



April 28, 2025

Bid Bulletin No. 2

Modification of the Technical Specifications and Answers to Clarifications

Name of Project:	<i>2025-03G: Acquisition of Equipment and other Equipment for the Provision of Higher Education Services (Lot 1: General Science Laboratory Equipment)</i>
ABC: Php4,734,000.00	

This Bid Bulletin No. 2 is issued to modify or amend items in the Bidding Documents for the above cited project. This shall form an integral part of the said Bidding Documents. The changes in the technical description shall also apply to the Schedule of Requirements and Price Schedules found in the Bidding Documents

A. Section VII. Technical Specifications

Item	From	To
1	BIOLOGICAL BINOCULAR MICROSCOPE Viewing Head: 5" - 7" LCD Nosepiece: Ball beating quadruple nosepiece Eyepiece: Wide field plane-scope eyepiece WF10X18mm Objective: Achromatic 4X, 40X, 40X(S), 100X(S Oil) Plan achromatic 4X, 40X, 40X (S), 100X (S, Oil) Stage: Double layer mechanical stage Condenser: Abbe NA1.25 Condenser with Iris Diaphragm & filter, rack & piiiion adjustment. Illumination: Built-in illumination, halogen lamp, 6V/20W, power supply: 90-230V/3W LED	BIOLOGICAL BINOCULAR MICROSCOPE Viewing Head: 5" - 7" LCD "Nosepiece: Ball beating quadruple nosepiece " Objective: 1. Achromatic 4x, 40x, 40x(s), 100x(s, oil) 2. Plan Achromatic, 4x, 40x, 40x(s), 100x(s,Oil) or Semi Plan Achromat Stage: Double layer Mechanical Condenser: Abbe NA1.25 Condenser with Iris diaphragm & filter, rack & piiiion adjustment. Built in Illumination: Halogen lamp or LED light "6V/20W, power supply: 90-230V/3W LED "
2	MICROSCOPE Image sensor: ½.5" Color 5 megapixel CMOS Effective pixel: 2048x1536 Pixel size 2.2x2.2um LCD Screen size: 9.7" 1024x768 IPS LCD Frame rate: 15 Definition: FULL HD White Blance" Auto and Manual Operating System: Android 4.2.2 or higher Brightness Control: auto and manual Color: RGB Supports: Edge Enhancement, Film and Video, measurement, digital denoiser SD Card Interface: 32G SD 2.0, standard size, non visual design, maximum 32G Interface: Standard HDMI Output Lens: C Usb interface: USB2.0	MICROSCOPE Optic System: Infinite/Infinity Corrected Viewing Head: Trinocular Head Ocular Angle: 30° Rotation: 360° Interpupillary: 47-78mm -- 55-75mm Nosepiece Orientation: Reversed Nosepiece Style: Quadruple Eyepiece: Wide Field Eyepiece WF10X/20 or Super Widefieldm (FN20mm) Objectives: Achromatic Stage: Mechanical Stage XY Focusing: Coaxial Coarse and Fine Adjustment Condenser: NA 1.25 Abbe Condenser with Aperture Diaphragm Illumination: Halogen or LED With Dust Cover, Sparefue, Blue & Green Filters
3	SPECTROPHOTOMETER Measurement Range: -0.3-3.0A, 0-200%T	No Changes



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	Wavelength Range: 320-1100nm Optical System: Single Beam Light Source: Tungsten lamp Spectral Bandwidth: 2.0nm Wavelength Accuracy: $\pm 0.5\text{nm}$ Output: USB Port & Parallel Port (Printer) Power: 110/220VAC, 50/60Hz, 120W	
4	COLORIMETER Display: LCD Auto Power Off: Yes Memory: 4000 Points Interface: USB Cable Length: 1 m Power Source: Lithium Rechargeable Batteries Manufacturer Warranty Length: 2 yr Number of Tests: 25 Testing Parameter: Chlorine Green Environmental Attribute: Product is Rechargeable Condensed Mfg Number: 1910	COLORIMETER Display: LCD Auto Power Off: Yes Memory: 4000 Points Interface: USB Cable Length: 1 m Power Source: Lithium Rechargeable Batteries Number of Tests: 25 Testing Parameter: Chlorine Green Environmental Attribute: Product is Rechargeable Condensed Mfg Number: 1910
5	FUME HOOD External Size: (W×D×H): 1000 × 800 × 2515mm Internal Size: (W×D×H): 790 × 600 × 870mm Work Surface Height: 900mm (35.4") Max Opening: 750mm (29.5") Air Velocity: 0.3~0.8m/s System Exhaust Volume: 570 m ³ /h Noise: $\leq 68\text{dB}$ Exhaust Duct: PVC, Standard length; 4.3 meters, Ø300mm Pipe Strap: 2 pcs LED Lamp: 20W × 1 Blower: Built-in PP centrifugal blower Front Window: Manual, 5mm toughened glass, height adjustable Power Supply: 220V $\pm 10\%$, 60/50HZ; 110V $\pm 10\%$, 60Hz	FUME HOOD To be installed in the First Floor of Comprehensive Science Laboratory Hood Installation area is 2.7 meters by 5 meters, hood must fit on the said area Work Surface Height: 900mm - 1100mm Max Opening: 750mm (29.5") Air Velocity: 0.3~0.8m/s System Exhaust Volume: 570 m ³ /h Noise: $\leq 68\text{dB}$ Exhaust Duct: PVC, Standard length; 4.3 meters, Ø300mm Pipe Strap: 2 pcs LED Lamp: 20W × 1 Blower: Built-in PP centrifugal blower Front Window: Manual, 5mm toughened glass, height adjustable Power Supply: 220V $\pm 10\%$, 60/50HZ; 110V $\pm 10\%$, 60Hz
6	MOISTURE ANALYZER Maximum Measurement: 80 % RH Best Accuracy: 1.5 % Display Type: Graphic Display - Backlit Power Source: Mains Backlit LCD display, digit height 14 mm Drying process active Active heating profile Active switch-off criteria Previous drying time Current temperature Unit of the shown result, e.g. moisture (%) Interim result in moisture-% Halogen quartz glass heater 400 W	No Changes



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	<p>Observation window above the sample, useful during initial setting</p> <p>Internal memory for automatic sequence of 15 complete drying processes and 5 drying processes carried out.</p> <p>The last value measured remains on the display until it is replaced by a new measurement.</p> <p>50 sample plates included</p>	
7	<p>LAB OVEN</p> <p>Capacity: 108L</p> <p>Temp. Range: 50~200°C</p> <p>Temp. Precision: 0.1°C</p> <p>Temp. Fluctuation: ±1°C</p> <p>Ambient Temp.: 5~40°C</p> <p>Timing Range: 1~9999min</p> <p>Shelves No.: 2 pcs</p> <p>Power Consumption: 1600W</p> <p>Power Supply: 220V±10%,50/60Hz</p> <p>Internal Size(W*D*H) mm: 550*360*550</p> <p>External Size(W*D*H) mm: 830*610*720</p> <p>Packing Size(W*D*H) mm: 960*720*900</p> <p>Features:</p> <ul style="list-style-type: none"> -External material: cold-rolled steel with anti-bacteria powder coating. -Stainless steel inner chamber, round angle structure, adjustable shelves. -PID control with LED display -Double-layer glass observation window, adjustable airtight buckle lock. -Over-temperature protection. 	<p>LAB OVEN</p> <p>Capacity: 90L - 120L</p> <p>Temp. Range: 50~200°C</p> <p>Temp. Precision: 0.1°C</p> <p>Temp. Fluctuation: ±1°C</p> <p>Ambient Temp.: 5~40°C</p> <p>Timing Range: 1~9999min</p> <p>Shelves No.: 2 pcs</p> <p>Power Consumption: 1600W</p> <p>Power Supply: 220V±10%,50/60Hz</p> <p>Features:</p> <ul style="list-style-type: none"> -External material: cold-rolled steel with anti-bacteria powder coating. -Stainless steel inner chamber, round angle structure, adjustable shelves. -PID control with LED display -Double-layer glass observation window, adjustable airtight buckle lock. -Over-temperature protection.
8	<p>HIGH PRESSURE LIQUID CHROMATOGRAPHY</p> <p>High Pressure Liquid Chromatograph (HPLC) System</p> <p>Flow Range: 0.001 9.999 ml/min</p> <p>Delivery Method: Double Piston (Main & Auxiliary)</p> <p>Display: 320 mm.</p> <p>Pump Head: 10m1 SST/Peek Analytical</p> <p>Accuracy: +/- 1% or +/- 2l/min, whichever is greater + 1% or + 1l/min, whichever is greater (Micro)</p> <p>Flow Rate Settings: 0 0.10 mL/min., 0.001 inc. // 0.10 0.90 mL/min., 0.010 inc. 1.0 mL/min., + 0.10 inc.</p> <p>Precision: 0.25% from 0.1 mL/min to 10 mL/min. at 20oC 0.25% from 0.05 mL/min to 4 mL/min. at 20oC (Micro)</p> <p>Pmax: 0.05 mL/min to 4 mL/min. at 20oC (Micro) Pmax</p>	<p>HIGH PRESSURE LIQUID CHROMATOGRAPHY</p> <p>High Pressure Liquid Chromatograph (HPLC) System</p> <p>Flow Range: 0.001 9.999 ml/min</p> <p>Delivery Method: Double Piston (Main & Auxiliary)</p> <p>Display: 190 - 350mm</p> <p>Pump Head: 10m1 SST/Peek Analytical</p> <p>Accuracy: +/- 1% or +/- 2l/min, whichever is greater + 1% or + 1l/min, whichever is greater (Micro)</p> <p>Flow Rate Settings: 0 0.10 mL/min., 0.001 inc. // 0.10 0.90 mL/min., 0.010 inc. 1.0 mL/min., + 0.10 inc.</p> <p>Precision: 0.25% from 0.1 mL/min to 10 mL/min. at 20oC 0.25% from 0.05 mL/min to 4 mL/min. at 20oC (Micro)</p> <p>Pmax: 0.05 mL/min to 4 mL/min. at 20oC (Micro) Pmax</p>
9	<p>ROTARY EVAPORATOR</p> <p>-2L Rotary Evaporator, Standard :2L Rotary Flask, 1L Collection bottle, Bath</p> <p>Temperature Range: 0-99°C. Easy to Detach and Clean, Better Sealing</p> <p>Quality</p>	<p>ROTARY EVAPORATOR</p> <p>-2L Rotary Evaporator, Standard :2L Rotary Flask, 1L Collection bottle, Bath</p> <p>Temperature Range: 0-99°C. Easy to Detach and Clean, Better Sealing</p> <p>Quality</p>



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	<p>-110V / 60Hz, North American plug, bottle rotation speed: 0-120rpm, can be easily adjusted by the button on the control center.</p> <p>-High Quality Material Made Water Bath, Manual to Lift It Up and Down</p> <p>On Use, Range: 0-150mm</p> <p>-Perfect for The Concentration, Crystallization, Drying, Separation and Solvent Recovery of The Pharmaceutical, Chemical and Biological Pharmaceutical Industries</p> <p>- 1 Year Warranty, the video installation and instruction can be offered to all customers</p>	<p>-bottle rotation speed: 0-120rpm (adustable)</p> <p>-Manual or Automatic lift</p> <p>On Use, Range: 0-150mm</p> <p>-Perfect for The Concentration, Crystallization, Drying, Separation and Solvent Recovery of The Pharmaceutical, Chemical and Biological Pharmaceutical Industries</p> <p>-220v</p> <p>Accessories: Vacuum Pump with regulator and Moisture Trap</p> <p>"Chemical Resistant Vacuum Pump with Regulator and Moisture Trap</p> <p>Maximum Vacuum:13mbar"</p> <p>Work Mode: Continuous Operation Nozzle Size: 8mm</p> <p>Motor speed: at least 1450rpm</p> <p>Flow Rate: at least 25 L/min at 1000 mbar Noise: 50dB</p>
10	<p>ASTRONOMICAL TELESCOPE</p> <p>-Optical System: High-quality refractive design with an 80mm caliber for crisp, clear images.</p> <p>-Focal Length & Magnification: Generous 900mm focal length with two eyepieces offering 45X and 225X magnification.</p> <p>- EQ2 Equatorial Mount: Precision German EQ2 mount supports smooth tracking of celestial bodies.</p> <p>-Sturdy Stainless-Steel Tripod: Ensures stable and secure observations.</p> <p>-Included THESKYX Planetary Software: Enhance your stargazing with detailed sky maps and object location features.</p> <p>Inclusions: Deluxe 80DX Astronomical Telescope EQ2 Equatorial Mount with Stainless Steel Tripod 20mm and 4mm Eyepieces 3X Barlow Mirror THESKYX Planetary Software CDROM 1.25 Inch Upright Zenith Mirror Red Dot Star Finder Accessory Disk</p>	<p>ASTRONOMICAL TELESCOPE</p> <p>-Optical System: High-quality refractive design with an 80mm caliber</p> <p>-Focal Length & Magnification: 900mm focal length with two eyepieces offering 45X and 225X magnification.</p> <p>- EQ2 Equatorial Mount: Precision German EQ2 mount supports smooth tracking of celestial bodies.</p> <p>-Sturdy Stainless-Steel Tripod</p> <p>Inclusions: Astronomical Telescope EQ2 Equatorial Mount with Stainless Steel Tripod 20mm and 4mm Eyepieces 3X Barlow Mirror Planetary Software 1.25 Inch Upright Zenith Mirror Red Dot Star Finder Accessory Disk</p>
11	<p>VISIBLE SPECTROPHOTOMETER</p> <p>Optical System: Single Beam 1200lines/mm</p> <p>Wave length Range: - 190~1100nm / 320~1100nm /340~1050nm</p> <p>Spectral Bandwidth: 2nm / 4nm</p> <p>Wavelength Accuracy: $\pm 0.3\text{nm}$ / $\pm 0.5\text{nm}$ / 1nm</p> <p>Wavelength Repeatability: ≤ 0.1 / $\leq 0.2\text{nm}$</p> <p>Photometric Accuracy: 0.3%T / 0.5%T</p> <p>Photometric Repeatability: 0.2%T</p> <p>Photometric Range:0-200%T, 0.3 - 3A</p>	<p>VISIBLE SPECTROPHOTOMETER</p> <p>Optical System: Single Beam 1200lines/mm</p> <p>Wave length Range: 190~1100nm - 340~1050</p> <p>Spectral Bandwidth: 2nm - 4nm</p> <p>Wavelength Accuracy: $\pm 0.5\text{nm}$</p> <p>Wavelength Repeatability: $\leq 0.1\text{nm}$ - $\leq 0.2\text{nm}$</p>



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	<p>Stray light: 0.05%T / 0.1%T / 0.15%T Stability: $\pm 0.0001A / \pm 0.0002A$ Baseline flatness: $\pm 0.002A$ Noise: $\pm 0.001A$ Wavelength Setting: Auto Light Source: Deuterium Lamp / Tungsten Lamp Display: LCD Detector: Silicon Photodiode Output: USB Port x1 Power: AC 220V / 50Hz ; AC 110V/60Hz</p>	<p>Photometric Accuracy: 0.3%T - 0.5%T Photometric Range: 0-200%T, 0.3 - 3A Stray light: 0.05%T - 0.15%T "Baseline flatness: $\pm 0.002A$ " Noise: $\pm 0.001A$ Wavelength Setting: Auto Light Source: Deuterium Lamp / Tungsten Lamp "Display: LCD " "Detector: Silicon Photodiode " Output: USB Port x1 Power: AC 220V / 50Hz</p>
12	<p>GAS CHROMATOGRAPHY Temperature Range (Oven) RT-450°C Temperature Accuracy (Oven) $\leq \pm 0.1^\circ C$ Temperature Program (Oven) 16-phase Maximum Temperature Heating Rate (Oven) 40°C/min Hydrogen Flame Ionization Detector (FID) Detection limit: $\leq 310^{-12}g/s$ (Sample: n-hexadecane)
Baseline drift: $\leq 110^{-10}A/30min$
Linear range: 210^7 Thermal Conductivity Detector (TCD) (Optional): Sensitivity: $> 10000mv \cdot ml/mg$ (Sample: n-hexadecane)
Linear range: 210^5 Electron Capture Detector (ECD) (Optional): Detection limit: $\leq 1 \cdot 10^{-12}g/ml$ (Sample: n-hexadecane 5-666)
Linear range: 210^3 Flame Photometric Detector (FPD) (Optional): Detection limit: $\leq 210^{-11}g/s$ (S of thiophene)
Detection limit: $\leq 110^{-12}g/s$ (P of methyl parathion)
Linear range (S): ≥ 10
Linear range (P): ≥ 10 Nitrogen and Phosphorus Detector (NPD) (Optional): Detection limit: $\leq 110^{-12}g/s$ (Azobenzene)
Detection limit: $\leq 110^{-12}g/s$ (Marla sulphur phosphorous)
Linear range: 210^3 Power Supply: AC220V$\pm 10\%$, 50/60Hz (Optional) Standard Accessory: FID detector, Chromatography workstation software, Capillary sampler Optional Accessory: Sample injection system, TCD, ECD, FPD and NPD detector, Chromatographic column Package Size (WDH): 820670600mm</p>	<p>GAS CHROMATOGRAPHY Temperature Range (Oven) RT-450°C Temperature Accuracy (Oven) $\leq \pm 0.1^\circ C$ Temperature Program (Oven) 16-phase Maximum Temperature Heating Rate (Oven) 40°C/min Hydrogen Flame Ionization Detector (FID) Detection limit: $\leq 3 \cdot 10^{-12}g/s - \leq 5 \cdot 10^{-12}g/s$ drift: $\leq 110^{-10}A/30min$
Linear range: 210^7 Thermal Conductivity Detector (TCD) : Sensitivity: $> 10000 mv \cdot ml/mg$ or $> 5000 mv \cdot ml/mg$ Linear range: 210^5 Electron Capture Detector (ECD): Detection limit: $\leq 1 \cdot 10^{-12}g/ml$ (Sample: n-hexadecane 5-666)
Linear range: 210^3 Flame Photometric Detector (FPD): Detection limit: $\leq 210^{-11}g/s$ (S of thiophene)
Detection limit: $\leq 110^{-12}g/s$ (P of methyl parathion)
Linear range (S): ≥ 10
Linear range (P): ≥ 10 Nitrogen and Phosphorus Detector (NPD) (Optional): Detection limit: $\leq 110^{-12}g/s$ (Azobenzene)
Detection limit: $\leq 110^{-12}g/s$ (Marla sulphur phosphorous)
Linear range: 210^3 Power Supply: AC220V$\pm 10\%$, 50/60Hz Standard Accessory: FID detector, Chromatography workstation software, Capillary sampler Optional Accessory: Sample injection system, TCD, ECD, FPD and NPD detector, Chromatographic column Hydrogen Generator Air Generator</p>



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	Gross Weight: 71kg	
13	<p>TRINOCULAR MICROSCOPE</p> <p>Image sensor: ½.5” Color 5 megapixel CMOS</p> <p>Effective pixel: 2048x1536</p> <p>Pixel size 2.2x2.2um</p> <p>LCD Screen size: 9.7” 1024x768 IPS LCD</p> <p>Frame rate: 15</p> <p>Definition: FULL HD</p> <p>White Balance” Auto and Manual</p> <p>Operating System: Android 4.2.2 or higher</p> <p>Brightness Control: auto and manual</p> <p>Color: RGB</p> <p>Supports: Edge Enhancement, Film and Video, measurement, digital denoiser</p> <p>SD Card Interface: 32G SD 2.0, standard size, non visual design, maximum 32G</p> <p>Interface: Standard HDMI Output</p> <p>Lens: C</p> <p>Usb interface: USB2.0</p>	<p>TRINOCULAR MICROSCOPE</p> <p>Optical Syystem: Infinite</p> <p>View Head: Compesation Free Trinocular Head</p> <p>Inclined at 30°</p> <p>Rotatable 360°</p> <p>Interpupillary 55 - 75mm</p> <p>Eyepiece: P10X/22mm, P16X/15mm</p> <p>Objectives:</p> <p>Infinite Plan Achromatic: 10X N.A=0.25 WD=8.10mm</p> <p>Infinite LWD Plan Phase Objective Contrast</p> <p>Objective: 10X N.A=0.25 WD=8.10mm, 20X N.A=0.40 WD=4.80mm</p> <p>Focusing: Coaxial coarse&fine adjustable system, pinion and rack adjustable, fine division 0.002mm</p> <p>Stage: glass slide ø110mm (minimum)</p> <p>Condenser: ELWD condenser with iris diaphragm & filter, LWD 75mm</p> <p>Illumination: Halogen Lamp</p>
14	<p>AIR DRYING OVEN</p> <p>Operational Method: Continuous</p> <p>Material: Stainless Steel</p> <p>Structure: Desktop</p> <p>Capacity: 140L</p> <p>Temp range: rt+10~250/300°C</p> <p>temp. Precision: 0.1°C</p> <p>Temp Fluctuation: ±0.5°C</p> <p>Ambient Temperature: 5~40°C</p> <p>Timing Range: 1~9999min</p> <p>Shelves No.: 2</p> <p>Power Consumption: 1500W</p> <p>Power: AC 110v/220V±10% 50/60Hz</p>	<p>AIR DRYING OVEN</p> <p>Operational Method: Continuous</p> <p>Material: Stainless Steel</p> <p>Structure: Desktop</p> <p>Capacity: 90L - 140L</p> <p>Temp range: rt+10~250/300°C</p> <p>temp. Precision: 0.1°C</p> <p>Temp Fluctuation: ±0.5°C</p> <p>Ambient Temperature: 5~40°C</p> <p>Timing Range: 1~9999min</p> <p>Shelves No.: 2</p> <p>Power Consumption: 1500W</p> <p>Power: AC 110v/220V±10% 50/60Hz</p>
	<p><i>All Items must have:</i></p> <p>At least 1 year warranty</p> <p>after sales services</p> <p>installation / assembly</p> <p>Training on how to use and maintain the equipment</p>	<p>All Items must have:</p> <p>At least 1 year warranty</p> <p>after sales services</p> <p>installation / assembly</p> <p>Training on how to use and maintain the equipment</p> <p>Equipment Manual</p> <p>Distributors Certificate</p>

B. Answer to the Clarification of Suppliers on the Technical Specifications

Item	Clarification	TWG Answer
Biological Binocular Microscope	Can the specifications be amended to include USB interface? This will provide flexibility to end-user when transferring files. A USB flash drive can be directly plugged to the microscope camera and to their computers. While SD cards will need adapters which is not readily available.	Biological Binocular Microscope does not need SD Card Interface.



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	<p>Q. In terms of Illumination light, instead of halogen lamps can we offer a LED illumination light?</p> <p>Q. In terms of its objectives, can we offer a semi plan achromat?</p> <p>(Justification: we'd also recommend considering semi-plan achromatic (SMP) objectives as a cost-effective and high-quality alternative. SMP objectives offer improved image flatness and clarity over standard achromats and are suitable for most routine and advanced applications in education, clinical, and research setting)</p>	<p>Semi Plan Achromat was added. LED Illumination was added.</p>
HIGH PRESSURE LIQUID CHROMATOGRAPHY	<p>The specifications are general and are common to various HPLC brands/models. It will be best to maintain the specifications. This will allow various brand and models to participate.</p> <p>However, we would like to confirm if the needed detector is a UV-Vis detector? Which is the usual and commonly used detector for HPLC systems.</p>	<p>Added UV-Vis Detector in the Technical Specifications.</p>
	<p>In terms of the display, can we range it to closer or approximate size? So that we can also offer our brand since iba't iba naman po yung sizes ng display as per manufacturer.sizes po?</p>	<p>Display size was change for fix size to range from 320mm to 190mm – 350mm</p>
ROTARY EVAPORATOR	<p>Can the specifications be amended to make the Rotary flask 1L minimum instead? As this is the most common setup for rotary evaporators.</p> <p>We noticed that there was no mention of ancillary accessories such as the Vacuum Pump and Recirculating Chiller.</p> <p>With this, we ask the end-user and BAC to require at least the vacuum pump to ensure a working rotary evaporation setup.</p>	<p>2L is the minimum requirement of the end-user.</p> <p>Vacuum Pump was incorporated in Technical Specifications.</p>
	<p>Rotary Evaporator lang po ba talaga ito Sir/Ma'am? Wala pong Chiller or vacuum pump?</p> <p>Also, in terms of power supply, I think dapat naka 220V po ito since ito po yung standard na power supply in a Philippine setting.</p>	<p>Vacuum Pump was added 110v was changed to 220v</p>
VISIBLE SPECTROPHOTOMETER	<p>The specifications are from different models/variants of the spectrophotometer.</p> <p>We suggest keeping the first set of the specifications and remove the rest. Doing so will also make this spectrophotometer different from the spectrophotometer from item 3. This will allow the institution to have 2 different types of spectrophotometers.</p>	<p>Wavelength was change into range, you can offer anything in between of 190~1100nm - 340~1050</p>



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	<p>In terms of the spectral bandwidth we would like to clarify if we can offer either 2nm or 4nm? Nakasulat po kasi ay mm, which i think nanometer po sana kasi yun po ang unit for bandwidth</p>	<p>Spectral Bandwidth was ranged from 2nm – 4nm, you can offer 2nm, 3nm, or 4nm.</p>
<p>GAS CHROMATOGRAPHY</p>	<p>We would like to ask the BAC and end-user to amend the required quantity for this setup to just 1 unit.</p> <p>1 unit of Gas Chromatography system is usually around 25-40% of the ABC of this project. The HPLC system is around 50%. So requiring 2 units of the Gas Chromatography system will likely exceed the ABC. The required gases to run the Gas Chromatography system was not mentioned/required in the specifications.</p> <p>We suggest adding the following:</p> <ol style="list-style-type: none"> 1. Hydrogen Generator - hydrogen gas is required for GC-FID systems. This can also be used as the carrier gas. 2. Air Generator <p>We are suggesting requiring generators instead as this is a lot safer than using gas cylinders, specially for hydrogen gas. With generators, hydrogen gas is only produced on demand, unlike with a cylinder which contains a large volume of hydrogen gas (which is flammable). This is also more economical in the long run for the institution.</p>	<ol style="list-style-type: none"> 1. Quantity cannot be amended 2. Hydrogen Generator and Air Generator was added
	<p>Q: In terms of FID Detection Limit, can we range the values from $\leq 3 \times 10^{-12} \text{g/s}$ to $\leq 5 \times 10^{-12} \text{g/s}$</p> <p>Justification: The difference between 3×10^{-12} and 5×10^{-12} is very small, so for most real-world uses, both are excellent, and the difference might not even matter, and for most applications, they're practically the same in performance</p> <p>Q: for TCD Sensitivity, can we also range the values from $>10000 \text{ mv}\cdot\text{ml/mg}$ to $>5000 \text{ mv}\cdot\text{ml/mg}$.</p> <p>Justification: For most applications - including gas analysis, petrochemicals, and environmental testing - this level of sensitivity of $>5000 \text{ mv}\cdot\text{ml/mg}$ is more than sufficient already.</p> <p>Q: In terms of the sizes and weight, can you put, "or approximately closer to these values" since we need to consider the fact that different manufacturers have different sizes and weight.</p>	<p>Detection limit was ranged. $\leq 3 \times 10^{-12} \text{g/s}$ - $\leq 5 \times 10^{-12} \text{g/s}$ Sensitivity was ranged. $>10000 \text{ mv}\cdot\text{ml/mg}$ to $>5000 \text{ mv}\cdot\text{ml/mg}$ Package size and Gross weight was removed</p>



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MICROSCOPE	We would like to clarify if this is a camera? Because it seems that the specifications are for a camera.	The required item is microscope. Technical specifications has been changed.
FUME HOOD	Can we range the dimension size since different manufacturers have different sizes po? Same as with the Max opening and work surface height?	External and Internal size was removed, instead we include the size of the installation area of the hood.
LAB OVEN	Can we range the dimension size since different manufacturers have different sizes?	Dimensions are removed.
TRINOCULAR MICROSCOPE	Camera po ba for trinocular Microscope yung hinahanap nyo po ba dito?	Specifications was revised.
AIR DRYING OVEN	We would like to clarify, in this Temperature Range: RT+10 to 250/300C, does this mean we can offer either up to 250C or 300C?	Yes, you can offer 250°C or 300°C.

For the guidance and information of all concerned.


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BAC Chairperson