



MARIANO MARCOS STATE UNIVERSITY
Bids and Awards Committee

BID BULLETIN No. 2022-008

**Project: Procurement of Laboratory Equipment for BS Food Technology Program of CAFSD
ABC: P1,937,250.00**

Issued pursuant to Sec. 22.5 of the IRR of R.A. 9184 to clarify and/or amend certain provisions in the Bidding Documents issued for the above project:

A. AMENDMENTS/INCLUSIONS

Reference	Amendment/Inclusions
Section VI. Specifications	To revise the List of Technical Specifications in the bidding documents (kindly see attached document)

For the guidance and information of all concerned.

March 7, 2022.


NATHANIEL R. ALBUOYOG
BAC CHAIR

Item Number	QTY	UNIT	Description	Compliance to
				Tech. Specifications
1	2	unit	Autoclave; Capacity: 75L; Chamber Size(mm): ϕ 386*670; Max Designed Pressure: 0.28MPa; Working Pressure: 0.22MPa; Working temp.: 100°C-136°C; Power consumption: 5.5KW; Power Supply: AC110/220V,60Hz, movable (with caster/wheels, 4)	
2	2	unit	Hot plate w/magnetic stirrer, Temperature Range: Ambient +5 to 400°C, Stirrer Speed Range: 150 to 1500 rpm, Power Supply: 220V, 60Hz	
3	2	unit	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	
4	1	unit	Brookfield viscometer; Speeds: 0.0, 0.3, 0.6, 1.5, 3, 6, 12, 30, 60, (rpm), Operating Environment: 0°C to 40°C, Temperature Range: 32°F to 104°F, 20% - 80% R.H.; non-condensing atmosphere Viscosity Accuracy: \pm 1.0%, Full Scale Range in Use, Viscosity Repeatability: \pm 0.2% of Full-Scale Range in Use, Temperature Sensing Range: -100°C to +300°C, Temperature Accuracy: \pm 1°C; -100°C to +149°C \pm 2°C; +150°C to +300°C	
5	1	unit	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 (NaNO2), Wavelength: Accuracy: 0.5 nm, Min. Data Range: 0.2 to 5.0nm, Range: 190 to 1,100nm, Repeatability: < \pm 0.2 nm, Scanning	

			Speed, 10 to 4,200 nm/mn, Slow Speed: Slow, medium and fast (up to 1600 nm/mn), Accessories: 4 pcs cuvettes, quartz	
6	1	unit	Water Activity; Measurement Principle: 0.020-1.000aw, Calibration Range: 0.110-0.900aw, Resolution: 0.001aw, Accuracy: +/-0.010aw within cal. Range, Precision: +/-0.003aw within cal. Range; Temperature - Measurement Principle: Surface-IR and NTC, Measurement Range: 5-45°C; Current Supply: 5 VDC, +/-6%, max. power consumption 10W, Power Supply: 220 V AC 50/60 Hz, Display: LC-display, Volume measurement chamber: 15 mL, Dimensions Sample Cup: Diameter: 30mm x Height 14mm	
7	1	unit	Muffle furnace; Operating temp. range: 100~1150°C, Temp. control accuracy: ±2°C (at 1150 ° C), Max. temp. reaching time: ~60min., Exterior material: Cold rolled steel plate with baked-on melamine resin finish, Internal material: Ceramic fiber, Sensor: R-thermocouple, Exhaust port: ø20mm, Operation function: Fixed temperature, quick auto stop, auto stop, auto start, program (maximum 6 patterns: 30 steps x 1 pattern, 15 steps x 2 patterns or 10 steps x 3 patterns), Internal dimensions WxDxH: 100x250x150 mm, 100x250x150 mm: 346x505x567 mm, Internal capacity: 3.75L, Power source (50/60Hz): AC220V 7.5A	
8	1	unit	Babcock shaker; Babcock Variable-Speed Orbital Shaker; 220V/60Hz, 24 Bottle Capacity, Platform Flask Capacity: 24 x 6 to 9" high bottles, Power (Hz): 50, Description: Babcock variable-speed Orbital Shaker, 220V/60Hz, 24 bottle capacity, Height (Inch Short): 11.5, Max Speed (rpm): 500	
9	1	unit	Babcock centrifuge; Cast aluminum bowl and cast-iron base. Accommodates either 6 1/2" or 9" Babcock bottles. Equipped with heater, thermostat, thermometer, brake and visiscope speed indicator (tachometer). Pilot light, motor & heater switches in control box. 23" bowl diameter, 20 1/2" base, 16 1/8" overall height. 220 V., 60 Hz	

10	1	case	Babcock bottle for milk test; 8%, SAMPLE Size (g) : 18, %, mL: 8, 1.6, 12 pcs per case	
11	1	case	Babcock bottle for ice cream, 10%; SAMPLE Size (g) : 18, %, mL:10, 2, 3 pcs per case	
12	1	case	Babcock bottle for Cheese, Sour Cream, Paley, 20%; SAMPLE Size (g) : 9, %, mL:20, 2, 12 pcs per case	
13	1	case	Babcock for Cream and Cheese, 50%; SAMPLE Size (g) : 9, %, mL:30,5, 12 pcs per case	
14	1	case	Babcock bottle for Cream, 50%; SAMPLE Size (g) : 18, %, mL:50, 10, 12 pcs per case	
15	1	unit	Consistometer; Overall Length: 17 inches. Overall W/dth: 3-1/4 inches. Weight: 2 pounds, Trough length: 14-1/2 length with 60 etched 0.5 cm graduations. Sample Reservoir Capacity: 75 ml, Leveling: 2-leveling screws and spirit level	
16	1	unit	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	
17	1	unit	Alcohol refractometer; Measurement scale range: Ethyl alcohol 0.0 to 45.0% (g/100g), Specimen measurement temperature range: 10.0 to 35.0 degrees C, Accuracy: Ethyl alcohol ±1.0%, Temperature: ± 1 degrees C, Resolution: Ethyl alcohol 0.5%, Temperature 0.1 degrees C, Ambient temperature for unit operation: 10 to 40 degrees C, Sample volume: 0.3ml, Measurement time: Three seconds	

18	1	unit	<p>Thermocouple Meter w/ SD Card Slot for Data Logging: Measures, Records and Displays up to 4 Temperature Channels Using Thermocouple or RTD Probes</p> <p>Temperature Range of -58°C to 1700°C (Dependent on Thermocouple Type) with ±0.5% Accuracy</p> <p>Recorded Data Logs to SD Card with Easy Analysis Using Microsoft® Excel®</p> <p>1 Second to 1 Hour User-Selectable Sampling Rate</p> <p>Battery-Powered with Optional AC/DC Powered Adapter Backlight LCD Display Shows Current, Min and Max Readings and Battery Status</p> <p>Accessories: Right Angle Type K Surface Thermocouple Sensor Probe, Air and Gas Type K Thermocouple Sensor Probe, Type K Needle Tip Thermocouple Sensor Probe, Type K Immersion Thermocouple Sensor Probe</p>
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