



Republic of the Philippines
VISAYAS STATE UNIVERSITY
 Visca, Baybay City, Leyte

PURCHASE REQUEST

PPMP No. : 22-4-636-2024-0-0-0

PR No.: TF-2024-09-01663

Date: 09-05-2024

Dept./Office: NARC

Category: Laboratory
 Equipment

Section/End-User: Cielo F. Señara

Funding Source: Trust Fund

Project Title/Code: ACEF R&D Grant

Item #	Item Description	Unit	Qty	Unit Cost	PAR/ICS	Total Cost
1	150L, Autoclave Manual Vent Vertical Autoclave Sterilizer	unit	1	250,000.00	ROMEL B. ARMECIN	250,000.00

Specification:

Specifications:

Chamber Size/Volume:

- Diameter x Height: 7400 mm x H820 mm
- Total Volume: 117 L

Outer Dimensions/Weight:

- Width x Depth x Height: 620 mm x 720 mm x 1160 mm
- Weight: 95 kg

Temperature Range (Max Pressure):

- Temperature: 100°C - 137°C
- Pressure: 0.250 MPa

Sterilization Time:

- Range: 0 minutes - 48 hours 00 minutes

Dissolving Temperature/Time:

- Temperature: 40°C - 99°C
- Time: 0 minutes - 48 hours 00 minutes

Warming Temperature/Time:

- Temperature: 40°C - 60°C
- Time: 0 minutes - 48 hours 00 minutes

Safety Devices:

- Lid interlock
- Lid opening/closing detection

- Water leak prevention
- Over temperature prevention
- Over pressure prevention
- Sensor breakage detection
- Memory backup
- Leakage breaker
- Pressure safety valve

Power Demand:

- **Voltage:** AC 220/230/240V
- **Current:** 18/19/20A

Wire Baskets/Quantity:

- **Size:** 7380 mm x 400 mm
- **Quantity:** 2 pcs

2	Autoclave Pipettor set with rack	unit	2	70,000.00	ROMEL B. ARMECIN	140,000.00
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Specification:

Catalog Number: 4642090

- **Volume:** 100 to 1000 ?L
- **Increments:** 1 ?L
- **Color:** Blue
- **Compatible Tips:** Finntip 1000, Filter 1000, Flex Filter 1000, 1000 Ext, Filter 1000 Ext, Wide 1000

Catalog Number: 4642010

- **Volume:** 0.2 to 2 ?L
- **Increments:** 0.002 ?L
- **Color:** Pink
- **Compatible Tips:** Finntip 10 Micro, Filter 10 Micro, Flex 10, Flex Filter 10

Catalog Number: 4642020

- **Volume:** 0.5 to 5 ?L
- **Increments:** 0.01 ?L
- **Color:** Pink
- **Compatible Tips:** Finntip 10 Micro, Filter 10 Micro, Flex 10, Flex Filter 10

Catalog Number: 4642030

- **Volume:** 1 to 10 ?L
- **Increments:** 0.02 ?L
- **Color:** Pink
- **Compatible Tips:** Finntip 10 Micro, Filter 10 Micro, Flex 10, Flex Filter 10

Catalog Number: 4642060

- **Volume:** 2 to 20 ?L
- **Increments:** 0.02 ?L
- **Color:** Yellow

- **Compatible Tips:** Finntip 250, Filter 20, Flex 200, Flex Filter 30, 200 Ext, Wide 250

Catalog Number: 4642070

- **Volume:** 10 to 100 μ L
- **Increments:** 0.2 μ L
- **Color:** Yellow
- **Compatible Tips:** Finntip 250, Filter 100, Flex 200, Flex Filter 100, 200 Ext, Filter 100 Ext, Wide 250

Catalog Number: 4642080

- **Volume:** 20 to 200 μ L
- **Increments:** 0.2 μ L
- **Color:** Yellow
- **Compatible Tips:** Finntip 250, Filter 200, Flex 200, Flex Filter 200, 200 Ext, Filter 200 Ext, Wide 250

Catalog Number: 4642100

- **Volume:** 0.5 to 5 mL
- **Increments:** 0.01 mL
- **Color:** Green
- **Compatible Tips:** Finntip 5mL, Filter 5mL

2. Finnpiquette™ F2 Good Laboratory Pipetting (GLP) Kits

Catalog Number: 4700880

- **Volume Range:** 0.2 to 1000 μ L
- **Includes:** 0.2-2 μ L micro, 2-20 μ L, 20-200 μ L, and 100-1000 μ L
- **Compatible Tips:** Flex tips: 10, 200, 1000

Catalog Number: 4700870

- **Volume Range:** 1 to 1000 μ L
- **Includes:** 1-10 μ L micro, 10-100 μ L, and 100-1000 μ L
- **Compatible Tips:** Flex tips: 10, 200, 1000

Catalog Number: 4700885

- **Volume Range:** 10 to 10,000 μ L
- **Includes:** 10-100 μ L, 100-1000 μ L, and 1-10mL
- **Compatible Tips:** Flex tips: 200, 1000, FT 10mL

Catalog Number: 4701070

- **Volume Range:** 2 to 1000 μ L
- **Includes:** 2-20 μ L, 20-200 μ L, and 100-1000 μ L
- **Compatible Tips:** Flex tips: 200, 1000

Features for All Pipettes:

- Autoclavable
- Color-Coded for Easy Identification
- Variable Volume Adjustment
- High Precision and Accuracy

3	Basic benchtop pH meter with replaceable electrode and buffer	unit	3	70,000.00	ROMEL E. ARMECIN	210,000.00
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Specification:

- **Display:** Large 6.5-inch LCD display
- **Input:** Touch keypad
- **Memory:** 1000-item memory for pH measurements and calibration trail
- **Connectivity:** RS232 and USB interface for data output
- **Electrode Monitoring:** i-Steward monitors electrode condition for accurate measurements
- **User Interface:** Intuitive, smartphone-like interface for parameter changes, setup, and calibration
- **Calibration:** Auto endpoint mode and auto buffer recognition for easy calibration
- **Options:**
 - AB33PH meter with electrode holder
 - Full kit including AB33PH meter, ST310 electrode, electrode holder, and 4 pH buffer mini kits (50 mL each)

Specifications:

- **Accuracy (mV):** ± 1
- **Accuracy (Temperature):** $\pm 0.5^{\circ}\text{C}$
- **Outputs:** USB, RS-232 (PC), RS-232 (Printer)
- **Calibration:** Linear

4	Bead sterilizer with glass beads for laboratory supply-beads	unit	2	75,000.00	ROMEL E. ARMECIN	150,000.00
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Specification:

Description:

- **Function:** Uses heated glass beads for rapid sterilization of small lab equipment such as forceps, scissors, scalpels, needles, and inoculation needles.
- **Sterilization Time:** Effective within ten seconds
- **Heating Temperature:** Approximately 300°C
- **Common Use:** Research laboratories

Features:

1. **Compact Design:** Ideal for use in ultraclean workbenches; digital display shows real-time temperature.
2. **Material & Build:**
 - **Inner Container:** Stainless steel
 - **Heating Element:** High-performance
 - **Temperature Controller:** High precision with over-temperature protection
3. **Temperature Control:** Equipped with high-temperature sterilization beads.
4. **Size and Weight:** Small volume, lightweight, and simple to operate with a long working life.
5. **Glass Beads Configuration:** Diameter of 2.0-2.5 mm

Technical Parameters:

- **Temperature Control Range:** 100°C - 300°C
- **Temperature Stability:** ±5°C
- **Heating Speed:** 725 minutes
- **Heating Well Volume:** Diameter 40 mm, Depth 80 mm
- **Glass Beads Capacity:** 300 g
- **Cover Material:** Stainless steel
- **Insulation Material:** Environmental-protection mineral wool
- **Voltage:** AC 220V 50Hz or AC 110V 60Hz
- **Power:** 120W
- **Fuse:** 250V, 2A/3A, 75 x 20 mm

Dimensions & Weight:

- **Dimension (W x D x H):** 130 x 150 x 200 mm
- **Net Weight:** 2 kg

5	Compound photo microscope LBA powered led 40x - 1600x magnification trinocular compound microscope	unit	1	100,000.00	ROMEL B. ARMECIN	100,000.00
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Specification:

Microscope:

Eyeieces:

- 10X
- 16X

Objectives:

- Achromatic DIN 4X
- 10X
- 40X (Spring, S)
- 100X (Spring, Oil)

Head:

- 30-degree inclined, 360-degree swiveling trinocular

Interpupillary Distance:

- 2-1/8" to 3-1/8" (53mm - 77mm)

Adjustable Ocular Diopter: Yes

Photo Port:

- Height-adjustable 23mm tube

Nosepiece:

- Revolving quadruple port

Mechanical Stage:

- 3D double-layer with caliper
- X-Y-Z movement
- Size: 4-5/8" x 5" (118mm x 127mm)
- Travel Range (X-Y): 70mm x 21mm

Condenser:

- NA1.25 Abbe condenser with iris diaphragm

Transmitted Illumination:

- Variable-intensity LED

Focusing:

- Coaxial coarse and fine knobs on both sides

Power Supply:

- AC 100-240V, 50/60Hz, AC/DC adapter (UL approved)

Dimensions (excluding trinocular port):

- 11" x 7" x 13-3/4" (280mm x 178mm x 350mm)

Camera Specifications:

- **Sensor Type:** CMOS
- **Sensor Optical Format:** 1/3"
- **Active Pixels:** 1M (1280 x 1024)
- **Pixel Size:** 3.67µm x 3.67µm
- **Active Sensor Area:** 4.61mm x 3.69mm
- **Shutter:** Electronic rolling shutter
- **Spectral Response:** 380-650nm with IR-cut filter
- **Capture Resolution and Maximum Framerate:**
 - 7.5fps @ 1280x1024
 - 12.5fps @ 1024x768
 - 12.5fps @ 800x600
- **Connectivity:** USB 2.0
- **Power:** 5VDC over USB

Software OS Requirements:

- **Windows:** XP/Vista/7/8/10 (32/64 bit)
- **Mac OS:** 10.8+
- **Linux:** Kernel 3.13+

Hardware Requirements:

- **Processor:** Intel Core2 2.8GHz or comparable
- **RAM:** 4GB

Software Features:

Windows Version:

- Live video preview
- Captures still images and video
- Time-lapse capture
- Exposure and white-balance controls
- Image processing
- Measurement tools (lines, arcs, polygons)
- Segmentation and counting tools
- Image-stitching, extended depth-of-field, HDR

Mac/Linux Versions:

- Live video preview
- Captures still images and video
- Exposure control
- Color adjustment
- Measurement tools (lines, arcs, polygons)
- Additional features include live video, image capture, exposure control, and color adjustment.

Packing List:

- One Siedentopf trinocular microscope head
- One microscope body
- Four objective lenses: 4X, 10X, 40X, 100X
- One pair 10X eyepieces
- One pair 16X eyepieces
- One blue color filter
- One dust cover
- One sample immersion oil
- One digital eyepiece camera
- Two sizing adapters
- One mini USB to USB type A cable
- One software CD
- One book: "The World of the Microscope"
- One pack 50pc blank slides
- One pack 100pc cover slips

Additional Camera Specifications:

- **Sensor:** Aptina MT9P006 (color)
- **Sensor Size:** 5.7x4.28mm (1/2.5" class)
- **Pixel Size:** 2.2 micrometers
- **Resolution:** 5.0MP
- **Frame Rate:**
 - 101.2fps @ 640x480
 - 38.3fps @ 1280x960
 - 14.2fps @ 2560x1922
- **Sensitivity:** 1.76V/Lux-sec
- **Connectivity:** USB 3.0

- **Compatibility:** Windows (32/64 bit) 8.1/10/11, Mac OSX, Linux
- **Mounting Sizes:** 23mm, 30mm, 30.5mm, and C-mount

Advanced Software for Windows:

- **Features:**
 - Stitching, EDF, video recording, and measurement functions
 - Measurements for lengths, angles, arcs, areas
 - Image saving in multiple formats (BMP, TIFF, JPG, etc.)
 - Live video and still image capture in different resolutions
 - Additional image editing and measurement tools

6	Emergency Eye Wash station	unit	2	52,000.00	ROMEL B. ARMECIN	104,000.00
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Specification:

Description:

- **Purpose:** Suitable for cleaning eyes, face, and hands; spray head can be used for washing the whole body.
- **Operation:**
 - Spray shower controlled by the top of the handle.
 - Steady and ample flow.
 - Valve-switch operation is simple—touch the knob to use.
- **Design:**
 - Height and angle of the bowl are ergonomically designed to fit the face proportion.
 - Outlet water bore is designed to make the water flow mild, protecting the eyes.
 - Drainage system allows used water to flow directly through a tube in the bowl, minimizing pollution.

Material: Stainless steel, firm and chemical resistant

Dimensions and Weight:

- **Package Size (W x D x H):** 1310 mm x 380 mm x 250 mm
- **Gross Weight:** 17.5 kg

7	Fume Hood with HEPA carbon filter, anti-corrosive, ductless	unit	3	70,000.00	ROMEL B. ARMECIN	210,000.00
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Specification:

Advantages:

1. **Adjustable Air Speed:** 9 levels.
2. **Control System:** Microprocessor with LED display.
3. **Chemical Resistance:** Resistant to moderate acids and alkalis.
4. **Memory Function:** Recalls settings after power failure.
5. **Front Window:** Manual, height adjustable with 5mm toughened glass.
6. **Blower:** Built-in PP centrifugal blower; low noise and easy to install.

Specifications:

- **External Size (W x D x H):** 1800 mm x 800 mm x 2515 mm
- **Instrument Size (W x D x H):** 1590 mm x 600 mm x 870 mm
- **Work Surface Height:** 900 mm
- **Max Opening:** 750 mm

- **Air Velocity:** 0.3 ~ 0.8 m/s
- **System Exhaust Volume:** 1140 m³/h
- **Noise Level:** 768 dB
- **Exhaust Duct:** PVC, Standard length 4.3 meters, Ø300 mm
- **Pipe Strap:** 2 pcs
- **LED Lamp:** 40W x 1
- **Blower:** Built-in PP centrifugal blower
- **Consumption:** 500W
- **Power Supply:** AC220V ±10%, 60Hz/50Hz; 110V ±10%, 60Hz
- **Material:**
 - **Exterior:** 1.0 mm cold-rolled steel with anti-bacteria powder coating
 - **Interior:** Compact laminate board with acid and alkali resistance
 - **Work Table:** Chemical-resistant phenolic resin

Standard Accessories:

- PP Water Sink
- Total load of 2 waterproof sockets: 500W
- Base Cabinet
- Water Tap
- 4 meters Exhaust Duct (Ø300 mm)

Optional Accessories:

- Air Supply Flow Control Valve
- Gas Faucet

Package:

- **Main Body:** 1940 mm x 940 mm x 1900 mm
- **Base Cabinet:** 1940 mm x 940 mm x 1050 mm
- **Gross Weight:** 365 kg

8	Gas safety burner/Bunsen burner, sensor ignition, with two adjustment dials for gas and air, 220V	unit	1	100,000.00		100,000.00
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Specification:

Features:

Gas Type Compatibility:

- Natural gas
- Propane
- Butane

Ignition:

- Sensor ignition (IR Sensor)

Adjustment Dials:

- Two dials for adjusting gas and air

Inlet Tube OD:

- 0.375 inches

Power Supply:

- Voltage: 100 to 240 VAC
- Frequency: 50/60 Hz

Components Included:

- IR sensor
- Burner head
- Natural gas nozzle
- Propane/butane nozzle
- 10-mm tubing adapter
- Inoculating loop holder
- Burner head screwdriver
- Gas connection wrench
- Tilt mechanism
- Universal power adapter

Warranty:

- 3 years

9	Heavy cast Aluminium Pressure cooker, 41 quartz cap.	unit	2	50,000.00	ROMEL B. ARMECIN	100,000.00
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Specification:**Description:**

- **Material:** Heavy Cast Aluminum
- **Liquid Capacity:** 41.5 quarts
- **Inside Diameter:** 15.5 inches
- **Inside Height:** 13.5 inches
- **Dimensions (H x W x D):** 49 cm x 57 cm x 46 cm
- **Weight:** 16 kg
- **Seal:** Exclusive "Metal to Metal" seal
- **Quality:** Professional quality, heavy-duty construction

10	Heavy cast Aluminium Pressure cooker, 41L cap.	unit	2	60,000.00	ROMEL B. ARMECIN	120,000.00
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Specification:**Description:**

- **Material:** Heavy Cast Aluminum
- **Liquid Capacity:** 41.5 quarts (approximately 41 liters)
- **Inside Diameter:** 15.5 inches
- **Inside Height:** 13.5 inches
- **Dimensions (H x W x D):** 49 cm x 57 cm x 46 cm
- **Weight:** 16 kg

• Seal Type: Exclusive "Metal to Metal" seal • Quality: Professional quality, heavy-duty construction, quality guaranteed						
11	Horizontal Laminar Flow Workstations plus installation services	unit	2	150,000.00	ROMEL B. ARMECIN	300,000.00
Specification: Features: • Certification: ETL certified, meets North American market standards • Memory Function: Retains settings in case of power failure • Alarm System: Audio and visual alarm for abnormal airflow velocity Model: • BBS-H1500 Dimensions: • External Size (W x D x H): 1500 x 810 x (1720~1980) mm • Internal Size (W x D x H): 1400 x 500 x 600 mm • Work Surface Height: 750~1010 mm • Max Opening: 440 mm Display: • Type: LCD Airflow Velocity: • Range: 80-99 fpm Materials: • Working Area: 304 stainless steel • Main Body: Cold-rolled steel with anti-bacteria powder coating • Front Window: 5 mm toughened glass, anti-UV Filters: • Pre-filter: Polyester Fiber • HEPA Filter: One, 99.995% efficiency at 0.3 μm Performance: • Noise Level: 768 dB(A) • Illumination: 7300 lx Electrical: • Waterproof Sockets: One double type, American standard, Max. Power: 500 W • Power Supply: 103.5~126.5 V, 60 Hz, 10 A • Consumption: 950 W • LED Lamp: 18 W x 1						

Standard Accessories:

- **Base Stand:** Manually height adjustable
- **LED Lamp**
- **Wind Speed Sensor**
- **Waterproof Socket**
- **Stainless Steel V Bar:** With 10 hooks

Optional Accessories:

- **UV Lamp**

Packaging:

- **Package Size (W x D x H):** 1640 x 1090 x 1250 mm
- **Gross Weight:** 265 kg

12	Hot plate stirrer including magnetic bar and retriever kit	unit	1	70,000.00	ROMEL B. ARMECIN	70,000.00
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Specification:**Specifications:**

- **Top Plate Material:** Ceramic-coated Aluminum
- **Includes:** Cord set with various plugs
- **Controller Type:** Scale
- **Size:** 5.5 in. dia.
- **Temperature Range:** 50°C to 350°C (122°F to 662°F)
- **Ambient Temperature Range:** 50°C to 350°C (122°F to 662°F)
- **Frequency:** 50/60 Hz
- **Length:** 290 cm (11.42 in.)
- **Wattage:** 600 W
- **Shape:** Round
- **Plug Type:** Various styles
- **Stirring Range:** 50 to 2000 rpm
- **Dimensions (LxWxH):** 11.42 x 6.34 x 3.94 in. (290 x 161 x 100 mm)
- **Voltage:** 230 V
- **Body Material:** Cast Aluminum
- **Height:** 100 cm (3.94 in.)
- **Width:** 161 cm (6.34 in.)
- **Type:** Stirring Hotplate, Stirrer
- **Max. Sample Load:** 25 kg
- **Max. Container Size:** 20 L
- **Warranty:** 2 Years
- **Certifications/Compliance:** cCSAus, CE

13	Laboratory refrigerator 10.6 cubic	unit	2	100,000.00	ROMEL B. ARMECIN	200,000.00
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Specification:**Specifications:**

- **Volume:** 358 L

- **Type:** 5 shelves
- **Refrigeration Mode:** Air-cooled
- **Defrosting Mode:** Frost-free
- **Refrigerant:** R290, 75 g
- **Noise Level:** 55 dB(A)
- **Ambient Temperature Range:** 10~32°C
- **Temperature Range:** 5±3°C
- **Temperature Accuracy:** 0.1°C
- **Evaporator Plate and Tube Type:** Copper tube and aluminum fin
- **Condenser:** Copper tube and aluminum fin
- **Sensor:** NTC Thermostat
- **Thermostat:** Electronic
- **Door:** Foamed cyclopentane
- **Display:** Digital tube display
- **Interface:** USB

Power Supply:

- **Voltage:** 110~220V
- **Frequency:** 50~60Hz
- **Power:** 220W / 286VA
- **Current:** 1A

Materials:

- **Internal Material:** Sprayed steel plate
- **External Material:** Sprayed steel plate
- **Lagging:** Foamed polyurethane cyclopentane

Standard Accessories:

- High and low temperature alarm
- Power fault alarm
- Thermostat fault alarm
- Door ajar alarm
- LED lamp
- USB port

Optional Accessories:

- Printer
- 485 port

Dimensions:

- **Internal Size (W x D x H):** 530 mm x 520 mm x 1325 mm
- **External Size (W x D x H):** 630 mm x 653 mm x 1886 mm
- **Package Size (W x D x H):** 730 mm x 780 mm x 2038 mm

Weight:

- Net Weight: 111 kg
- Gross Weight: 131 kg

14	Microwave oven with inverter technology, heavy duty	unit	1	60,000.00	ROMEL B. ARMECIN	60,000.00
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Specification:

Type:

- Solo Oven

Capacity:

- 32 L

Power Source:

- 230-240 V / 50 Hz (AUS 240V / NZ 230V)

Cooking Power:

- 1100 W

Power Supply:

- Inverter

Style:

- Colour: White
- Door: Side Open
- Door Mechanism: Push Open
- Control Panel Design: Membrane
- Control Panel Type: 10-1 Key

Display:

- Type: New 4 Digit + Icon
- Colour: Green

Programmable Features:

- Sensor: No
- Microwave Power Levels:
 - High: 1000W
 - Medium-High: 800W
 - Medium: 600W
 - Medium-Defrost: 300W
 - Low: 100W
- Cook Time: 99 min 90 sec
- Kitchen Timer: Yes (99 min 50 sec)
- Standing Time: Yes (99 min 50 sec)
- Delay Start: Yes (99 min 50 sec)
- Clock: 12 H

- **Stage Cooking:** 3 Stage

Specifications:

- **Outside Dimensions (H x W x D):** 310 x 525 x 388 mm
- **Oven Dimensions (H x W x D):** 251 x 355 x 365 mm
- **Net Weight:** 11.5 kg

Menu:

- **Turbo Defrost:** Yes (0.1-3.0 kg)
- **Add Time:** Yes
- **Quick 30:** Yes
- **Serving / Weight:** Yes
- **More/Less:** No
- **Auto Reheat:** Yes
- **Beverage:** Coffee/Milk

15	Tabletop shaker, orbital, 40-200 rpm, 2 kg cap. 220V, LED display, continuous running, 270x330x130mm	unit	1	50,000.00	ROMEL B. ARMECH	50,000.00
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Specification:

General Specifications:

- **Speed Range:** 40-200 rpm
- **Capacity:** 2 kg
- **Power Supply:** 220V
- **Display:** LED display
- **Dimensions (External):** 270 x 330 x 130 mm
- **Amplitude:** 50 mm
- **Oscillation Type:** Orbital
- **Shaking Plate Size:** 680 x 500 mm

Features:

- **Intelligent Sound and Light Alarm:** Provides alerts for operational issues.
- **Microprocessor Controller:** For precise control and easy operation.
- **LCD Display:** Shows set and measured parameters.
- **Running Parameter Memory:** Avoids tedious re-setup after power loss.
- **DC Brushless Motor:** Long service life, maintenance-free.
- **Power-Off Memory Function:** Resumes operation based on the original set program after power restoration.
- **Acceleration Control Circuit:** Ensures smooth and safe startup, protecting experimental samples.

Capacity:

- **Default Capacity:** 250 ml x 24
- **Standard Capacity:**
 - 250 ml x 24
 - 500 ml x 18
 - 1000 ml x 14
 - 2000 ml x 7

- **Maximum Capacity:**

- 250 ml x 35
- 500 ml x 24
- 1000 ml x 20
- 2000 ml x 12

Performance:

- **Drive Mode:** Single-axis balanced drive
- **Speed Accuracy:** ± 1 rpm
- **Ambient Temperature:** 15-35 °C

Additional Features:

- **Curve Programming:** Fixed value control speed
- **Timing Range:** 0-9999 minutes/hour

Power and Weight:

- **Power Consumption:** 80W
- **Net Weight:** 95.5 kg
- **Package Size (W x D x H):** 750 x 700 x 470 mm
- **Gross Weight:** 117.5 kg

16	Temporary Immersion Bioreactors System, with 20 vessels, 1 manifold, timer and spare membrane filter	unit	1	250,000.00	ROMEL B. ARMECIV	250,000.00
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Specification:

Bioreactor System:

- **System Includes:**
 - 20 vessels
 - 1 manifold
 - Timer
 - Spare membrane filter

Prefilters:

- **Quantity:** 200 pieces
- **Type:** Suction filter (hydrophobic)
- **Material:** Plastic
- **Diameter:** 40-42 mm
- **Pore Size:** 45 μ m
- **Sterilization:** Non-sterile

Manifold:

- **Material:** PVC
- **Components:** Solenoid valve (electrical block)
- **Voltage:** 220V

- **Length:** 1.0 meter

Pump:

- **Specifications:** Not specified (Pump required for the system)

Rubber Tubing:

- **Length:** 10 meters
- **Dimensions:** 6 mm (inside diameter) x 9 mm (outside diameter)

Timer Switch:

- **Quantity:** 4 units
- **Type:** Programmable (hours, minutes, days)
- **Display:** Digital

17	Vertical benchtop industrial lab thermal oven	unit	1	170,000.00	ROMEL B. ARMECIN	170,000.00
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Specification:

Features:

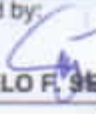
- **External Material:** Cold-rolled steel with anti-bacteria powder coating
- **Inner Chamber:** Stainless steel with round angle structure, adjustable shelves
- **Observation Window:** Double-layer glass with adjustable airtight buckle lock
- **Control System:** PID control with LED display
- **Safety:** Over-temperature protection

Specifications:

- **Model:** BOV-T200F
- **Capacity:** 212L
- **Temperature Range:** 50~200°C
- **Temperature Precision:** 0.1°C
- **Temperature Fluctuation:** ±1°C
- **Ambient Temperature:** 5~40°C
- **Timing Range:** 1~9999 minutes
- **Number of Shelves:** 2 pcs
- **Power Consumption:** 2500W
- **Power Supply:**
 - Standard: 220V±10%, 50/60Hz
 - Optional: 110V, 60Hz
- **Internal Size (WDH):** 602498602 mm
- **External Size (WDH):** 880775785 mm
- **Package Size (WDH):** 1010880940 mm
- **Gross Weight:** 145 kg

	TOTAL					2,584,000.00
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Purpose: for laboratory use

Checked by:  GENESIS C. ALBARICO TWG - Laboratory Equipment		Funds Available:  NICK FREDDY R. BELLO (OIC) HEAD, ACCOUNTING OFFICE	
Signature: Printed Name: Designation:	Prepared by:  CIELO F. SEÑARA	Noted by:  ROMEL B. ARMECIN UNIT HEAD PROJECT LEADER	Approved by:  PROSE IVY G. YEPES PRESIDENT, VSU