



MARIANO MARCOS STATE UNIVERSITY

Bids and Awards Committee

BID BULLETIN No. 2021-033

Project: Procurement of Laboratory Equipment for BS Food Technology Program of CAFSD
ABC: P5,122,250.00

Subject: Clarification of the Details in the Bidding Documents

Notice is hereby given to all interested bidders of the following clarifications:

	As Published	As Corrected
Delivery Period	60 days	90 days
Technical Specifications 1	Electric Microscope; Optical System: Infinite Optical System, Viewing Head: Seidentopf Trinocular Viewing Head, Inclined at 30°, 360° Rotatable, Interpupillary 50-75mm, Light Distribution: 20:80, Eyepiece: WF10x/20, Nosepiece: Backward Quadruple Nosepiece, Objective: Infinity E-Plan objectives 4X, 10X, 40X (S), 100X (Oil) (S), Condenser: Abbe condenser NA 1.25 with Iris Diaphragm, Focusing: Coaxial Coarse & Fine Focusing knobs, Travel Range: 26mm, Scale:2um, Stage Size: 145x140mm, Cross Travel 76x52mm, Two Slide Holder, Illumination: 6V/20W Halogen lamp, Brightness adjustable, Power Supply: AC 220V, 60Hz	Electric Microscope; Optical System: Infinite Optical System, Viewing Head: Seidentopf Trinocular Viewing Head, Inclined at 30°, 360° Rotatable, Interpupillary 50-75mm, LED display, Light Distribution: 20:80, Eyepiece: WF10x/20, Nosepiece: Backward Quadruple Nosepiece, Objective: Infinity E-Plan objectives 4X, 10X, 40X (S), 100X (Oil) (S), Condenser: Abbe condenser NA 1.25 with Iris Diaphragm, Focusing: Coaxial Coarse & Fine Focusing knobs, Travel Range: at least 25mm , Scale:2um, Stage Size: 145x140mm, Cross Travel 76x52mm, Two Slide Holder, Illumination: 6V/20W Halogen lamp, Brightness adjustable, Power Supply: AC 220V, 60Hz
2	Laminar flow; External Size (W*D*H), mm: 1040*615*1770; Internal Size (W*D*H), mm: 940*540*545; Work Surface Height: 750mm; Airflow Velocity: Average of 0.3~0.5m/s, air speed adjustable; Illuminating Lamp: LED Lamp: 12W*1; UV Lamp: 18W*1, Power Supply: AC 220V±10%,60 Hz	Laminar flow; Internal Size (W*D*H), mm: 940*540*545; Work Surface Height: 750mm; Airflow Velocity: Average of 0.3~0.5m/s, air speed adjustable; Illuminating Lamp: LED Lamp: 12W*1; UV Lamp: 18W*1, Power Supply: AC 220V, 60 Hz
3	Autoclave; Capacity: 75L; Chamber Size(mm): φ386*670: Max Designed Pressure: 0.28MPa; Max	Autoclave; Capacity: 75L; Chamber Size(mm): φ386*670: Max Designed Pressure: 0.28MPa;



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	Designed Temp: 150°C; Working Pressure: 0.22MPa; Working temp.: 80°C-136°C; Power consumption: 5.5KW; Power Supply: AC110/220V±10%, 60Hz; External Size(W*D*H) mm: approx. 700*610*1100	Working Pressure: 0.22MPa; Working temp.: 100°C-136°C; Power consumption: 5.5KW; Power Supply: AC110/220V,60Hz, movable (with caster/wheels, 4)
4	Incubator; Gravity convection provides gentle airflow and minimal drying out, Temperature ranges from ambient +5 °C up to 75 °C, Temperature uniformity of ± 0.6 °C, Temperature stability of ± 0.2 °C, Capacity: 45-50L, Power Supply: 220V 60Hz	Incubator; Gravity convection provides gentle airflow and minimal drying out, Temperature ranges from ambient +5°C to 75°C, Temperature uniformity of ± max of 0.6 C, Temperature stability/fluctuation of ±0.1 to ±0.2°C, Capacity: at least 45L, Power Supply: 220V, 60Hz
5	Hot plate w/magnetic stirrer; Temperature Range: Ambient +5 to 400°C, Stirrer Speed Range: 150 to 1500 rpm, Platform Dimensions 7 x 7 in. / 17.8 x 17.8 cm, Dimensions (w x d x h): 7.5 x 11.5 x 4 in. / 18 x 27.9 x 10.1 cm, Power Supply: 220V, 60Hz	Hot plate w/magnetic stirrer; Temperature Range: Ambient +5 to 400°C, Stirrer Speed Range: 150 to 1500 rpm, Power Supply: 220V, 60Hz
6	Top loading balance; Size: approx 320X280X150mm, capacity:0-300g, Display Type: LCD, weighing range:0~300g, Readability accuracy: 0.01 g Dimensions:320x280x150mm, Power supply: 220V AC 60Hz and DC dual purpose, Weighing pan size:130mm	Top loading balance; Capacity: 0-300g, Display Type: LCD, weighing range: 0 to 300g, Readability accuracy: 0.01 g, Power supply: 220V AC 60Hz and DC dual purpose, include Weighing pan
9	Centrifuge; Table top, Speed: 0 to 4000 rpm, Capacity: 1 x 15mL, Power Input: 220V, 8 holes capacity, Includes 8 pcs 15-mL centrifuge tubes	Centrifuge; Table top, Speed: 0 to 4000 rpm, Capacity: 1 x 15mL, Power Input: 220V, Include 8 pcs 15-mL centrifuge tubes
10	Table top pH meter; Measuring range: 0.00-14.00 pH, -2000-2000 mv, 0-100 °C; Resolution: 0.01 pH, 1 mV, 0.1 °C; Error limits: ± 0.01 pH, ± 1 mV, 0.3 °C; Calibration: max. 5-point, 4 predefined buffer groups; Memory size: 200 measurements, current calibration; Sensor inputs: BNC, Cinch, NTC 30 kΩ; USB Interface; Power supply: 100-240 V	Table top pH meter; Measuring range: 0.00-14.00 pH, -2000-2000 mv, 0-100 °C; Resolution: 0.01 pH, 1 mV, 0.1 °C; Error limits: ± 0.01 pH, ± 1 mV, 0.3 °C; Calibration: max. 5-point, 4 predefined buffer groups; Memory size: at least 200 measurements, current calibration; Sensor inputs: BNC, Cinch, NTC 30 kΩ; USB Interface;



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	AC/60 Hz/12 V DC, Display: 4.3" segmented LCD; Size/Weight: 227 x 147 x 70 mm / 0.5 - 1.5 kg	Power supply: 100-240 V AC/60 Hz/12 V DC, Display: LCD
16	UV-vis spectrophotometer; Optical Design: double beam, Optical Detector: Type Dual silicon photodiodes, Spectral Bandwidth: 2.0 nm, Lamp (typical life): Xenon flash lamp (5 years), Accuracy (Photometric): $\pm 0.002A$ at 0.5A, $\pm 0.004A$ at 1.0A, $\pm 0.008A$ at 2.0A Drift: $< 0.0005A/hr$, Linearity: Up to 3.5A at 260nm, Noise: $\leq 0.00020A$ at 0A at 260 and 500 nm $\leq 0.00030A$ at 1A at 260 and 500 nm, $\leq 0.00040A$ at 2A at 260 and 500 nm, Range (Photometric): -2A to +3.5A; $< 1000\%T$ to $0\%T$; 9999 C, Stray Light: $< 1.0\%T$ 198 nm (KCl), $< 0.05\%T$ at 220 nm (NaI), $< 0.03\%T$ at 340 nm (NaNO ₂), Wavelength: Accuracy: 0.5 nm, Min. Data Interval 0.2; 0.5; 1.0; 2.0; 3.0; 5.0nm, Range: 190 to 1,100nm, Repeatability: $\leq \pm 0.2$ nm, Scanning Speed, 10 to 4,200 nm/nm, Slow Speed: Slow, medium and fast (up to 1600 nm/min), Accessories: 4 pcs cuvettes, includes calibration services and certification	UV-vis spectrophotometer; Optical Design: double beam, Optical Detector: Type Dual silicon photodiodes, Spectral Bandwidth: 2.0 nm, Lamp (typical life): Xenon/Tungsten/Deuterium flash lamp (>1000 operating hours) , Accuracy (Photometric): $\pm 0.002A$ at 0.5A, $\pm 0.004A$ at 1.0A, $\pm 0.008A$ at 2.0A Drift: $< 0.0005A/hr$, Linearity: Up to 3.5A at 260nm, Noise: $\leq 0.00020A$ at 0A at 260 and 500 nm $\leq 0.00030A$ at 1A at 260 and 500 nm, $\leq 0.00040A$ at 2A at 260 and 500 nm, Range (Photometric): -2A to +3.5A; $< 1000\%T$ to $0\%T$; 9999 C, Stray Light: $< 1.0\%T$ 198 nm (KCl), $< 0.05\%T$ at 220 nm (NaI), $< 0.03\%T$ at 340 nm (NaNO ₂), Wavelength: Accuracy: 0.5 nm, Min. Data Range: 0.2 to 5.0nm, Range: 190 to 1,100nm, Repeatability: $\leq \pm 0.2$ nm, Scanning Speed, 10 to 4,200 nm/nm, Slow Speed: Slow, medium and fast (up to 1600 nm/min), Accessories: 4 pcs cuvettes, quartz
18	Convection drying oven; Capacity: 1.7 cu. Ft., Interior Dimensions WxDxH in. (cm): 12 x 20 x 12 (30.5 x 50.8 x 30.5), Exterior Dimensions WxDxH in. (cm): 20.5 x 28.2 x 26.25 (52 x 71.75 x 67.75), Temperature Range: 10°C above ambient to 240°C, Temperature Uniformity: $\pm 3.5\%$ of set point	Convection drying oven; Capacity: 1.7 cu. Ft., Temperature Range: 7.5 to 300°C , Temperature Uniformity: $\leq \pm 2.2^\circ C$
28	Kjehldahl apparatus; Storage capacity: 40 batches (with Compass unlimited), Analysis time: 3.5 minutes at 30 mg N, Distillation capacity: ~ 40 ml/min, measuring range: 0.1 – 210 mg N, 1% RSD (including the digestion step), Recovery: $> 99.5\%$ at nitrogen	Kjehldahl apparatus; Storage capacity: 40 batches, Analysis time: 3.5 minutes at 30 mg N, Distillation capacity: ~ 40 ml/min, measuring range: 0.1 – 210 mg N, 1% RSD (including the digestion step), Recovery: $> 99.5\%$ at nitrogen levels between 1 – 200 mg N,



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	levels between 1 – 200 mg N, Burette volume: 35 ml, Burette resolution: 2.4 uL/step, Delay: 0-1800 sec, Power supply: 220V, Dimensions (W*d*h): 48 × 58 × 69 cm, designed for analysis of foods	Burette volume: >25 ml, Burette resolution: 2.4 uL/step, Delay: 0-1800 sec, Power supply: 220V, 8 placer (min), with scrubber, with complete accessories, For Food Analysis
30	Soxhlet Extractor Automatic Fat Analyzer; Temperature Range: Room temp.+5-300 Degree Celsius, Temperature Accuracy: ±1 Degree, Capacity: 6 pcs, Solvent Recovery: ≥80%, External Size(W*D*H): 650*320*715mm, Measuring Range: 0.1~100%, Sample Weight: 0.5-15g, Solvent Cup Volume: 80ml, Power supply: 220V, 60Hz	Soxhlet Extractor Automatic Fat Analyzer; Temperature Range: Room temp.+5-300 Degree Celsius, Temperature Accuracy: ±1 Degree, Capacity: 6 pcs, Solvent Recovery: ≥80%, Measuring Range: 0.1~100%, Sample Weight: 0.5~15g, Solvent Cup Volume: ≥80ml, Power supply: 220V, 60Hz

For the guidance and information of all concerned.

October 25, 2021


NATHANIEL R. ALIBUYOG
Bac Chair