Stainless Steel</p>	

Hale

2

- Voltage : 220V/50Hz
- Table Thickness : 1.5mm
- Body Thickness : 1.2mm
- Load Capacity :  $\geq$ 150kg
- Lifting Type : Hydraulic
- Stretch(Tensile Test) : 520 N/mm<sup>2</sup>
- Surface Hardness : HV200

**LOT 2 – LABORATORY CABINET**

**BIOSAFETY CABINET**

**FEATURES**

- Class II Biological Safety Cabinets
- Displays all safety information on one screen
- Centered and angled down for easy reach & viewing
- H14 filtration system operate at a typical efficiency of >99.999% at 0.1 to 0.3 micron sizes
- ISOCIDE powder coat inhibit microbial growth to improve safety
- Microprocessor control alarm system supervise operation of all cabinet functions. Monitor both exhaust and downflow.
- Robust cabinet construction with key components, including fluorescent lamps, control system are located away from contamination air to permit service without decontamination.

**TECHNICAL PARAMETERS**

- 2
- Cabinet: Stainless Steel Sides
  - External Dimension (W x D x H): 1340 x 810 x 1400 mm / (52.8” x 31.9” x 55.1”)
  - Internal Dimension (W x D x H): 1220 x 580 x 670 mm / (48.0” x 22.8” x 26.4”)
  - Tested Opening: 175 mm (7”)
  - Airflow Velocity
    - o Inflow: 0.45 m/s (89 fpm)
    - o Downflow: 0.30 m/s (60 fpm)
  - Airflow Volume
    - o Inflow: 346 cmh (204 cfm)
    - o Downflow: 764 cmh (449 cfm)
    - o Exhaust: 346 cmh (204 cfm)
    - o Filter Efficiency: (%) >99.999% at 0.1 to 0.3 micron, ULPA; >99.999% at MPPS, H14
    - o Sound Emission: 57 dBA
    - o Fluorescent Lamp Intensity: 1118 lux (104 foot-candles)
  - Cabinet Construction
    - o Main Body: 1.2 mm (0.05”) / 18-gauge EG Steel with Isocide Oven-Baked Epoxy-Polyester
  - Powder Coating

	<ul style="list-style-type: none"> <li>o Workzone: Single-piece work tray, 1.5 mm (0.06") / 16 gauge, SS304, with stainless steel side wall</li> <li>o Electrical: Maximum Power / Current Consumption: 360 W / 2 A</li> <li>o Nominal Power Consumption: 308 W</li> <li>o Outlet Amp Fuse: 5 A</li> <li>o Full Load Amps: 7 A</li> <li>o BTU/Hr: 874</li> </ul> <p><b>INCLUDED ACCESSORIES</b></p> <ul style="list-style-type: none"> <li>▪ UV Lamp</li> <li>▪ American Style Service Fixture with 22mm Thread Length – Universal</li> <li>▪ Support Stand with Caster Wheels (Height 28")</li> <li>▪ Supply of Automatic Voltage Regulator (AVR) 1 KVA</li> <li>▪ ONSITE TRAINING at USTP-CDO Campus by a Certified Biosafety Engineer for the Two (2) Personnel (Laboratory Custodian and Medical Technologist)</li> <li>▪ Issuance of calibration/service report after installation</li> </ul>	
4	<p><b>FUMEHOOD WITH BASE CABINET</b></p> <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>▪ Centrifugal Fan</li> <li>o Permanently lubricated fans are energy efficient with external rotor motor design that reduces operating costs.</li> <li>▪ Nanocarb Activated Carbon Filters</li> <li>o Optimized retention capacity</li> <li>o Diffusion technology to ensure even filter loading</li> <li>o Efficient perimeter clamping ensures no leakage as well as allows easy filter change procedure.</li> <li>▪ Rear Walls: Electro galvanized steel wall for superior durability</li> <li>▪ Advanced microprocessor control supervises operation of all hood functions.</li> <li>▪ 24-hour clock and blower run hour meter are standard.</li> <li>▪ Silver-ion impregnated powder coat that inhibit microbial growth to improve safety</li> <li>▪ Auto Purge Slots: Improves containment and operator protection by preventing accumulation of fumes in the work zone</li> </ul> <p><b>TECHNICAL PARAMETERS</b></p> <ul style="list-style-type: none"> <li>- Nominal Size: 1.2 meter (4')</li> <li>- External Dimensions (W x D x H): 1340 x 736 x 1460 mm / (52.8" x 29.0" x 57.5")</li> </ul>	

- Internal Work Area (W x D x H): 1268 x 596 x 765 mm / (50.0" x 23.5" x 30.1")
- Standard Filtration Elements:
  - o Pre-filter: Disposable, non-washable polyester fibre, 85% arrestance
  - o Main filter: Activated Carbon with Granular Media bed
  - o Back-up Filter: Activated Carbon with Granular Media bed
- Airflow alarm
- o Inflow Air Velocity: 0.40 m/s - 0.6 m/s (80-120 fpm)
- o Sound Emission: ≤65 dBA
- o Fluorescent Light Intensity: >1397 lux / (>130 foot-candles)
- Hood Construction:
  - o Main Body: 1.2 mm (0.05") 18 gauge electro-galvanized steel with white oven-baked epoxy-polyester Isocide antimicrobial powder coated finish
  - o Side Walls: Tempered Glass
  - o Work Top: 1.5 mm (0.06") 16 gauge stainless steel, type 304, with 4B finish
  - o Sash: Sloped Front: 3°
  - o Sash Type: Vertical Sliding Electrical
  - o Cabinet Full Load Amps (FLA): 2 A
  - o Cabinet Nominal Power: 355 W
  - o Cabinet BTU/Hr: 1211

**INCLUDED ACCESSORIES**

- Base Storage Cabinet with Castor Wheels
- Code A Standard Filter - 595mm x 520mm x 65mm
- Code B Acid Secondary Backup Filter - 900mm x 546mm x 40mm
- Volatile organic compound (VOC) Sensor
- Swan-neck Faucet and PP Drip Cup
- Direct Mounted Electrical Outlet - Plug Code A
- American Style Service Fixture with 50mm Thread Length - Universal
- European Style Service Fixture with 50mm Thread Length - Water
- Worktop Upgrade from SS304 to Epoxy Resin
- Supply of Automatic Voltage Regulator (AVR) 1 KVA

**LOT 3 – SCANTRON TEST SCORING MACHINE**

5	<p><b>SCANTRON TEST SCORING MACHINE</b></p> <ul style="list-style-type: none"> <li>• Scanning capacity of 2,800 sheets</li> <li>• Pencil Read Only (reads both sides)</li> <li>• Automatic Input hopper 100 sheets cap.</li> <li>• Two push button programmable switches operator panel</li> <li>• Async. Comm. cable ( Serial RS232 &amp; USB Cable)</li> <li>• Able to print Scores on the Test Answer Sheet</li> <li>• Scantools Ver. 8.3</li> <li>• SOFTWARE (Creates the following reports) included – Masterlist, Examinee Ranking, Test Performance, Frequency Distribution, Summary Statistics, Examinee Response &amp; Item Analysis.</li> </ul>	
<b>LOT 4 – ICT EQUIPMENT</b>		
1	<p><b>AUDIO MIXER</b></p> <p>8-Channel Compact Mixer with USB, Bluetooth, and Multi-FX; USB I/O for audio playback and stereo recording; Dedicated Bluetooth channel with mix-minus return for feedback-free phone pairing; Four (4) Headphone Outputs with Independent Volume Control; 16 Built-in Multi-fx with Dedicated Return Channel; 1/4" Main, Tape, and AUX outputs; Four mic input channels with phantom power and balanced line inputs; Two stereo input channels with balanced 1/4" TRS jacks; Two-band EQ on all channels; 2-track inputs w/ assignable routing: main mix or headphone out; Eight-segment LED VU meter for precise level monitoring; Extra knob caps included in the box for added customization</p>	
6	<p><b>SPEAKER WALL MOUNT BRACKET AND CABLES AND CONNECTORS</b></p> <ul style="list-style-type: none"> <li>- Speaker Wall Mount Bracket Heavy duty</li> <li>- Type: wall mount</li> <li>- Material: Metal</li> <li>- Color: Black</li> <li>- Adjustable: 90°-30° Degree (6 pcs)</li> <li>- Cables and connectors</li> <li>- XLR Microphone cable 100m (5 pcs)</li> <li>- XLR female connector (5 pcs)</li> <li>- XLR male connector (5 pcs)</li> <li>- 1 x 3.5mm stereo plug to 2 x 6.3mm TS plug connector 5m (2 pcs)</li> </ul>	

7	<p><b>SPEAKERS</b></p> <p>2000-Watt 10-Inch 2-Way Powered Loudspeaker With Bluetooth, DSP &amp; APP CONTROL, 2000W peak (1300 LF + 700 HF), 1000 W continuous RMS (650 LF + 350 HF) FREE App (iOS/Android) for remote configuration and control; Bluetooth audio streaming direct from device; On-board DSP with 4 Speaker Use modes (inc. Custom EQ via App); True Wireless Stereo speaker linking via Bluetooth; Integrated 3-channel mixer with dual XLR ¼-inch combo inputs, mic/line switches and independent level controls XLR Mix output, Speaker Use, and Sub Size Controls 10” driver, 2.0” (50 mm) high-temperature voice coil 1” exit ceramic driver with 1.4” (35 mm) coil; Lightweight enclosure for easy transport, set up and installation; Versatile design - pole-mountable, wedge monitor or flown application with integral M10 suspension points; Powerful and efficient class D amplifiers with fanless cooling design to run cleaner, quieter and with greater long-term reliability</p>	
8	<p><b>WIRELESS MICROPHONE SYSTEMS</b></p> <ul style="list-style-type: none"> <li>- Dual Channel UHF Wireless Handheld Microphone System</li> <li>- Frequency Band: 640 MHz - 690 MHz</li> <li>- Operating Range: ≈ 50 meters</li> <li>- Frequency Increment: 250 kHz</li> <li>- Bandwidth: 50 MHz</li> <li>- S/N Ratio: ≥ 50 dB (including pickup, according to China GB standard)</li> <li>- Shipping Weight: 2.5kg</li> <li>- Dimensions (L×W×D) 480 × 340 × 70 mm</li> <li>- Receiver: <ul style="list-style-type: none"> <li>&gt; Frequency Deviation: ±10 kHz</li> <li>&gt; Frequency Preparation: PLL synthesized control</li> <li>&gt; Receiving Mode: CPU controlled selection + Pilot tone detection</li> <li>&gt; Mute Mode: Mute &amp; Lock Loop Circuit</li> <li>&gt; Display: LCD</li> <li>&gt; Power Requirement: 12 VDC, 1.25 A</li> <li>&gt; Audio Output Connector: 2 × balanced XLRs, 1 × 6.35mm unbalanced TS</li> </ul> </li> <li>Transmitters: <ul style="list-style-type: none"> <li>- Frequency Preparation: PLL synthesized control</li> <li>- Transmission Power: ≤ 30mW</li> </ul> </li> </ul>	

<ul style="list-style-type: none"><li>- Transmission: CPU controlled selection + Pilot tone detection</li><li>- Frequency Deviation: <math>\pm 10</math> kHz</li><li>- Display: LCD</li><li>- Pickup Cartridge: Dynamic</li><li>- RF Output power: High, Low</li></ul>	
<b>***** Nothing Follows*****</b>	

Additional Requirements:

The technical specification that shall be submitted by the Bidder shall include, among others:

- a. product specifications as supported by brochures or catalogues;*
- b. certification from the manufacturer as authorized distributor/reseller;*
- c. certification of one (1) year warranty for the product offered;*
- d. bidder's certification that it has after-sales support; and*
- e. bidder's certification of certified technician for the product offered.*