

Republic of the Philippines
BULACAN AGRICULTURAL STATE COLLEGE

Office of Bids and Awards Committee

Pinaod, San Ildefonso, Bulacan, Philippines 3010

November 22, 2023

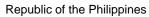
Bid Bulletin No. 1

Name of
Project:2023-06G: Acquisition of Laboratory Equipment for the Bulacan
Agricultural State College for CY 2024ABC: Php10,500,000.00

This Bid Bulletin No. 1 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

Section VII. Technical Specifications

Item	From	То
1	Full Automatic Triaxial Test Set	No changes
	Test Specimen: Soil	
	Display: Digital Display	
	Axial Force: 0-10kn, Measurement Accuracry:	
	±1% Shear Rate: 0.001-5.000mm/Min	
	Specimen size: Ф39.1x80mm	
	Confining Pressure: 0-1MPa	
	Backpressure: 0-1MPa	
	Aperture Pressure: 01MPa	
	Volume Change: 0-50ml	
	,	
	inclusion:	
	with 1 year warranty	
	with after sales services	
	with installation/assembly	
	with training	
2	Analytical Balance	No changes
	Accuracy: 0.0001g	
	Display type: LCD	
	Material: Stainless Steel	
	Structure: Desktop	
	Certification: CE or ISO	
	Application: Industry, School, Hospital, Laboratory	
	Calibration: Internal	
	Capacity: 0-220g	
	Readability: 0.1mg	
	inclusion:	
	with 1 year warranty	
	with after sales services	
	with installation/assembly	
	with training	





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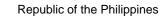
3	Fume Hood	Fume Hood
	Size (W*D*H) (mm) 1200 x 850 x 2350 or 1500 x 850 x 2350 or 1800 x 850 x 2350	Size (W*D*H) (mm) 1500 x 850 x 2350
	average windspeed: 0.3 - 0.6 m/s adjustable Noise Level: 60dB(a) Exhaust air rate: 1500 - 3000 m ³ /h Opening height: 20 - 750 mm Luminance: >300LX Power 220V/50HZ	average windspeed: 0.3 - 0.6 m/s adjustable Noise Level: 60dB(a) Exhaust air rate: 1500 - 3000 m ³ /h Opening height: 20 - 750 mm Luminance: >300LX Power 220V/50HZ
	inclusion: with 1 year warranty with after sales services with installation/assembly with training	inclusion: with 1 year warranty with after sales services with installation/assembly with training
4	Visible spectrophotometer	Visible spectrophotometer
	Optical System: Single Beam 1200lines/mm Wave length Range: 190~1100nm / 320~1100nm /340~1050nm Spectral Bandwidth: 2mm / 4nm Wavelengt Accuracy ± 0.3 nm / ± 0.5 nm / 1nm Wavelengt Repeatability: <=0.1 / <=0.2nm Photometric Accuracy: 0.3%T / 0.5%T Photometric Repeatability: 0.2%T Photometric Range:0-200%T, 0.3 - 3A Stray light: 0.05%T / 0.1%T / 0.15%T Stability: ± 0.0001 A / ± 0.0002 A Baseline flatness: ± 0.002 A Noise: ± 0.001 A Wavelenght Setting: Auto Light Source: Deuterium Lamp / Tungsten Lamp Display: LCD Detector: Silicon Photodiode Output: USB Port x1 Power: AC 220V / 50Hz ; AC 110V/60Hz	Optical System: Single Beam 1200lines/mm Wave length Range: 340~1050nm Spectral Bandwidth: 2mm / 4nm Wavelengt Accuracy $\pm 0.3nm$ / $\pm 0.5nm$ / 1nm Wavelengt Repeatability: <=0.1 / <=0.2nm Photometric Accuracy: $0.3\%T$ / $0.5\%T$ Photometric Accuracy: $0.3\%T$ / $0.5\%T$ Photometric Repeatability: $0.2\%T$ Photometric Range: $0-200\%T$, $0.3 - 3A$ Stray light: $0.05\%T$ / $0.1\%T$ / $0.15\%T$ Stability: $\pm 0.001A$ / $\pm 0.0002A$ Baseline flatness: $\pm 0.002A$ Noise: $\pm 0.001A$ Wavelenght Setting: Auto Light Source: Deuterium Lamp / Tungsten Lamp Display: LCD Detector: Silicon Photodiode Output: USB Port x1 Power: AC 220V / $50Hz$; AC 110V/60Hz
	inclusion: with 1 year warranty with after sales services with installation/assembly with training	inclusion: with 1 year warranty with after sales services with installation/assembly with training



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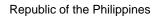
Display: 7 - 10 inch Color Touch Screen Reproducibility: <2% Stability: <3% Responsetime: <8 seconds (min) Printer: Integral Thermal Printer USB Data Output: Optional Fp Win Data Collection	
Reproducibility: <2% Stability: <3% Responsetime: <8 seconds (min) Printer: Integral Thermal Printer USB Data Output: Optional Fp Win Data Collection	
Stability: <3% Responsetime: <8 seconds (min) Printer: Integral Thermal Printer USB Data Output: Optional Fp Win Data Collection	
Responsetime: <8 seconds (min) Printer: Integral Thermal Printer USB Data Output: Optional Fp Win Data Collection	
Printer: Integral Thermal Printer USB Data Output: Optional Fp Win Data Collection	
USB Data Output: Optional Fp Win Data Collection	
Software (equal or higher)\	
Supported Languages: English (and others)	
Concentration units: Ug/MI, Mg/100mI, Mmol/L,	
Meq/L	
Gases: LPG, Natural Gas, Propane, Butane, etc	
inclusion:	
with 1 year warranty	
with after sales services	
with installation/assembly	
with training	
6 Muffle furnace box type No Changes	
Capacity: up to 30L maximum	
Temperature: 1000°C - 1200°C	
Power Voltage: 10KW/380v or 12KW/380V	
Buckle Handle: 4	
Clamping force: up to 500kg	
Controller: Programable Controller	
Liner: High Aluminum, pressure resistance, Strong	
wear resistance, Uniform Heating, small temp.	
fluctuation, thermocouple temperature	
measurement	
sensitive response.	
with voltage regulator	
inclusion:	
with 1 year warranty	
with after sales services	
with installation/assembly	
with training	
7 <i>Electronic titrator</i> No Changes	
Display: LED Touch Screen	
Chemical Analysis type: Karl Fischer Method	
Portable: Yes	
Application: Chemicals	
Analysis Method: Physical Analysis	
Type: karl Fisched Moisture Meter	
Temperature Measuring: 0~100°C	
pH Measuring Range: 0~14.pH	





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	Mv Measuring range: ±1999mv	
	Resolution: 0,01pH; 0.1mv;0.1°C	
	Repeatability: ≤0.2mv	
	Power: AC 110v/220V±10% 50/60Hz	
	Fower: AC 1100/2201910/8 50/00112	
	inclusion:	
	with 1 year warranty	
	with after sales services	
	with installation/assembly	
	with training	
8	Drying Oven	Drying Oven
	Operational Method: Continuous	Operational Method: Continuous
	Material: Stainless Steel	Material: Stainless Steel or Painted Stainless
		Steel
	Structure: Desktop	Structure: Desktop
	Capacity: 140L	Capacity: 140L
	Temp range: rt+10~250/300°C	Temp range: rt+10~250/300°C
	temp. Precision: 0.1°C	
	Temp Fluctuation: ±0.5°C	temp. Precision: 0.1°C
	Ambient Temperature: 5~40°C	Temp Fluctuation: ±0.5°C
	Timing Range: 1~9999min	Ambient Temperature: 5~40°C
	Shelves No.: 2	Timing Range: 1~9999min
		Shelves No.: 2
	Power Consumption: 1500W	Power Consumption: 1500W
	Power: AC 110v/220V±10% 50/60Hz	Power: AC 110v/220V±10% 50/60Hz
	inclusion:	inclusion:
	with 1 year warranty	
	with after sales services	with 1 year warranty
	with installation/assembly	with after sales services
	with training	with installation/assembly
		with training
9	Autoclave	Autoclave
	Stainless steel	Stainless Steel or Painted Stainless Steel
	Light Indicators for working state	Light Indicators for working state
	Over temperature & over pressure auto-	Over temperature & over pressure auto-
	protection	protection
	Double Scale indication pressure gauge	Double Scale indication pressure gauge
	Safe protection water lacking	Safe protection water lacking
	Automatically shut of after sterilization	Automatically shut of after sterilization
	2 stainless steel sterilizing baskets	2 stainless steel sterilizing baskets
		Ĭ
	Chamber volume:	Chamber volume:
	Maximum 150L	
		Capacity: 150L
		Designed Pressure: 0.217Mpa
	Working Pressure: 0.22MPa	Designed Temp: 138°C
	Working Temperature: 134°C	Working Pressure: 0.217Mpa
	Heat average: ≤±1°C	Working Temp: 50-134°C
	Timer scope: 0~60min	Temp Display Accuracy : 0.1°C
	Temperature Scppe: 105 ~134°C	Timing Range: 0-99h





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		Dynamic Pulse Exhaust Temp: 105-136°C
	Power:	Temp Holding Range: 50-100°C (Programmable
	2.5KW / AC220V.50Hz (min)	Consumption: 6kW
	6KW / AC220V.50Hz (max)	Power Supply: 50Hz/220V
		inclusion:
	inclusion:	with 1 year warranty
		with after sales services
	with 1 year warranty	
	with after sales services	with installation/assembly
	with installation/assembly	with training
	with training	
10	Automatic Kjeldahl Distillation Apparatus	Automatic Kjeldahl Distillation Apparatus
	Control: Computer Control	Measuring Range: 0.1mg-240mg N
	Display: Digital	Recovery Rate ≥99.5%
	Accuracy Grade: 1	Sample Output: Solid ≤6g; Liquid ≤25mL
	Mass Scope of Workpiece: <900kg	Distillation Speed: 3-8min / sample
	Max Diameter for Workpiece: <500mm	Distillation time: 0-99min
	Power Supply 220V±10%, 50/60Hz	Repeatability ≤0.5%
	Input power: 1250W	Titration percision: 1.0 ul//step
	Temperature Range: Ambient to -69°C	Storage Data: up to 1million groups
	Temerature Control Accuracu: ±0.5°C	Protection Device: Flowrate Detection, liquid
		level
	Refrigeration System: New Type Refrigiration	alarm, over pressure protection
	Compressor	
	Ambient Temperature: 10-35°C	Display: 7 inches LCD (maximum)
	Relative Humidity: ≤85%	Rated power 12kW
	Heating Power: 400w	Power Supply: 220v 50/60Hz
	Filtration Filter: 363 Mesh Stainless Steel Wire	
	Mesh	inclusion:
	in all rations.	with 1 year warranty
	inclusion:	with after sales services
	with 1 year warranty	with installation/assembly
	with after sales services	with training
	with installation/assembly	
	with training	
11	Portable Animal Digital Ultrasound (B/W)	No Changes
	Display: 4-5.7 inch High Resolution Color TFT LCD	
	Probe model: Electronic Convex and Linear	
	Lements of Probe: 80 (minimum)	
	Standard Probe: 6.5MHz multi-frequency	
	Linear rectal prob Frequency range:	
	4.5/5.5/6.5/7.5 MHz	
	Optional probe: 4.0MHz multi Frequency	
	Convex Rectal Probe Frequency Range:	
	2.0/ 2.5 / 4.0 / 5.0 MHz	
	Optional probe: 3.5MHz multi-frequency convex	
	probe; frequency range: 2.0 / 2.5 / 3.5 / 5.0 MHz	



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Optional probe: 6.5MHz multi frequency intra cavity	
prove 6.5 MHz; frequency range: 4.5/5.5/6.5/7.5MHz	
Optional probe: 7.5 multi high frequency linear probe;	
frequency range: 5.5/6.5/7.5/9.0 MHz	
Optional probe: 5.0MHz multi micro convex probe;	
frequency range: 4.5/5.0/6.5/7.5 MHz	
Scanning angle: convex probe: 60°, intra-cavity probe: 135°	
Probe Connector: 1 pc, automative identifying' function	
Receiving channel: ≥16 digital beam former	
Resolution: Horizontal ≤2mm, Vertical ≤1mm	
Dead Zone: ≤5mm	
Maximum Scanning Depth: ≥190cm	
Geometric Position Accuracy:Horizontal ≤5%	
Vertical ≤5%	
Scanning mode: B,2B,4B,B/M,M	
Full field image with 9 lever adjustment	
Gain range: general gain continuously	
adjustment (0~127dB)	
Dynamic range: 27~90dB, video adjustable	
4 kinds of angles/ width adjustment	
Gray: 256	
Imaging Technology: full digital beam forming continuously dynamic adjustment focusing,	
Dynamic aperture	
Image Storage: 100 frames permanent Storage	
Cine Loop: 256 frames	
Intelligent TGC Control: near-field and far field	
Imaging Processing: Pre-processing (Continuous, dynamic focusing,dynamic aperture,dynamic filtering)	
post processing (4 gamma correction)	
Correlation Processing (4 levers) Left, Right, positive/	
negative,vertical, horizontal flip and B/W conversion,	
edge enhancement	
With image depth enhance and amplification	
Frame rate: 30 FPS	
Measurement: Distance Perimeter, Area, Volume	
Battery: 2400 Mah	



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	Rigid Chrome Push Plate	
	Elasometric Door Seal (no adhesives)	
	Heavy duty all steel welded cabinet	
	Double wall Construction	
	13 to 15 levels	
	2 to 4 colums	
13	Herbarium Cabinet	No Changes
	with training	
	with installation/assembly	
	with after sales services	
	with 1 year warranty	
	inclusion:	
	4. Case information	
	3. Analyusis and determinant histogram	
	2 Sperm Dynamic trajectory curve	
	1. Main technical data of sperm	
	Output conten from sperms test system is NOT less than:	
	energy is arrhythmic map of sperms	
	4. Display various sperms in motion speed and	
	3. sperm dynamic trajectory curve	
	2. features data of semen and statistical data from analysis of all main functions	
	1. Distribution curve of static sperms,	
	less than	
	Displayed content of sperm test system is NOT	
	Microscope objective lens: 10x 20x 25x 40x	
	Analysis time: 1-5 second (fastest) Group number of collected images: 1-15 groups	
	Resolution of particle in diameter: 0-150um/s	
	Frame number of picture: 0-75	
	Range of test speed: 0-180um/s	
	Maximum of the tested sperms: 1000	
12	Sperm Analyzer	No Changes
10	with training	
	with installation/assembly	
	with after sales services	
	with 1 year warranty	
	inclusion:	
	Power Saving Function	
	Power: 85v~242V, 48~62Hz	
1	Adapter: 40VA	



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	3 Pt Locking mechanism	
	Removable Steel Shelf Drawer	
	Air Space	
	Safe type Heave 13 Gauge Lift off hinge	
	Fumigant Compartments	
	Chrome Label holder (3x5 card minimum)	
	Key Lock	
	Short Depth Shelf	
	Fold at front of shelf	
	Double panel air tight door	
	inclusion:	
	with 1 year warranty	
	with after sales services	
	with installation/assembly	
	with training	
14	Soil test kit fertility nutrient analyzer	No Changes
	LCD display	
	Print: Print test date, sample number, sample items,	
	sample contents, variety	
	Large Capacity sotrage (time, place, fertilizers), data	
	can be checked at anyyime	
	Test: N, P, K, organic matter, salinity and pH in soil	
	, fertilizer and plants	
	Can set crop variety, crop yield, fertilizer variety, and	
	automatically count the fertilizing amount	
	SOIL NUTRIENT	
	Stability: Absorbency of light drift <0.003	
	Repeatability: Absorbency of light <0.005	
	Linearity erros: Red light for Copper	
	Blue light for potassium dicromate <3.0%	
	Sensitivity: Red light ≥4.5*10 5	
	Blue light ≥ 3.17*10 3	
	Wavelenght: Red light 620 ± 5nm	
	Blue light 440 \pm 5nm	
	Anti Knocking performance: Qualified	
	Ph	
	Testing Range: 1 - 14	
	Error: ± 0.5%	
	Salinity	
	Testing Range: 0.01% - 1.00%	
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	Error: ±5%	
	Power Supply: 220v/110V ± 10% 50/60Hz	
	inclusion:	
	with 1 year warranty	
	with after sales services	
	with installation/assembly	
	with training	
15	Laboratory flow meter	No Changes
	Barrel parameters: inner hole 9.550±0.005mm (min	
	Pistons parameters: Piston head: 9.474±0.005mm	
	Outlet length 8.000±0.025mm	
	Parameters: Extrusion hole: 1=2.095±0.005mm	
	Temperature range: room temp-450 degree centigrade	
	Temperature Fluctuation: ±0.2°C	
	Temperature uniformity: ±1°C	
	Temperature Dispay resolution:0.1°C	
	Display Resolution: 0.1°C	
	Maximum Comsuption: <600W	
	Time Display Resolution: 0.1s	
	Weight Capacity: 0.325kg to 21.6kg	
	Position Detection	
	Loop distance Up Down: 30mm	
	Control Precision ±0.1mm	
	Test flow control	
	Tmes of cutting the material: 0-10times	
	Material cutting interval 0-999	
	Control flow reaches the set temp w/o volatility	
	Barrel temp time: 15min	
	Material be installed: 1	
	Material sample tem recovery time: 4min	
	Binder set: 1 min	
	Output mode: Micro Automatic Print output	
	Test load: 8 sets of weights	
	Cut material method: automatic	
	Power AC220v ± 10% 50/60Hz	
	inclusion:	
	with 1 year warranty	
	with after sales services	
	with installation/assembly	
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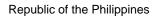
	with training	
16	Binocular Microscope w/ LCD	Binocular Microscope w/ LCD
	Viewing Head:	Viewing Head:
	5" - 7" LCD	5" - 7" LCD
		Eyepiece:
	Nosepiece:	Wide field plane-scope eyepiece WF10X18mm
	Ball beating quadruple nosepiece	
		Infinite plan Achromatic Objective:
	Eyepiece:	4x N.A=0.10 WD=20.00mm
	Wide field plane-scope eyepiece WF10X18mm	10x N.A=0.25 WD=0.68mm
		100x (Oil) N.A=1.25 WD=0.20mm
	Objective:	
	1. Achromatic 4X, 40X, 40X(S), 100X(S Oil)	Stage:
	2. Plan achromatic 4X, 40X, 40X (S), 100X (S, Oil)	Double layer mechanical stage
		Condenser:
	Stage:	Abbe NA1.25 Condenser with Iris
	Double layer mechanical stage	diaphragm & filter, rack & piiion adjustment.
	Condenser:	Illumination:
	Abbe NA1.25 Condenser with Iris	Built-in illumination, halogen lamp,
	diaphragm & filter, rack & pilion adjustment.	6V/20W, power supply: 90-230V/3W LED
	Illumination:	inclusion:
	Built-in illumination, halogen lamp,	with 1 year warranty
	6V/20W, power supply: 90-230V/3W LED	with after sales services
		with installation/assembly
	inclusion:	with training
	with 1 year warranty	
	with after sales services	
	with installation/assembly	
	with training	
7	Trinocular Microscope	Trinocular Microscope
	Image sensor: 1/2.5" Color 5 megapixel CMOS	Optical System: Infinite
	Effective pixel: 2048x1536	Viewhead: Compensation Free Trinocular Head,
	Pixel size 2.2x2.2um	inclined at 30°, 360° rotatable, interpupillary
	LCD Screen size: 9.7" 1024x768 IPS LCD	55~75mm
	Frame rate: 15	Eyepiece: P10X/22mm P16/15mm
	Definition: FULL HD	
	White Blance" Auto and Manuual	Infinite plan Achromatic Objective:
	Operating System: Android 4.2.2 or higher	4x N.A=0.10 WD=20.00mm
	Brightness Control: auto and manual	10x N.A=0.25 WD=0.68mm
	Color: RGB	100x (Oil) N.A=1.25 WD=0.20mm
	Supports: Edge Enhancement, Film and Video,	
	measurement, digital denoiser	Focosung: Coaxial Coarse and fine adjustable system
	SD Card Interface: 32G SD 2.0, standard size,	range 30mm, fine division 0.002mm
		Stage: Double layers mechanical stage 155*145mm
	non visual design, maximum 32G	staget bousie layers meenamen stage 155 145mm



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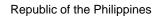
	Interface: Standard HDMI Output	Moving range 80*50mm
	Lens: C	Condenser: Abb NA1.25 centerable condenser with
	Usb interface: USB2.0	iris diaphragm and filter
		Illumination: Halogen lamp 6v/20W, adjustable
	inclusion:	brightness
	with 1 year warranty	Filter: Blue Yellow Green
	with after sales services	Power Supply: AC85 - 275V 50/60Hz
	with installation/assembly	
	with training	inclusion:
	-	with 1 year warranty
		with after sales services
		with installation/assembly
		with training
18	Thermostatic water bath	Thermostatic water bath
	Capacity: 23L	Capacity: 18L(Minimum) 23L (maximum)
	Power: 1000w	Temp Range: RT100°C
	Temperature Range: RT+5 -99ºC	Temperature Fluctuation: ±0.5 ^o C
	Temperature Fluctuation: ±0.5°C	Temp Accuracy ≤±1ºC
	Timer: 0-999min	Timer: 0-999min
	Voltage: 110V 60Hz /220V 50Hz	Power: 2000W (maximum)
		Power Supply: 110/220V 50/60Hz
	inclusion:	inclusion:
	with 1 year warranty	with 1 year warranty
	with after sales services	with after sales services
	with installation/assembly	with installation/assembly
	with training	with training
19	Mycotoxin Analyzer	No Changes
	Compact, Economical, standalone micro stirp reader	
	with a log software	
	Calculate result automatically	
	more than 120 user-entered tests	
	interactive LCD touch screen with USB Mouse	
	optionm superb optics, onboard curve-fitting software	
	and built-in printer	
	Components	
	1 Microwell Reader	
	1 Touch Screen Protector	
	2 paper rols	
	1 photometer lamp	
	1 adhesive dress panel	
	1 12-well strip carrier	
	1 8-well strip carrier	
	1 manual	
	1 cover	
	1 usb connector	
	1 power supply cord	





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	inclusion:	
	with 1 year warranty	
	with after sales services	
	with installation/assembly	
	with training	
20	Soil Analysis	No Changes
	Calcium chloride solution (CaCl2) sufficient for	
	110 soil extracts	
	calcium acetate lactate solution (CAL) sufficient	
	for 7 soil extracts,	
	1 set of scales,	
	1 soil sieve,	
	1 funnel,	
	1 double-ended spatula,	
	3 syringes,	
	1 spray bottle,	
	1 measuring cylinder,	
	1 can,	
	2 shakers,	
	1 plastic shovel,	
	100 folded filters,	
	1 set of instructions	
	inclusion:	
	with 1 year warranty	
	with after sales services	
	with installation/assembly	
	with training	
21	Centrifuge (Hematocrit)	No Changes
	Speed= 12,000rpm (fixed)	
	R.C.F= 14,648g	
	Timer= 0~15 min. mechanical timer	
	Motor= Universal motor	
	Capacity= 24 x capillary tube (Diam. 1.5x75mm)	
	Standard Accessory=Percentage	
	Reader(Aluminum) Optional Accessory= Disc reader (plastic)	
	Weight (kg)= N.W 9.0 / G.W. 9.5	
	Overall Dimension= W300xD300xH240mm	
	Power supply= AC 110V 60Hz (220V, $50/60$ Hz	
	available)	
	inclusion:	
	with 1 year warranty	
	with after sales services	
	with installation/assembly	
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	with training	
22	Centrifuge(Eppendorf)	Centrifuge
	Digital Display	Digital Display
	Automatic lid release function	Automatic lid release function
	Separate short spin key for short centrifugation	Separate short spin key for short centrifugation
	Rotation speed: 800 - 13400rpm	Rotation speed: 800 - 13400rpm
	Maximum centrifugal force: 12100G	Maximum centrifugal force: 12100G
	Maximum throughput: 1.5 - 2.0 mL	Maximum throughput: 1.5 - 2.0 mL
	inclusion:	inclusion:
	with 1 year warranty	with 1 year warranty
	with after sales services	with after sales services
	with installation/assembly	with installation/assembly
	with training	with training

For the guidance and information of all concerned.

la RONALD REAGAN T. ALONZO, Ph.D. BAC Chairperson