



July 30, 2019

**Bid Bulletin No. 1**

**Subject: Supply, Delivery and Installation of Various Laboratory Equipment for Crop Biotechnology Center (Group I) under PB 19-03-17**

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This bid bulletin is being issued to clarify and/or amend the schedule of requirements and technical specifications for Project 1 & 2 of the Supply, Delivery and Installation of Various Laboratory Equipment for Crop Biotechnology Center (Group I) as follows:

**Revised Schedule of Requirements and Technical Specifications:**

Attached is the revised schedule of requirements and technical specifications for the complete details.

Please be guided accordingly.

(Original signed)  
**AURORA M. CORALES**  
BAC Vice-Chairperson

## Section VI. Revised Schedule of Requirements

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

Item no.	Description	Qty	Unit	Total ABC (in PhP)	Delivered, Weeks/Months
<b>PROJECT 1</b>					
1	Manual Single-channel Multi-Dispense Variable Pipettor	4	Units	64,000.00	Within 90 calendar days upon receipt of PO/NTP
2	Digital Repetitive Dispenser, 0.4-2.0 mL	2	Units	96,000.00	Within 90 calendar days upon receipt of PO/NTP
3	Magnetic Stand-96 Well	2	Units	120,000.00	Within 90 calendar days upon receipt of PO/NTP
4	Bottletop Dispenser, Adjustable with standard valve	4	Units	140,000.00	Within 90 calendar days upon receipt of PO/NTP
5	Benchtop Microcentrifuge	2	Units	160,000.00	Within 90 calendar days upon receipt of PO/NTP
6	Ampule Pod for Labconco Lyophilizer/Freeze Dryer	1	Unit	180,000.00	Within 90 calendar days upon receipt of PO/NTP
7	Multi-dispense 8-channel Pipettor	5	Units	185,000.00	Within 90 calendar days upon receipt of PO/NTP
8	Laboratory Blender	1	Unit	200,000.00	Within 90 calendar days upon receipt of PO/NTP
9	Electronic Weighing Scale	2	Units	260,000.00	Within 90 calendar days upon receipt of PO/NTP
10	Top Loading Balance	4	Units	360,000.00	Within 90 calendar days upon receipt of PO/NTP
11	Water Bath	1	Lot	450,000.00	Within 90 calendar days upon receipt of PO/NTP
12	Analytical Balance	4	Units	480,000.00	Within 90 calendar days upon receipt of PO/NTP
13	Non-refrigerated Microcentrifuge	3	Units	600,000.00	Within 90 calendar days upon receipt of PO/NTP
14	Shaking Incubator	1	Lot	780,000.00	Within 90 calendar days upon receipt of PO/NTP
15	Rotary Vacuum Evaporator	1	Unit	890,000.00	Within 90 calendar days upon receipt of PO/NTP
16	Benchtop pH meter	4	Units	200,000.00	Within 90 calendar days upon receipt of PO/NTP
17	Ultraviolet-Visible Spectrophotometer	1	Unit	800,000.00	Within 90 calendar days upon receipt of PO/NTP
<b>PROJECT 2</b>					
1	Ultra High Speed Centrifuge	1	lot	6,500,000.00	Within 90 calendar days upon receipt of PO/NTP



## ***Section VII. Revised Technical Specifications for PB 19-03-17 for Project 1***

Item	Specification	Statement of Compliance
1.	<p><b>Manual Single-channel Multi-Dispense Variable Pipettor (4 units) made up of steel alloy body or equivalent;</b>            Volume range: 0.5 to 10 uL  <b>Inaccuracy: 0.5-10ul = 5% / 2%</b>  <b>Increment: 0.1ul</b></p> <p>Features:</p> <ul style="list-style-type: none"> <li>• Fully-autoclavable body</li> <li>• Metal tip cones with double "O" rings for optimal sealing and precision</li> <li>• Compatible with all major pipette tip brands</li> <li>• Finger hook</li> <li>• Volume Lock</li> <li>• Tip ejector</li> <li>• Manifold 360 enabling pipetting in any direction and angle</li> <li>• Exchangeable volume control knob-choose between variable or fixed volume controllers</li> </ul>	<p>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 Bidders 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 provisions of <b>ITB</b> Clause 3.1(a)(ii) and/or <b>GCC</b> Clause 2.1(a)(ii).</p>





	<ul style="list-style-type: none"> <li>Printed serial number on each pipette</li> <li>Secure volume lock</li> </ul> <p><b>Inclusions:</b></p> <ul style="list-style-type: none"> <li><b>Calibration certificates</b></li> <li><b>5 Racks of sterile tips compatible with the pipettor</b></li> </ul> <p><b>With 2-years warranty on parts and services</b></p>	
2.	<p>Digital Repetitive Dispenser (2 units) Volume range: 0.4 to 2 mL Increment: 0.01 mL <b>Accuracy: <math>\pm 1\%</math> full scale accuracy and <math>\pm 0.2\%</math> full scale reproducibility</b></p> <p>Features:</p> <ul style="list-style-type: none"> <li>Compatible with all major pipette tip brands</li> <li>Secure volume lock</li> <li>Dispensing from most types of liquid containers is possible,</li> <li>Easy to use with fixed volume adjustment</li> <li>Light weight design for one-hand operation</li> <li>The glass cylinder and plunger are protected by plastic housings</li> </ul> <p><b>Inclusions:</b></p> <ul style="list-style-type: none"> <li><b>Calibration certificates</b></li> <li><b>5 Racks of sterile tips compatible with the pipettor</b></li> </ul> <p><b>With 2-years warranty on parts and services</b></p>	
3.	<p>Magnetic Stand-96 Well (2 units) Purpose: for paramagnetic bead precipitation from standard 96-well, U-bottom microplates, and 0.2 mL PCR plates Material: Clear polyacrylic base in standard SBS 96-well microplate footprint</p> <p><b>With 2-years warranty on parts and services</b></p>	
4.	<p>Bottletop Dispenser, Adjustable w/ standard valve (4 Units) <b>Volume range: 0.1-2.0 mL</b> Increment: 0.05 mL Accuracy: <math>\pm 0.5\%</math></p>	



	<p>Precision: 0.1%</p> <p>Features:</p> <ul style="list-style-type: none"> <li>• 3 sized adaptors for fitting with various types of bottles (100-mL, 500-mL, and 1-L bottles)</li> <li>• With chemical-guard materials used for liquid contact parts</li> <li>• Adjustable inlet tube for various types of bottles</li> <li>• With liquid returning mechanism for minimizing the waste of reagents</li> <li>• Acid and organic solvent resistant</li> </ul> <p><b>Inclusion:</b></p> <ul style="list-style-type: none"> <li>• <b>Calibration certificates</b></li> </ul> <p><b>With 2-years warranty for parts and services</b></p>	
5.	<p>Benchtop Microcentrifuge (2 units)</p> <p><b>Rotation speed: 6000 rpm or higher, fixed</b> Max RCF = 2000 x g <b>or higher</b></p> <p>Tube rotors: 2 (6-8 x 0.5 to 2.0 mL tube and 8-16 x 0.2 mL (singles or 2 x 8 strip tubes))</p> <p><b>Interchangeable rotors and adapters for 0.5-2.0mL microtubes or PCR strips</b> 6-8 tube adapters for 0.2mL 6-8 tube adapters for 0.5mL</p> <p><b>Noise: &lt;55 decibel</b> Power requirement: 240V 50/60 Hz, with 4 interchangeable plug type</p> <p><b>Features:</b></p> <ul style="list-style-type: none"> <li>• <b>Rubber feet to keep it stable and minimize the vibration</b></li> <li>• <b>Automatically shuts off when the cover is open</b></li> <li>• <b>The power switch (or the emergency safety switch) can stop the rotor in seconds</b></li> </ul> <p><b>With 2-years warranty on parts and service and 1-time preventive maintenance within warranty period</b></p>	
6.	<p><b>Ampule Pod for Lyophilizer/Freeze-dryer (1 unit)</b> Size: 1/2 in. tubing port diameter Material: Polypropylene base with 15 silicone tubing ports, 15 plugs, and two clamps</p>	



	<p><b>Features:</b></p> <ul style="list-style-type: none"> <li>• <b>Must be compatible with the existing Labconco Lyophilizer/Freeze-dryer</b></li> </ul> <p>Inclusion:</p> <ul style="list-style-type: none"> <li>• 1 straight stainless steel adapter for connection to a drying accessory valve port</li> <li>• Oxygen/natural gas sealing torch - specifically designed for flame sealing freeze dry samples, seals all types of heat-resistant glass, and connects to natural gas, butane or propane and oxygen with 1/4" ID hose connectors</li> <li>• 1 pack (100 pcs) of 1 mL, pre-scored, flat bottom ampules</li> <li>• 1 pack (100 pcs) of 2 mL, pre-scored, flat bottom ampules</li> <li>• 1 pack (100 pcs.) of 10ml, pre-scored, flat bottom ampules</li> </ul> <p><b>With installation and 2-years warranty on parts and services</b></p>	
7.	<p><b>Multi Dispense 8-Channel Pipettor (5 units)</b> Capacity: 0.5 to 10 uL <b>Inaccuracy (±)%: 1-2.5 volume dependent</b> <b>Imprecision (±)%: 0.8-1.5 volume dependent</b> <b>Increment 0.1 ul</b> <b>Volume format: Adjustable</b> <b>Body structure: Steel alloy body or equivalent</b></p> <p>Features:</p> <ul style="list-style-type: none"> <li>• Fully-autoclavable body</li> <li>• No Disassembly</li> <li>• Metal tip cones with double "O" rings for optimal sealing and precision required</li> <li>• With lever ejector arm which considerably reduces thumb workload</li> <li>• Manifold 360, enabling pipetting, in any direction and angle</li> <li>• Exchangeable volume control knob-choose between variable or fixed volume controllers</li> <li>• <b>Printed serial number</b></li> <li>• Secure volume lock</li> </ul> <p>Inclusion:</p> <ul style="list-style-type: none"> <li>• Calibration certificate</li> <li>• <b>5 Racks of sterile tips compatible with the pipettor</b></li> </ul>	



	<b>With 2-years warranty on parts and services</b>	
8.	<p>Laboratory Blender (1 unit) Capacity: 4 Liters <b>Material: container must be made up of stainless steel with stainless steel blades and clamp-on lid with rubber gasket and stopper</b> Electrical requirements: 220-240V, 50/60 Hz Electrical power: 3.75 HP motor offers 3 speeds plus pulse <b>Maximum speed: Max</b> at 20,800 rpm, medium at 18,000 rpm and low at 15,800 rpm; Features:</p> <ul style="list-style-type: none"> <li>• Has full-traction rubber, non-skid base</li> <li>• With sealed, precision ball bearing system for a long service life</li> <li>• Easy-to-clean and easy-to-use electronic membrane keypad</li> <li>• Metal-on-metal, stainless steel coupling system for durability and reliability</li> </ul> <p>With <b>2-years warranty</b> on parts and service and 1 time preventive maintenance within warranty period</p>	
9.	<p>Electronic Weighing Scale (2 units) <b>Material: Stainless steel</b> Maximum Capacity: 52 kg Minimum display: 1 g Pan Size: 345 x 250 mm; <b>Accuracy: 5.0 g</b> Linearity: ±1 g; Stability time: 2 sec Display: LCD Units available: g, kg, ct, mom, %, pcs, lb, oz, ozt, tl, dwt, GN, t, d <b>Power requirements: 220V/60Hz</b></p> <p><b>Inclusion:</b> <b>Calibration certificate</b></p> <p>With <b>2-years warranty</b> on parts and service and 1-time preventive maintenance within warranty period</p>	
10.	<p>Top Loading Balance (4 units) <b>Maximum Capacity: 4200 g</b> Readability: 0.1 g Repeatability: 0.1 g Linearity: 0.2 g <b>Response time: 2.5 sec or faster</b> <b>Dimension: about 7.5 x 12.5x 3 inches</b> <b>Electrical requirement: 240V/60Hz</b></p>	





	<p>Features:</p> <ul style="list-style-type: none"> <li>• Large liquid crystal display</li> <li>• Real time clock (date and time)</li> <li>• Comprehensive range of integrated application programme</li> <li>• With various weight units, piece counting, percentage weighing, statistic, net total application, density determination</li> <li>• With RS232 interface to printer or PC</li> </ul> <p>Inclusion:</p> <ul style="list-style-type: none"> <li>• Calibration certificate</li> </ul> <p>With <b>2-years warranty</b> on parts and service and 1-time preventive maintenance within warranty period</p>	
11.	<p>Water Bath (1 lot)</p> <p>1 unit – 10L Capacity Temperature range: <b>Ambient</b> to 100°C Cabinet material: Epoxy powder-coated steel Chamber material: Stainless steel; Temperature presets: 4 Temperature uniformity: <math>\pm 0.2^\circ\text{C}</math> Controller type: Digital Display: Monochrome LCD Inclusions:</p> <ul style="list-style-type: none"> <li>• Clear polycarbonate gable cover, and diffuser tray</li> <li>• <b>5 float racks for 1.5/2ml tubes</b></li> <li>• <b>5 float racks for 0.5 tubes</b></li> <li>• <b>Calibration certificate</b></li> </ul> <p>2 units - <b>28L to 30L Capacity</b> Temperature range: Ambient to 100°C Cabinet material: Epoxy powder-coated steel Chamber material: Stainless steel Temperature presets: 4 Temperature uniformity: <math>\pm 0.2^\circ\text{C}</math> Temperature Stability <math>\pm 0.1^\circ\text{C}</math> Electrical Requirements: 220V, 50/60 Hz, 800 W Certifications/Compliance: UL, CE Controller type: Digital Display: Monochrome LCD Inclusions:</p> <ul style="list-style-type: none"> <li>• Clear polycarbonate gable cover, and diffuser tray</li> <li>• <b>5 float racks for 1.5/2ml tubes per unit</b></li> <li>• <b>5 float racks for 0.5 tubes per unit</b></li> <li>• <b>Calibration certificate</b></li> </ul>	





	<p>Features</p> <ul style="list-style-type: none"> <li>• Free up valuable bench space with smaller footprint</li> <li>• Advanced microprocessor controller designed for extended functionality</li> <li>• Protect work with audible alarms</li> <li>• Conveniently save commonly used settings with four temperature presets</li> <li>• Simple to operate and monitor with icon-based graphical display</li> <li>• Enhanced hinge design supports open lid configuration and easy lid removal</li> <li>• Help prevent bath damage and overheating with low-fluid protection</li> </ul> <p>With <b>2-years warranty</b> on parts and service and 1-time preventive maintenance within warranty period</p>	
<p>12.</p>	<p>Analytical Balance (4 units) Maximum capacity: 220 g <b>Minimum capacity: 0.001 g</b> Readability: 0.0001g <b>Pan Size: 70 - 90 mm dia.</b> Units of measurement: g, mg, ct, GN, mo, oz, dwt <b>Response time: 2.5 sec or faster</b> Power supply: AC adapter 230V Tare range (subtractive): 220g Repeatability: <math>\pm 0.0001g</math>; Linearity: <math>\pm 0.0002g</math> Features:</p> <ul style="list-style-type: none"> <li>• <b>With internal calibration and adjustment</b></li> <li>• With large, sturdy and nearly frameless, all-glass shield chamber</li> <li>• Built-in, motorized calibration</li> </ul> <p><b>With calibration certificate</b></p> <p>With <b>2-years warranty</b> on parts and service and 1-time preventive maintenance within warranty period</p>	
<p>13.</p>	<p><b>Non-refrigerated</b> Microcentrifuge (3 Units) <b>Maximum RCF: at least 21,000 x g</b> <b>Maximum speed: at least 14,800 rpm</b> Maximum capacity: 10 x 5.0 mL; <b>Acceleration/deceleration time: max of 15 sec</b> Display: large, brightly lit LCD <b>Time set range: 1 min - 99 min; 1 min increments + HOLD mode</b></p>	



	<p>Brake function: 10 ramps  <b>Noise level: &lt; 55 dB</b>  Volume range: 50 mL  Power supply: 230 V, 50/ 60 Hz;  Power consumption; 280 W  Features:</p> <ul style="list-style-type: none"> <li>• Aerosol-tight lids for simple and safe handling</li> <li>• Outstanding software features</li> <li>• 10 acceleration and braking ramps</li> <li>• 3 program buttons, short function without continuous pressing of the key</li> <li>• Extended rotor programme: 5.0 mL rotor, swing-bucket rotor for PCR strips</li> <li>• Designed for quiet operation, even without a rotor lid</li> <li>• Soft-touch one-finger lid closure for ergonomic operation</li> <li>• Automatic lid opening at the end of the run - prevents sample warming and allows easy access to samples;</li> </ul> <p><b>Inclusions for each unit:</b></p> <ul style="list-style-type: none"> <li>• <b>Rotor: At least 24 x 1.5/2.0 mL rotor with safety lid, compatible with the unit (Max speed: at least 14800 rpm; maximum RCF: at least 21000 x g)</b></li> <li>• <b>UPS with built-in AVR compatible with the unit</b></li> <li>• <b>Calibration certificate</b></li> </ul> <p>With installation and <b>2-years warranty</b> on parts and service and 1-time preventive maintenance within warranty period</p>	
<p>14.</p>	<p>56-L Shaking Incubator (1 lot)  Detachable Shaker  Movement: Orbital  Door type: Double Door  Speed range: 30 to 500 rpm  Display: LCD  Temperature range: -10 to +70°C  Temperature resolution: every 0.1°C  Controller: microprocessor with external LCD graphic display  Interior: acid-proof stainless steel to DIN 1.4301  Housing material: powder coated sheet  Shelves Fitted: 2/5  Over temperature protection: class 2.0 according to DIN 12880;  Amplitude: 5 mm  Maximum load capacity: 10 kg</p>	



	<p>Shaking mode: 1 min.to 99 h or continuous operation, can be located inside cooled incubators Max shelf workload: 25 kg Nominal power: 60W Safety: Open door alarm, over temperature Ambient temperature: +10 to +40°C Power requirement: 230 V, 50/60Hz</p> <p>Inclusions:</p> <ul style="list-style-type: none"> <li>• Universal platform (25 to 2000 ml) attachment anti-skid mat</li> <li>• 2 Stainless Steel Shelves</li> <li>• USB port to allow direct recording and data transfer onto a flash drive</li> <li>• <b>UPS with built-in AVR compatible with the unit</b></li> </ul> <p>With installation and <b>2-years warranty</b> on parts and service and 1-time preventive maintenance within warranty period</p>	
15.	<p><b>Rotary Vacuum Evaporator (1 unit)</b></p> <p>Type of cooling: Vertical Cooling surface: 1500 cm<sup>2</sup> Motor principle: DC Speed range: 20 – 280 rpm Reversible direction of rotation: yes Lift: Motor; Stroke: 140 mm <b>Heating temperature range: Room temp. 95°C to 180°C</b> Heat output: 1300 W Heat control accuracy: 1? Bath volume max.: 3L Vacuum controller integrated: no Timer: yes Permissible ambient temperature [°C]: 5 - 40 Permissible relative humidity: 80% Protection class according to DIN EN 60529: IP 20 RS 232 interface: yes Voltage: 220 – 240V Frequency: 50/60 Hz Features:</p> <ul style="list-style-type: none"> <li>• Universal water/oil heating bath</li> <li>• Vertical glassware</li> <li>• Motorized lift with safety-stop function</li> <li>• RS 232 and IR Interface</li> <li>• Optimized heating bath volume for fast heat-up</li> <li>• Highly efficient 1500 cm<sup>2</sup> condenser unit</li> </ul>	



<ul style="list-style-type: none"> <li>• Ergonomically placed handles on Heating bath</li> <li>• Safety temperature circuits</li> <li>• Lower-end stop,</li> <li>• Easy and safe operation due to ergonomical design of the user interface</li> </ul> <p>Basic Vacuum pump  Pump rate max. (50/60Hz): 1.7 m<sup>3</sup>/h;  Pump rate max. (50/60Hz): 28.3 l/min;  Final pressure without gas ballast: 8 mbar  Final pressure with gas ballast: 15 mbar  Suction levels: 2  Connection diameter suction side: 10 mm  Connection diameter pressure side: 10 mm  Gas ballast valve: yes  Input pressure min: 7 mbar  Input pressure max.: 1050 mbarr  Cylinder: 2  Speed range: 1380 - 1680 rpm  Nominal speed: 1380 rpm  Noise at low. pressure: 65 dB(A)  Permissible ambient temperature: 10 - 40 °C  Permissible relative humidity: 80 %  Protection class according to DIN EN 60529: IP 54  Voltage: 230 V  Frequency: 50/60 Hz  Power input: 180 W  Recirculating Chiller  Classification according to DIN: 12876 I  Identification according to DIN: 12876 FL  Cooling agent: R134a  Cooling agent quantity: 250 g  Pressure max.: 20 bar  <b>Cooling Range: -10 to -20°C</b>  Operating temperature min.: -20 °C  Operating temperature max.: (with external heating) 40 °C  Working temperature min.: -20 °C  Working temperature max.: room temp. °C  Temperature display: yes  Temperature control: PT 100  Working temperature sensor: PT 100  Working temperature display: LED  Temperature stability DIN: 12876 0.1 ±K  Display resolution: 0.1 ±°C  Warning function optical: yes  Warning function acoustic: yes</p>	
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	<p>Warning function excess temperature: yes  Sub-level protection: yes  Bath volume min.: 1.4  Bath volume max.: 4.0 l  Pump type: Pressure- / suction pump  Pump capacity adjustable: yes  Pump pressure max. (0 liters discharge flow): 0.3 bar  Pressure pump (suction side) (0 liter flow): 0.2 bar  Pump pressure max. (0 bar back pressure): 18 l/min  Calibration option: yes  Technical data complies with the standard: DIN 12876  Permissible ON time: 100 %  Permissible ambient temperature: 5 - 32 °C  Permissible relative humidity: 80 %  Protection class according to DIN EN 60529: IP 21  RS 232 interface: yes  USB interface: yes  Voltage: 230 V  Frequency: 50/60 Hz  Power input: 300 W</p> <p>Other Inclusions:</p> <ul style="list-style-type: none"> <li>• Vacuum control valve</li> <li>• <b>UPS with built-in AVR compatible with the unit</b></li> <li>• <b>Spare cylindrical flask &amp; evaporating flask</b></li> </ul> <p>With installation and training</p> <p>With <b>2-years warranty</b> on parts and service and 1-time preventive maintenance within warranty period</p>	
16.	<p>Benchtop pH meter (4 units)  pH range: -2.00 to 19.99  Resolution: 0.1 / 0.01  Accuracy: ±0.01  <b>At least 3 calibration points (4, 7 and 10)</b>  ORP range: ±1999.9 mV  Resolution: 0.1 mV  Accuracy: ±0.2 mV  <b>Temperature range: At least -5.0 °C to 110 °C</b>  Resolution: 0.1 °C  Accuracy: ±0.4 °C  Calibration option: Yes (±5.0 °C range in 0.1 °C increments)  Memory: 500</p>	



	<p>Auto Shut -off: Yes (programmable: 1 to 30 mins);          Auto-Hold: Yes          Averaging/Stability: Yes          Offset display: Yes;          Slope display: Yes (independent acid and alkaline slopes depending on calibration)          Calibration alarm: Yes (programmable: 1 to 400 days);          Electrode status: On screen display          Diagnostic messages: Yes          Display: Custom LCD          Power requirements: <b>220-240 V, 50/60 Hz</b>  <b>Inclusions per unit:</b></p> <ul style="list-style-type: none"> <li>• 1 unit electrode stand</li> <li>• 1 set buffer solution (pH 4.01, 7.01, 10.01) &amp; 3.33M KCl solution, 250mL each,</li> <li>• 1 unit glass pH electrode</li> </ul> <p>With installation and training</p> <p>With <b>2-years warranty</b> on parts and service and 1-time preventive maintenance within warranty period</p>	
<p>17.</p>	<p>Ultraviolet-Visible Spectrophotometer (1 unit)  <b>Optical System: Czerny - Turner mount or equivalent</b>          Monochromator: Double beam          Wavelength range: 190 to 1100 nm          Spectral band width: 1 nm          Stray light at 198 nm (KCl): 1.0 % or less, 220 nm (NaI): 0.05 % or less, 340 nm (NaNO<sub>2</sub>): 0.05 % or less          Wavelength accuracy: ±0.3 nm (at Xe 260.6, 484.3, 881.9 nm; Hg 253.7, 435.8, 546.1 nm);          Wavelength repeatability precision: ±0.1 nm  <b>Photometric range: Absorbance: -3.3 to 3.3, Transmittance: 0 to 300</b>          Photometric accuracy: ±0.002 Abs (0-0.5 Abs), ±0.004 Abs (0.5-1.0 NIST SRM 930)          Photometric repeatability: ±0.002 Abs (0 to 1.0 Abs)          Scan speed: 10, 40, 100, 200, 400, 800, 1200, 2400, 4800, 6000 nm/min;          Wavelength drive speed: 8500 nm/min;          Baseline stability: 0.0005 Abs/h (at 260nm);          Noise level: 0.0001 Abs (at 260nm, 0 Abs);</p>	



	<p>Baseline flatness: <math>\pm 0.0009</math> Abs (200 to 950 nm)  <b>Light source: Xenon flash lamp 5W (with 7 years of warranty period) or equivalent;</b>          Detector: Silicon photodiode          Measurement modes: Concentration measurement, Absorbance/ Transmittance, Nucleic acid, Wavelength scan, Time scan, Monitor measurement;          Sample compartment: Automatic 6-Cell Turret          Printer interface: Wi-Fi or USB          Interface: LAN port- connected to a router or PC, USB port- connected to USB memory for use when transferring CSV-format files          Number of storable data: About 500MB          Power requirements: 220-240v, 50/60 Hz;          Power consumption: 70 W or less          Operating temperature: 15 to 35°C          Operating humidity: 25 to 80% Non-condensing. When temperature is 30°C or higher, less than 70 % RH</p> <p>Inclusions:</p> <ul style="list-style-type: none"> <li>• 1 Unit LAN cable (straight cable),</li> <li>• <b>1 Unit All-in-1 Desktop (at least 22", at least i7, 500 GB)</b></li> <li>• 1 Unit printer compatible with the PC</li> <li>• <b>4 pairs quartz cuvettes</b></li> <li>• UPS with built in AVR</li> </ul> <p>With installation and training (on-site)</p> <p>With <b>2-years warranty</b> on parts and service and 1-time preventive maintenance within warranty period</p>	
	<p><b>EVIDENCE</b></p> <ul style="list-style-type: none"> <li>• Brochure and complete technical specifications [SEPARATE DOCUMENT (use your company letterhead) indicating ALL the technical specifications you are offering but not limited to Brand, Model, Place of Origin, Features, Inclusions, Warranty, and Installation (if applicable)] of the item being offered.</li> <li>• Certificate as authorized distributor or exclusive dealer coming from the principal.</li> </ul>	





	<ul style="list-style-type: none"><li>• Certificate of training of service engineers/technicians authorized to conduct after sales service issued by the principal supplier/brand being offered.</li><li>• The supplier shall declare through a written statement that the product being offered is/are repairable and that replacement parts are available for a minimum of <b>five (5) years</b> after end of production.</li><li>• <b>For all items with “or equivalent”, please indicate the equivalent offer as well as its advantages which must be supported by evidence.</b></li></ul>	
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## ***Section VII. Revised Technical Specifications for PB 19-03-17 for Project 2***

Item	Specification	Statement of Compliance
1.	<p>Ultra-High-Speed Centrifuge (1 unit)  Maximum speed: 90,000 rpm  <b>Maximum RCF: at least 692,000 x g</b>  Speed control accuracy: <math>\pm 2</math> rpm at 1,000 rpm  Accel / Decel Mode Accel: 10 / Decel: 11 (10 and coasting)  Set speed range: 1,000 rpm to max speed with 100 rpm increments  Timer: 1 min to 999 hours 59 min  Set temperature range: 0 to 40°C with 1°C increments  Vacuum system: Oil rotary pump and oil diffusion pump  Noise level: 51dB(A)  Heat radiation into a room: 1kW or below  <b>Cooling system: Thermoelectric module cooling system (CFC / HCFC / HFC free)</b>  Control panel: Touch sensitive color LCD panel</p>	<p>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 Bidders 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 provisions of <b>ITB</b> Clause 3.1(a)(ii) and/or <b>GCC</b> Clause 2.1(a)(ii).</p>



<p>Data communication: USB host x 1, Device x 1 / Lan x 1 Power: 230-240 V, 50/60 Hz</p> <p><b>Working environment: Ambient temperature for operation 2°C to 40°C</b> Standard: CE marking complied</p> <p>Features:</p> <ul style="list-style-type: none"> <li>• Low table height with smooth sliding door for easy loading and unloading the rotor</li> <li>• Self-locking rotor system</li> <li>• Economy mode for energy saving</li> <li>• Can register up to 1000 programs for programmed operation to the system</li> <li>• Operating history can be recorded to the system automatically</li> <li>• Manage rotor life via logs and control individual rotor usage by tracking the number of rotor runs and total spin hours</li> <li>• Automatic tube balance compensation accelerates sample preparation by allowing visual sample balancing up to 5mm</li> </ul> <p>Inclusions:</p> <ul style="list-style-type: none"> <li>• <b>Rotor #1</b>- 1 Fixed angle rotor with maximum capacity of 6 x 230-250 mL; rotor material made aluminum or better material such as titanium or carbonfiber composite; max. speed 19,000 rpm or better</li> <li>• <b>Rotor #2</b> - 1 Fixed angle rotor with maximum capacity of 8 x 39 mL; rotor material made of aluminum or better material such as titanium or carbonfiber composite; max. speed 50,000 rpm or better</li> <li>• <b>Rotor #3</b> - Swinging bucket rotor with maximum capacity of 6 x 35-40 mL; rotor material made of aluminum or better material such as titanium or carbonfiber composite; max. speed 28,000 rpm or better</li> </ul> <p>Inclusions:</p> <ul style="list-style-type: none"> <li>• <b>15 pcs 230-250-mL screwcap polyallomer bottles for Rotor #1</b></li> <li>• <b>5 x 50 pcs 39-mL polyallomer tubes equivalent to Quick Seal for Rotor #2</b></li> <li>• <b>5 x 50 pcs thin-walled ultra-clear tubes for Rotor #3</b></li> </ul>	
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	<ul style="list-style-type: none"> <li>• UPS with built-in AVR compatible to the unit</li> </ul> <p><b>Double pan platform Balance with the following specifications:</b>  <b>Capacity: 2010 g</b>  <b>Sensitivity: 0.1g</b>  <b>Graduations: 0-10g, 0.1g increment (upper beam): 0-200g, 10g increment (lower beam)</b>  <b>Tare capacity: 200 g</b>  <b>Pan diameters: 150mm</b>  <b>Pan materials: Stainless steel</b>  <b>Supplied with supplementary masses consisting of one each of 100g, 200 g with 500 g a dust cover</b></p> <p>With installation and training</p> <p>With <b>2-years warranty</b> on parts and service and 1-time preventive maintenance within warranty period</p>	
	<p><b>EVIDENCE:</b></p> <ul style="list-style-type: none"> <li>• Brochure and complete technical specifications [SEPARATE DOCUMENT (use your company letterhead) indicating ALL the technical specifications you are offering but not limited to Brand, Model, Place of Origin, Features, Inclusions, Warranty, and Installation (if applicable)] of the item being offered.</li> <li>• Certificate as authorized distributor or exclusive dealer coming from the principal.</li> <li>• Certificate of training of service engineers/technicians authorized to conduct after sales service issued by the principal supplier/brand being offered</li> <li>• The supplier shall declare through a written statement that the product being offered is/are repairable and that replacement parts are available for a minimum of ten (10) years after end of production</li> </ul>	