



Republic of the Philippines  
**TARLAC STATE UNIVERSITY**  
**BIDS AND AWARDS COMMITTEE**  
**GOODS AND SERVICES**  
 Romulo Blvd., San Vicente, Tarlac City 2300

February 25, 2025

SUPPLEMENTAL BID BULLETIN NO. 1

**Supply and Delivery of Laboratory Tools and Equipment for  
 the Center of Food Technology and Research (APP 2024),  
 Rebid**

This Supplemental Bid Bulletin no. 1 is issued to clarify items and shall be an integral part of the Bidding Documents.

Please be informed of the modification in the bidding documents.

POSTED TO PHILGEPS		MODIFICATION	
Section VII. Technical Specifications		Section VII. Technical Specifications	
Item No.	Description	Item No.	Description
18	Vacuum Oven, Performance Data Temperature Heating-up time to 100 °C [min] 80 Temperature fluctuation [± K] 0.1 Temperature range +10 °C above ambient temperature to [°C] 220; Temperature range +9 °C above ambient temperature to [°C] 220; Temperature variation at 100 °C [± K] 1.2 Vacuum Data; Leak rate [bar/h] 0.01 Electrical data; Nominal power [kW] 1.4; Phase (Nominal voltage)1~ Power frequency [Hz] 50/60 Rated Voltage [V] 200...230 Unit fuse [A] 8 Connections; Compressed air connection for pressure- encapsulation [NW] 5; Measuring access port with small flange [DN mm] 16; Universal connection for air / inert gas with flow limiter; thread (RP") 3/8 Vacuum connection with small flange [DN mm] 16 Doors; Unit doors 1; Housing dimensions not incl. fittings and connections; Depth net [mm] 461; Height net [mm] 815; Width net [mm] 638 Internal Dimensions; Depth [mm] 343; Height [mm] 400; Width [mm] 400 Measures; Interior volume [L] 55; Load per rack [kg] 20; Net weight of the unit (empty) [kg] 95 Permitted load [kg] 60; Viewing window height [mm] 420 Viewing window width [mm] 420; Wall clearance back [mm] 100; Wall clearance sidewise [mm] 70 Environment-specific data Soundpressure level [dB(A)] 40 Fixtures Number of shelves (std./max.) 1/5 With Vacuum Pump Technical Specifications: Max. temperature of liquid media: 5 – 40 °C Flow Rate 22 L/min Maximum Viscosity < 150 cSt Pump Flow 22 l/min Operating Conditions Maximum Vacuum 100 mbar Operating Current 0.9 A Operating Pressure 1 bar Power Requirements Input Wattage 130 Watts Line Frequency 60 Hz Line Voltage 115 V	18	Vacuum Oven, Performance Data Temperature Heating-up time to 100 °C [min] 80 Temperature fluctuation [± K] 0.1 Temperature range +10 °C above ambient temperature to [°C] 220; Temperature range +9 °C above ambient temperature to [°C] 220; Temperature variation at 100 °C [± K] 1.2 Vacuum Data; Leak rate [bar/h] 0.01 Electrical data; Nominal power [kW] 1.4; Phase (Nominal voltage)1~ Power frequency [Hz] 50/60 Rated Voltage [V] 200...230 Unit fuse [A] 8 Connections; Compressed air connection for pressure- encapsulation [NW] 5; Measuring access port with small flange [DN mm] 16; Universal connection for air / inert gas with flow limiter; thread (RP") 3/8 Vacuum connection with small flange [DN mm] 16 Doors; Unit doors 1; Housing dimensions not incl. fittings and connections; Depth net [mm] 461; Height net [mm] 815; Width net [mm] 638 Internal Dimensions; Depth [mm] 343; Height [mm] 400; Width [mm] 400 Measures; Interior volume [L] 55; Load per rack [kg] 20; Net weight of the unit (empty) [kg] 95 Permitted load [kg] 60; Viewing window height [mm] 420 Viewing window width [mm] 420; Wall clearance back [mm] 100; Wall clearance sidewise [mm] 70 Environment-specific data Soundpressure level [dB(A)] 40 Fixtures Number of shelves (std./max.) 1/5 With Vacuum Pump Technical Specifications: Max. temperature of liquid media: 5 – 40 °C Flow Rate 22 L/min Maximum Viscosity < 150 cSt Pump Flow 22 l/min Operating Conditions Maximum Vacuum 100 mbar Operating Current 0.9 A Operating Pressure 1 bar Power Requirements Input Wattage 130 Watts Line Frequency 60 Hz Line Voltage 115 V

	<p>Power Requirements 115 V - 60 Hz  Product Information  Type of Pump Vacuum Pump  Includes:  -AVR 5KVA  -With vacuum pump included  - With one year warranty  - With calibration certificate  - With personnel training</p>		<p>Power Requirements 115 V - 60 Hz  Product Information  Type of Pump Vacuum Pump  Includes:  -AVR 5KVA  -With vacuum pump included  - With one year warranty  - With calibration certificate  - With personnel training  - <b>Calibration on site with Certificate and sticker</b>  - <b>Certificate of Distributorship from Manufacturer</b>  - <b>Training Certificates of Service Engineer from Manufacturer</b></p>
19	<p>Drying Oven Convection,  Specifications:  Temperature range [°C] 60...230  Heating-up time to 150 °C [min] 36  Recovery time after 30 seconds door open at 150 °C [min] 19  Electrical data  Nominal Voltage [V] 230  Power frequency [Hz] 50/60  Nominal power [kW] 0.8  Phase (Nominal voltage) 1~  Measures  Interior volume [cu.ft.] 1  Net weight of the unit (empty) [lbs] 49  permitted load [lbs] 55  Load per rack [lbs] 22  Wall clearance back [in] 6.3  Wall clearance sidewise [in] 3.94  Internal Dimensions  Interior width [in] 15.76  Interior height [in] 11.03  Interior depth [in] 9.85  Doors  Unit doors 1  Housing dimensions not incl. fittings and connections  Width net [in] 22.85  Height net [in] 15.96  Depth net [in] 16.74  Fixtures  Number of shelves (std./max.) 2/4  Benefits:  Uniform drying conditions thanks to APT.line™ technology Identical test conditions throughout the chamber interior independent of sample size and quantity Outstanding thermal insulation saves operation costs  <b>MAIN FEATURES:</b> • Temperature range: 60 °C to 230 °C • Adjustable exhaust air flap • Hydro-mechanical thermostat • Class 1 temperature limitation device (Model E028-230V-T) • Timer 0 – 120 min • 2 chrome-plated racks  - With one year warranty  - With calibration certificate  - With personnel training</p>	19	<p>Drying Oven Convection,  Specifications:  Temperature range [°C] 60...230  Heating-up time to 150 °C [min] 36  Recovery time after 30 seconds door open at 150 °C [min] 19  Electrical data  Nominal Voltage [V] 230  Power frequency [Hz] 50/60  Nominal power [kW] 0.8  Phase (Nominal voltage) 1~  Measures  Interior volume [cu.ft.] 1  Net weight of the unit (empty) [lbs] 49  permitted load [lbs] 55  Load per rack [lbs] 22  Wall clearance back [in] 6.3  Wall clearance sidewise [in] 3.94  Internal Dimensions  Interior width [in] 15.76  Interior height [in] 11.03  Interior depth [in] 9.85  Doors  Unit doors 1  Housing dimensions not incl. fittings and connections  Width net [in] 22.85  Height net [in] 15.96  Depth net [in] 16.74  Fixtures  Number of shelves (std./max.) 2/4  Benefits:  Uniform drying conditions thanks to APT.line™ technology Identical test conditions throughout the chamber interior independent of sample size and quantity Outstanding thermal insulation saves operation costs  <b>MAIN FEATURES:</b> • Temperature range: 60 °C to 230 °C • Adjustable exhaust air flap • Hydro-mechanical thermostat • Class 1 temperature limitation device (Model E028-230V-T) • Timer 0 – 120 min • 2 chrome-plated racks  - With one year warranty  - With calibration certificate  - With personnel training  - <b>Calibration on site with Certificate and sticker</b>  - <b>Certificate of Distributorship from Manufacturer</b>  - <b>Training Certificates of Service Engineer from Manufacturer</b></p>

20	<p>Air Oven,  • Temperature range: +5 °C above ambient temperature to +300 °C • Force convection  • Controller with LCD display •  Electromechanical control of the exhaust air flap • 2 chrome-plated racks • Stackable •  Class 2 integrated independent adjustable temperature safety device  (DIN 12880) with visual alarm • Ergonomic handle design • USB port for recording data  • Best energy efficiency on the market •  Excellent temporal and spatial temperature accuracy • USB connection for recording data  Technical Specifications  Performance Data Temperature; Heating-up time to 150 °C [min]18; Recovery time after 30 seconds door open at 150 °C [min]4;  Temperature fluctuation at 150 °C [± K] 0.3;  Temperature range +10 °C above ambient temperature to [°C] 300; Temperature variation at 150 °C [± K]1.7; Air change data; Air change (approx.) at 100 °C [x/h]32  Electrical data; Nominal power [kW] 1.3  Phase (Nominal voltage)1~; Power frequency [Hz] 50/60 Rated Voltage [V] 230 Unit fuse [A] 6.3 Doors; Unit doors 1  Housing dimensions not incl. fittings and connections; Depth net [mm] 605; Height net [mm] 735 Width net [mm] 710 Internal Dimensions; Depth [mm] 385; Height [mm] 550 Width [mm] 550 Measures; Interior volume [L] 116 Load per rack [kg] 30; Net weight of the unit (empty) [kg]; Permitted load [kg] 150 Wall clearance back [mm] 160  Wall clearance sidewise [mm] 100 Environment-specific data 57; Energy consumption at 150 °C [Wh/h]340; Sound-pressure level [dB(A)] 4 Fixtures; Number of shelves (std./max.) 2/5  - With one year warranty  - With calibration certificate</p>	20	<p>Air Oven,  • Temperature range: +5 °C above ambient temperature to +300 °C • Force convection  • Controller with LCD display •  Electromechanical control of the exhaust air flap • 2 chrome-plated racks • Stackable •  Class 2 integrated independent adjustable temperature safety device  (DIN 12880) with visual alarm • Ergonomic handle design • USB port for recording data  • Best energy efficiency on the market •  Excellent temporal and spatial temperature accuracy • USB connection for recording data  Technical Specifications  Performance Data Temperature; Heating-up time to 150 °C [min]18; Recovery time after 30 seconds door open at 150 °C [min]4;  Temperature fluctuation at 150 °C [± K] 0.3;  Temperature range +10 °C above ambient temperature to [°C] 300; Temperature variation at 150 °C [± K]1.7; Air change data; Air change (approx.) at 100 °C [x/h]32  Electrical data; Nominal power [kW] 1.3  Phase (Nominal voltage)1~; Power frequency [Hz] 50/60 Rated Voltage [V] 230 Unit fuse [A] 6.3 Doors; Unit doors 1  Housing dimensions not incl. fittings and connections; Depth net [mm] 605; Height net [mm] 735 Width net [mm] 710 Internal Dimensions; Depth [mm] 385; Height [mm] 550 Width [mm] 550 Measures; Interior volume [L] 116 Load per rack [kg] 30; Net weight of the unit (empty) [kg]; Permitted load [kg] 150 Wall clearance back [mm] 160  Wall clearance sidewise [mm] 100 Environment-specific data 57; Energy consumption at 150 °C [Wh/h]340; Sound-pressure level [dB(A)] 4 Fixtures; Number of shelves (std./max.) 2/5  - With one year warranty  - With calibration certificate  - <b>With personnel training</b>  - <b>Calibration on site with Certificate and sticker</b>  - <b>Certificate of Distributorship from Manufacturer</b>  - <b>Training Certificates of Service Engineer from Manufacturer</b></p>
50	<p>Cooled Incubator  Technical Specifications:  Performance Data Temperature  Temperature range °C -10...100  Temperature variation at 37 °C [± K] 0.2  Temperature fluctuation at 37 °C [± K] 0.1  Recovery time after 30 seconds door open at 37 °C [min] 2  Electrical data  Rated Voltage [V] 230  Power frequency [Hz] 50 /60  Nominal power [kW] 0.7  Unit fuse [A] 10  Phase (Nominal voltage) 1~  Interior volume [L] 115  Net weight of the unit (empty) [kg] 105  Permitted load [kg] 50  Load per rack [kg] 20  Wall clearance back [mm] 100  Wall clearance sidewise [mm] 100  Internal Dimensions  Width [mm] 600  Height [mm] 480  Depth [mm] 400  Inner doors 1  Unit doors 1  Housing dimensions not including fittings and connections  Width net [mm] 835  Height net [mm] 1025  Depth net [mm] 650  Environment-specific data  Energy consumption at 37 °C [Wh/h] 75  Sound-pressure level [dB(A)] 49  Number of shelves (std./max.) 2/5  Features  *Temperature range: -10 °C to +100 °C  • APT.line preheating chamber technology  • Up to 30% lower energy consumption</p>	50	<p>Cooled Incubator  Technical Specifications:  Performance Data Temperature  Temperature range °C -10...100  Temperature variation at 37 °C [± K] 0.2  Temperature fluctuation at 37 °C [± K] 0.1  Recovery time after 30 seconds door open at 37 °C [min] 2  Electrical data  Rated Voltage [V] 230  Power frequency [Hz] 50 /60  Nominal power [kW] 0.7  Unit fuse [A] 10  Phase (Nominal voltage) 1~  Interior volume [L] 115  Net weight of the unit (empty) [kg] 105  Permitted load [kg] 50  Load per rack [kg] 20  Wall clearance back [mm] 100  Wall clearance sidewise [mm] 100  Internal Dimensions  Width [mm] 600  Height [mm] 480  Depth [mm] 400  Inner doors 1  Unit doors 1  Housing dimensions not including fittings and connections  Width net [mm] 835  Height net [mm] 1025  Depth net [mm] 650  Environment-specific data  Energy consumption at 37 °C [Wh/h] 75  Sound-pressure level [dB(A)] 49  Number of shelves (std./max.) 2/5  Features  *Temperature range: -10 °C to +100 °C  • APT.line preheating chamber technology  • Up to 30% lower energy consumption</p>

	<p>compared to the previous model</p> <ul style="list-style-type: none"> <li>• Cooling with compressor cooling unit</li> <li>• Adjustable fan speed</li> <li>• Controller with time-segment and realtime programming</li> <li>• Inner door made of tempered safety glass</li> <li>• 2 stainless steel racks</li> <li>• Stackable</li> <li>• Class 3.1 independent temperature safety device (DIN 12880) with visual and acoustic alarm</li> <li>• Computer interface: Ethernet</li> </ul> <p>-5KVA AVR -With one year warranty -With product training</p>	<p>compared to the previous model</p> <ul style="list-style-type: none"> <li>• Cooling with compressor cooling unit</li> <li>• Adjustable fan speed</li> <li>• Controller with time-segment and realtime programming</li> <li>• Inner door made of tempered safety glass</li> <li>• 2 stainless steel racks</li> <li>• Stackable</li> <li>• Class 3.1 independent temperature safety device (DIN 12880) with visual and acoustic alarm</li> <li>• Computer interface: Ethernet</li> </ul> <p>-5KVA AVR -With one year warranty -With product training</p> <p><b>- With personnel training</b> <b>- Calibration on site with Certificate and sticker</b> <b>- Certificate of Distributorship from Manufacturer</b> <b>- Training Certificates of Service Engineer from Manufacturer</b></p>	
51	<p>Sample Homogenizer, Technical Specifications: Motor rating input 800 W Motor rating output 500 W Volume range (H<sub>2</sub>O) 0.001 - 2 l Viscosity max. 5000 mPas Speed range 3000 - 25000 rpm Speed deviation 1 % Speed adjustment stepless Speed display LED Noise without element 75 dB(A) Extension arm diameter 13 mm Extension arm length 160 mm Process type batch Permissible ON time 100 % Dimensions (W x H x D) 87 x 271 x 106 mm Weight 2.5 kg Permissible ambient temperature 5 - 40 °C Permissible relative humidity 80% (up to 31°C), decreasing linearly to max. 50 (@40°C) Protection class according to DIN EN 60529 IP 20 Voltage 220 - 240 V Frequency 50/60 Hz Power input 800 W T25 Digital Package contains: 1 * Disperser 1 * Dispersing Element Ø18 mm 1 * Plate stand, H800 mm 1 * Boss head clamp, clamping range Ø6-16 mm -With one year warranty -With calibration certificate -With product training</p>	51	<p>Sample Homogenizer, Technical Specifications: Motor rating input 800 W Motor rating output 500 W Volume range (H<sub>2</sub>O) 0.001 - 2 l Viscosity max. 5000 mPas Speed range 3000 - 25000 rpm Speed deviation 1 % Speed adjustment stepless Speed display LED Noise without element 75 dB(A) Extension arm diameter 13 mm Extension arm length 160 mm Process type batch Permissible ON time 100 % Dimensions (W x H x D) 87 x 271 x 106 mm Weight 2.5 kg Permissible ambient temperature 5 - 40 °C Permissible relative humidity 80% (up to 31°C), decreasing linearly to max. 50 (@40°C) Protection class according to DIN EN 60529 IP 20 Voltage 220 - 240 V Frequency 50/60 Hz Power input 800 W T25 Digital Package contains: 1 * Disperser 1 * Dispersing Element Ø18 mm 1 * Plate stand, H800 mm 1 * Boss head clamp, clamping range Ø6-16 mm -With one year warranty -With calibration certificate -With product training</p> <p><b>- With personnel training</b> <b>- Calibration on site with Certificate and sticker</b> <b>- Certificate of Distributorship from Manufacturer</b> <b>- Training Certificates of Service Engineer from Manufacturer</b></p>
		52	<p>Pipettors Set with Corresponding Tips and 2 units Linear Stand Single Channel Mechanical Pipettor 0.5 to 10ul – 728020 (1 unit) 10 to 100ul – 728050 (1 unit) 20 to 200ul – 728060 (1 unit) 100 to 1000ul – 728070 (1 unit) 500 to 5000ul – 728080 (1 unit) 1000 to 10,000ul – 728090 (1 unit) 8 channels Mechanical Pipettor 30-300ul – 728140 (1 unit) Tips: 10 ul tips – 790010 (1 Box) 200 ul tips – 790200 (1 Box) 350 ul tips – 790350 (1 Box) 1000ul tips – 791000 (1 Box) 5000ul tips – LH-780304 (50 tips per rack - 10 racks) 10,000ul tips – LH-780316 (bulks in 250) Accessory: Linear Stand – 725620 (2 units) Descriptions: - Easy volume adjustment with click stop system - Large display for easy reading of volume - For both right- and left-handed users - Color coded for easy matching of fitting tips - Materials have high chemical and UV resistance to secure long life-time of the pipette - Easy cleaning</p>

52	<p>Pipettors Set with Corresponding Tips and 2 units Linear Stand  Single Channel Mechanical Pipettor  0.5 to 10ul – 728020 (1 unit)  10 to 100ul – 728050 (1 unit)  20 to 200ul – 728060 (1 unit)  100 to 1000ul – 728070 (1 unit)  500 to 5000ul – 728080 (1 unit)  1000 to 10,000ul – 728090 (1 unit)  8 channels Mechanical Pipettor  30-300ul – 728140 (1 unit)  Tips:  10 ul tips – 790010 (1 Box)  200 ul tips – 790200 (1 Box) 350 ul tips – 790350 (1 Box) 1000ul tips – 791000 (1 Box) 5000ul tips – LH-780304 (50 tips per rack - 10 racks) 10,000ul tips – LH-780316 (bulks in 250) Accessory: Linear Stand – 725620 (2 units) Descriptions:  - Easy volume adjustment with click stop system  - Large display for easy reading of volume  - For both right- and left-handed users  - Color coded for easy matching of fitting tips  - Materials have high chemical and UV resistance to secure long life-time of the pipette - Easy cleaning only with 3 parts needed to disassemble for deep cleaning, without any tools  - Safe-cone filters available for models above 10µl for extra protection when using non-filtered tips - With light tip ejector  - Fully autoclavable without the need for disassembly  - Superior Ergonomics - designed handle and finger hook  - Good Thermal Insulation to avoid transfer of heat from hand to mechanical spring coil  - Pipetting force of 15N to avoid Repetitive Strain Injury (RSI)  - With click stop as volume locking  - Length 239 mm  - Weight of 82 grams</p>	<p>only with 3 parts needed to disassemble for deep cleaning, without any tools  - Safe-cone filters available for models above 10µl for extra protection when using non-filtered tips - With light tip ejector  - Fully autoclavable without the need for disassembly  - Superior Ergonomics - designed handle and finger hook  - Good Thermal Insulation to avoid transfer of heat from hand to mechanical spring coil  - Pipetting force of 15N to avoid Repetitive Strain Injury (RSI)  - With click stop as volume locking  - Length 239 mm  - Weight of 82 grams  - <b>with Liquid Handling Academy (Correct usage of Pipettor, Validation and Verification)</b>  - <b>with Calibration Certificate and Sticker</b>  - <b>Certificate of Distributorship from Manufacturer</b>  - <b>Training Certificates of Service Engineer from Manufacturer</b></p>
55	<p>Babcock Fat Extraction set-up,  5 selectable modes for centrifugation (Gerber test, Röse-Gottlieb, Babcock, Solubility and Free Mode)  Free Set-up (Free Mode) of  - Speed/RCA** (adjustable from 600 to 1200 rpm, the corresponding RCA is shown simultaneously)  **RCA = Relative Centrifugal Acceleration  - Temperature (adjustable from amb. temp. to 68°C)  - Centrifugation time (adjustable from 1 to 99 minutes)  - Centrifugation drum of stainless steel  - Security lid locking device  - Automatic unbalance switch off  - Electrical brake  - Connection: 230V/50...60 Hz/1200 VA Weight (empty): 26kg - Full height: 460 mm  - Operation height: 370 mm  - Speed range: 600...1200 UpM  - Temperature range: Amb. temperature to 68°C  Includes:  Rotor (up to 18 Babcock-bottles) Babcockbucket – 18 pcs  - With one year warranty  - With calibration certificate  - With training</p>	<p>55  Babcock Fat Extraction set-up,  5 selectable modes for centrifugation (Gerber test, Röse-Gottlieb, Babcock, Solubility and Free Mode)  Free Set-up (Free Mode) of  - Speed/RCA** (adjustable from 600 to 1200 rpm, the corresponding RCA is shown simultaneously)  **RCA = Relative Centrifugal Acceleration  - Temperature (adjustable from amb. temp. to 68°C)  - Centrifugation time (adjustable from 1 to 99 minutes)  - Centrifugation drum of stainless steel  - Security lid locking device  - Automatic unbalance switch off  - Electrical brake  - Connection: 230V/50...60 Hz/1200 VA Weight (empty): 26kg - Full height: 460 mm  - Operation height: 370 mm  - Speed range: 600...1200 UpM  - Temperature range: Amb. temperature to 68°C  Includes:  Rotor (up to 18 Babcock-bottles) Babcockbucket – 18 pcs  - With one year warranty  - With calibration certificate  - With training  - <b>With personnel training</b>  - <b>Calibration on site with Certificate and sticker</b>  - <b>Certificate of Distributorship from Manufacturer</b>  - <b>Training Certificates of Service Engineer from Manufacturer</b></p>
56	<p>Circulating Water Pump,  Working Temperature Range °F -4° to 275°; Working Temperature Range °C -20° to 135°; Nominal Cooling Capacity @ +20C (W) 200 Reservoir Capacity (gallons) 1.85; Reservoir Capacity (liters) 7; Reservoir/Tank; Material Stainless Steel; Reservoir Cover Included; DuraTop</p>	

	<p>Yes; LidDock Yes; Cleanable Air Filter Yes; Working Access (L x W x D) (inches) 6.18 x 5.59 x 5 in; Working Access (L x W x D) (cm) 15.7 x 14.2 x 12.7 cm; Temperature Stability °F±0.13; Temperature Stability °C ±0.07°; Display 3.25" LCD; Display Resolution (Set) 0.1; Display Resolution (Read) 0.1; Pump Type Pressure; Pump Speed One; Process Connections 1/2" O.D.; Barbed Tubes Flammability Class (DIN 12876-1) I (NFL) Over-Temperature Protection; Failsafe Heater Control Yes; Low Liquid Level Protection Yes; Reservoir Drain Yes; Maximum Ambient; Temperature °F 95° Maximum Ambient Temperature °C 35° Overall Dimensions (L x W x H) (inches) 21.3 x 8.7 x 25.4in; Overall Dimensions (L x W x H) (cm) 54.1 x 22.1 x 64.5cm; Refrigerant R134a; Environmental Compliance RoHS, WEEE; Shipping Weight (pounds) 84.0; Shipping Weight (kilograms) 38.1; For 60 Hz Only: Maximum Pressure (psi) 2.3; Maximum Pressure (bar) 0.16 Maximum Pressure Flow Rate (gpm) 3.60 Maximum Pressure Flow Rate (l/min) 13.5 Cooling Capacity @ -20°C (W) 30 Cooling Capacity @ 0°C (W) 120 Cooling Capacity @ +20°C (W) 200 Cooling Capacity @ +100°C (W) 200 Included Hardware Fitting Kit for External Applications Heater Wattage 1100 Electrical Requirements (VAC/Hz/Ph/A) 120/60/1/12 Regulatory Approvals ETL  - With one year warranty  - With calibration certificate  - With training</p>	56	<p>Circulating Water Pump, Working Temperature Range °F -4° to 275°; Working Temperature Range °C -20° to 135°; Nominal Cooling Capacity @ +20C (W) 200 Reservoir Capacity (gallons) 1.85; Reservoir Capacity (liters) 7; Reservoir/Tank; Material Stainless Steel; Reservoir Cover Included; DuraTop Yes; LidDock Yes; Cleanable Air Filter Yes; Working Access (L x W x D) (inches) 6.18 x 5.59 x 5 in; Working Access (L x W x D) (cm) 15.7 x 14.2 x 12.7 cm; Temperature Stability °F±0.13; Temperature Stability °C ±0.07°; Display 3.25" LCD; Display Resolution (Set) 0.1; Display Resolution (Read) 0.1; Pump Type Pressure; Pump Speed One; Process Connections 1/2" O.D.; Barbed Tubes Flammability Class (DIN 12876-1) I (NFL) Over-Temperature Protection; Failsafe Heater Control Yes; Low Liquid Level Protection Yes; Reservoir Drain Yes; Maximum Ambient; Temperature °F 95° Maximum Ambient Temperature °C 35° Overall Dimensions (L x W x H) (inches) 21.3 x 8.7 x 25.4in; Overall Dimensions (L x W x H) (cm) 54.1 x 22.1 x 64.5cm; Refrigerant R134a; Environmental Compliance RoHS, WEEE; Shipping Weight (pounds) 84.0; Shipping Weight (kilograms) 38.1; For 60 Hz Only: Maximum Pressure (psi) 2.3; Maximum Pressure (bar) 0.16 Maximum Pressure Flow Rate (gpm) 3.60 Maximum Pressure Flow Rate (l/min) 13.5 Cooling Capacity @ -20°C (W) 30 Cooling Capacity @ 0°C (W) 120 Cooling Capacity @ +20°C (W) 200 Cooling Capacity @ +100°C (W) 200 Included Hardware Fitting Kit for External Applications Heater Wattage 1100 Electrical Requirements (VAC/Hz/Ph/A) 120/60/1/12 Regulatory Approvals ETL  - With one year warranty  - With calibration certificate  - With training  - <b>With personnel training</b>  - <b>Calibration on site with Certificate and sticker</b>  - <b>Certificate of Distributorship from Manufacturer</b>  - <b>Training Certificates of Service Engineer from Manufacturer</b></p>	
59	<p>Infrared Moisture Balance, Specifications: Weighing capacity: 200 g; Repeatability, average: -for initial sample weight approx. &gt; 1 g: ± 0.2 % -for initial sample weight approx. &gt; 5 g: ± 0.05 % Readability: 1 mg, 0.01 % Typical sample quantity: 5 – 15 g Result display: Moisture content in %M and g   dry weight in %S and g   ATRO in %M/S Temperature range and settings: 40°C– 160°C, stand-by temperature selectable from 40–100°C in increments of 1°C Sample heating: Infrared radiation by an AURI heater, 600 W; Heating programs: Standard drying, gentle drying Shutoff parameter Optional:– Fully automatic– Semiautomatic mg (1–50 mg 5–300 sec.)– Semiautomatic % (0.1– 5.0 % 5–300 sec.)– Timer settings (02:00– 99.59 min.)– Manual; Access to sample chamber: Removable hood with wide opening angle, SoftClose mechanism Operator guidance features:– Intuitive user interface, including touch screen and easy-to-understand menu guidance– Weighingin help and target value attainment function– Curve display; Methods: 100 methods saved in non-volatile memory; Method development: Assistant software guides users to develop new methods in approx. 3 easy test cycles; Methods management: Method menu with file management option, generation of a</p>	59	<p>Infrared Moisture Balance, Specifications: Weighing capacity: 200 g; Repeatability, average: -for initial sample weight approx. &gt; 1 g: ± 0.2 % -for initial sample weight approx. &gt; 5 g: ± 0.05 % Readability: 1 mg, 0.01 % Typical sample quantity: 5 – 15 g Result display: Moisture content in %M and g   dry weight in %S and g   ATRO in %M/S Temperature range and settings: 40°C– 160°C, stand-by temperature selectable from 40–100°C in increments of 1°C Sample heating: Infrared radiation by an AURI heater, 600 W; Heating programs: Standard drying, gentle drying Shutoff parameter Optional:– Fully automatic– Semiautomatic mg (1–50 mg 5–300 sec.)– Semiautomatic % (0.1– 5.0 % 5–300 sec.)– Timer settings (02:00– 99.59 min.)– Manual; Access to sample chamber: Removable hood with wide opening angle, SoftClose mechanism Operator guidance features:– Intuitive user</p>	

	<p>method library, up to 100 methods; Data transfer: SD card, method import and export function; Sample forceps: Easy-to-handle sample dish Performance test: Menu function to test the device's repeatability using the ReproEasy pad Memory for data storage: Results are saved for the last 999 measurements Status light: Displays the status "analysis running/ START", "analysis completed/ STOP" or "analysis error" Sample inspection: LED-illuminated sample chamber, inspection window with grid above the hood; Mini USB – Direct data transfer to Microsoft® Windows programs without any additional software– Programmable data output interval– Data transfer protocols SBI, table format, text format; Frequency: 50/60 Hz</p> <ul style="list-style-type: none"> <li>- With one year warranty</li> <li>- With calibration certificate</li> <li>- With product training</li> </ul>	
61	<p>Spectrophotometer, Wavelength Range: 190 - 1100 nm Monochromator: 4 nm Monochromator: Single beam Littrow type, grating 1200 lines/mm Wavelength Accuracy: ±0.8 nm Wavelength Repeatability: ±0.5 nm Wavelength Calibration: automatic at start Light Source: Tungsten Halogen/Deuterium Lamp Detector: Solid Silicon Photodiode Photometric Readout: 1/4 VGA 320X240 pixels backlit LCD Photometric Range: 0 - 200%T -0.3 - 3.0A 0 - 9999C Photometric Accuracy: ±0.5%T Zero Drift: &lt; 0.002A per hour after warmup Baseline Flatness: ±0.004A Stability: 0.002A/h at 500 nm Stray Light:&lt; 0.15%T Scanning Speed: Hi, Med., Low. Max. 1000 nm/min Standard Sample Holder: 4-position Cell Holder Analogue/Digital Output: Digital, RS232 Serial, Centronics Parallel Dimensions: 550(L) x 420(W) x 270(H) mm Weight: 20 kg / 44 lbs Shipping Dimensions: 390(H) mm Shipping Weight: Power Requirements: 230V/50Hz, switchable Operating Temperature Room temperature: 22 ±2°C Humidity Range: less than 85% Includes: - AVR 5KVA WITH Laptop Specifications 8-Core CPU 8-Core GPU 8GB Unified Memory 256GB SSD Storage footnote 1 16-core Neural Engine 13.6-inch Liquid Retina display with True Tone<sup>2</sup> 1080p FaceTime HD camera MagSafe 3 charging port Two Thunderbolt / USB 4 ports Support for one external display Magic Keyboard with Touch ID Force Touch trackpad 30W USB-C Power Adapter M2 brings incredible performance and capability so you can blaze through everyday activities, multitask across apps, pursue your creative passions, and play your favorite games</p>	<p>interface, including touch screen and easy-to-understand menu guidance– Weighing in help and target value attainment function– Curve display; Methods: 100 methods saved in non-volatile memory; Method development: Assistant software guides users to develop new methods in approx. 3 easy test cycles; Methods management: Method menu with file management option, generation of a method library, up to 100 methods; Data transfer: SD card, method import and export function; Sample forceps: Easy-to-handle sample dish Performance test: Menu function to test the device's repeatability using the ReproEasy pad Memory for data storage: Results are saved for the last 999 measurements Status light: Displays the status "analysis running/ START", "analysis completed/ STOP" or "analysis error" Sample inspection: LED-illuminated sample chamber, inspection window with grid above the hood; Mini USB – Direct data transfer to Microsoft® Windows programs without any additional software– Programmable data output interval– Data transfer protocols SBI, table format, text format; Frequency: 50/60 Hz</p> <ul style="list-style-type: none"> <li>- With one year warranty</li> <li>- With calibration certificate</li> <li>- With product training</li> <li>- <b>With personnel training</b></li> <li>- <b>Calibration on site with Certificate and sticker</b></li> <li>- <b>Certificate of Distributorship from Manufacturer</b></li> <li>- <b>Training Certificates of Service Engineer from Manufacturer</b></li> </ul>
		<p>61 Spectrophotometer, Wavelength Range: 190 - 1100 nm Monochromator: 4 nm Monochromator: Single beam Littrow type, grating 1200 lines/mm Wavelength Accuracy: ±0.8 nm Wavelength Repeatability: ±0.5 nm Wavelength Calibration: automatic at start Light Source: Tungsten Halogen/Deuterium Lamp Detector: Solid Silicon Photodiode Photometric Readout: 1/4 VGA 320X240 pixels backlit LCD Photometric Range: 0 - 200%T -0.3 - 3.0A 0 - 9999C Photometric Accuracy: ±0.5%T Zero Drift: &lt; 0.002A per hour after warmup Baseline Flatness: ±0.004A Stability: 0.002A/h at 500 nm Stray Light:&lt; 0.15%T Scanning Speed: Hi, Med., Low. Max. 1000 nm/min Standard Sample Holder: 4-position Cell Holder Analogue/Digital Output: Digital, RS232 Serial, Centronics Parallel Dimensions: 550(L) x 420(W) x 270(H) mm Weight: 20 kg / 44 lbs Shipping Dimensions: 390(H) mm Shipping Weight: Power Requirements: 230V/50Hz, switchable Operating Temperature Room temperature: 22 ±2°C Humidity Range: less than 85% Includes: - AVR 5KVA WITH Laptop Specifications 8-Core CPU 8-Core GPU 8GB Unified Memory 256GB SSD Storage footnote 1 16-core Neural Engine 13.6-inch Liquid Retina display with True Tone<sup>2</sup> 1080p FaceTime HD camera</p>

	<p>Run multiple apps and edit thousands of photos or 4K video Up to 12x faster than fastest Intel-based MacBook Air footnote <sup>3</sup> Supports one external display</p> <ul style="list-style-type: none"> <li>- With one year warranty</li> <li>- With calibration certificate</li> <li>- With personnel training</li> </ul>		<p>MagSafe 3 charging port Two Thunderbolt / USB 4 ports Support for one external display Magic Keyboard with Touch ID Force Touch trackpad 30W USB-C Power Adapter M2 brings incredible performance and capability so you can blaze through everyday activities, multitask across apps, pursue your creative passions, and play your favorite games Run multiple apps and edit thousands of photos or 4K video Up to 12x faster than fastest Intel-based MacBook Air footnote <sup>3</sup> Supports one external display</p> <ul style="list-style-type: none"> <li>- With one year warranty</li> <li>- With calibration certificate</li> <li>- With personnel training</li> <li>- <b>Calibration on site with Certificate and sticker</b></li> <li>- <b>Certificate of Distributorship from Manufacturer</b></li> <li>- <b>Training Certificates of Service Engineer from Manufacturer</b></li> </ul>	
62	<p>Titration Apparatus, Extremely high chemical resistance; Smooth and light to operate with soft touch operating wheels; Media recirculation system that allows unused media to be recovered from the device and returned to the bottle; 360° rotating dispensing head; Universal connector at the back of the unit for drying tubes and filters; Easy to attach aspiration tube with a secure threaded connection; User replaceable valves; Supplied with UV-protected replacement window for light sensitive media protection Long life CR2032 battery; Easy custom adjustment for various liquids; Wide range of accessories; Autoclavable liquid pathway; Wide range of adapters included to fit most common bottle sizes; Weight 844 g (20 mL); Length 260 mm (20 mL); Autoclavability Autoclavable liquid pathway (121 oC, 20 min, 1 bar/100 kPa); Threaded bottle fitting A45; Bottle adapters included A32, A38, S40 Battery CR2032; Limitations The accuracy and precision values are valid under the controlled conditions described in ISO 8655.; Test temperature: 15 oC to 30 oC +/- 0,5 oC Relative humidity: &gt; 50%; Transportation conditions Temperature: 0 oC to 40 oC; Long-term storage conditions Temperature: 0 oC to 40 oC; Chemical resistance Information available on request; Materials Piston: Compound Halar (ECTFE)   Cylinder: Borosilicate glass 3.3   Valve block: Halar (ECTFE); Valve mantle: Halar (ECTFE)   Valve ball; Borosilicate glass 3.3   Valve seat: Borosilicate glass 3.3; Valve spring: Hastelloy   Tubes: FEP   Sealing rings: PTFE; Nominal Volume(ml): 50; Readability(ml): 0.01; Test Volume(ml): 50 Systematic Error* [%]: 0.2 Systematic Error* [mL]: 0.10 Random Error* [%]: 0.1 Random Error* [mL]: 0.05 Includes: - 1 Liter Amber Bottle - With one year warranty - With calibration certificate - With personnel training</p>	62	<p>Titration Apparatus, Extremely high chemical resistance; Smooth and light to operate with soft touch operating wheels; Media recirculation system that allows unused media to be recovered from the device and returned to the bottle; 360° rotating dispensing head; Universal connector at the back of the unit for drying tubes and filters; Easy to attach aspiration tube with a secure threaded connection; User replaceable valves; Supplied with UV-protected replacement window for light sensitive media protection Long life CR2032 battery; Easy custom adjustment for various liquids; Wide range of accessories; Autoclavable liquid pathway; Wide range of adapters included to fit most common bottle sizes; Weight 844 g (20 mL); Length 260 mm (20 mL); Autoclavability Autoclavable liquid pathway (121 oC, 20 min, 1 bar/100 kPa); Threaded bottle fitting A45; Bottle adapters included A32, A38, S40 Battery CR2032; Limitations The accuracy and precision values are valid under the controlled conditions described in ISO 8655.; Test temperature: 15 oC to 30 oC +/- 0,5 oC Relative humidity: &gt; 50%; Transportation conditions Temperature: 0 oC to 40 oC; Long-term storage conditions Temperature: 0 oC to 40 oC; Chemical resistance Information available on request; Materials Piston: Compound Halar (ECTFE)   Cylinder: Borosilicate glass 3.3   Valve block: Halar (ECTFE); Valve mantle: Halar (ECTFE)   Valve ball; Borosilicate glass 3.3   Valve seat: Borosilicate glass 3.3; Valve spring: Hastelloy   Tubes: FEP   Sealing rings: PTFE; Nominal Volume(ml): 50; Readability(ml): 0.01; Test Volume(ml): 50 Systematic Error* [%]: 0.2 Systematic Error* [mL]: 0.10 Random Error* [%]: 0.1 Random Error* [mL]: 0.05 Includes: - 1 Liter Amber Bottle - With one year warranty - With calibration certificate - With personnel training - <b>Calibration on site with Certificate and sticker</b> - <b>Certificate of Distributorship from Manufacturer</b> - <b>Training Certificates of Service Engineer from Manufacturer</b></p>	



63	<p>Vortex Mixer,  Type of movement orbital  Shaking stroke 4.5 mm  Permissible shaking weight (incl. attachment) 0.5 kg  Motor rating input 10 W  Motor rating output 8 W  Permissible ON time 100 %  Speed min (adjustable) 200 rpm  Speed range 0 - 3000 rpm  Speed display scale  Operating mode continuous operation  Touch function yes  Working with microtiter plates yes  Number of microtiter plates 1  Dimensions (W x H x D) 148 x 63 x 205 mm  Weight 2.9 kg  Permissible ambient temperature 5 - 40 °C  Permissible relative humidity 80 %  Protection class according to DIN EN 60529 IP 21  Voltage 100 - 240 V  Frequency 50/60 Hz  Power input 20 W  DC Voltage 24 V=  Current consumption 800 mA  Includes:  MS 3.1 Standard attachment MS 3.3  Universal attachment MS 1.21 One-hand insert  - With one year warranty  - With calibration certificate</p>	<p>63</p> <p>Vortex Mixer,  Type of movement orbital  Shaking stroke 4.5 mm  Permissible shaking weight (incl. attachment) 0.5 kg  Motor rating input 10 W  Motor rating output 8 W  Permissible ON time 100 %  Speed min (adjustable) 200 rpm  Speed range 0 - 3000 rpm  Speed display scale  Operating mode continuous operation  Touch function yes  Working with microtiter plates yes  Number of microtiter plates 1  Dimensions (W x H x D) 148 x 63 x 205 mm  Weight 2.9 kg  Permissible ambient temperature 5 - 40 °C  Permissible relative humidity 80 %  Protection class according to DIN EN 60529 IP 21  Voltage 100 - 240 V  Frequency 50/60 Hz  Power input 20 W  DC Voltage 24 V=  Current consumption 800 mA  Includes:  MS 3.1 Standard attachment MS 3.3  Universal attachment MS 1.21 One-hand insert  - With one year warranty  - With calibration certificate  - <b>With personnel training</b>  - <b>Calibration on site with Certificate and sticker</b>  - <b>Certificate of Distributorship from Manufacturer</b>  - <b>Training Certificates of Service Engineer from Manufacturer</b></p>
64	<p>Differential Scanning Calorimeter,  Specifications:  This product was developed to provide a general-purpose DSC with a broad temperature range (-180 – 600°C) for all common applications. Furthermore, emphasis was placed on an extremely stable baseline and high reproducibility. The design allows manual and automatic operation. The conception of the cell guarantees maximum mechanical and chemical resistance.  Temperature range: –180°C (with appropriate cooling option) up to +600°C  Heating and cooling rates: 0,001 up to 300°C/min  Temperature accuracy: +/- 0.2K  Temperature precision: +/- 0.02K  Digital Resolution: 16.8 million points  Resolution: 0.03 µW  Atmospheres: inert, oxidizing (static, dynamic)  Measuring range: +/-2,5 up to +/-250mW  Calibration materials: included  Calibration: recommended 6-month interval  Temperature range: –180°C (with appropriate cooling option) up to +600°C  Heating and cooling rates: 0,001 up to 300°C/min  Temperature accuracy: +/- 0.2K  Temperature precision: +/- 0.02K  Digital Resolution: 16.8 million points  Resolution: 0.03 µW  Atmospheres: inert, oxidizing (static, dynamic) Measuring range: +/-2,5 up to +/-250mW  Calibration materials: included  Calibration: recommended 6-month interval  Includes:  -Al Standard crucible with lid 6x1,5mm 40µl (not crimpable)  - Sample press for crimping crucibles Incl. tool for 30293043, 30293044, 30293045 and 30293046  -L63/PRESSANDTOOL – Aluminum crucible (40 µl, for crimping)</p>	<p>64</p> <p>Differential Scanning Calorimeter,  Specifications:  This product was developed to provide a general-purpose DSC with a broad temperature range (-180 – 600°C) for all common applications. Furthermore, emphasis was placed on an extremely stable baseline and high reproducibility. The design allows manual and automatic operation. The conception of the cell guarantees maximum mechanical and chemical resistance.  Temperature range: –180°C (with appropriate cooling option) up to +600°C  Heating and cooling rates: 0,001 up to 300°C/min  Temperature accuracy: +/- 0.2K  Temperature precision: +/- 0.02K  Digital Resolution: 16.8 million points  Resolution: 0.03 µW  Atmospheres: inert, oxidizing (static, dynamic)  Measuring range: +/-2,5 up to +/-250mW  Calibration materials: included  Calibration: recommended 6-month interval  Temperature range: –180°C (with appropriate cooling option) up to +600°C  Heating and cooling rates: 0,001 up to 300°C/min  Temperature accuracy: +/- 0.2K  Temperature precision: +/- 0.02K  Digital Resolution: 16.8 million points  Resolution: 0.03 µW  Atmospheres: inert, oxidizing (static, dynamic) Measuring range: +/-2,5 up to +/-250mW  Calibration materials: included  Calibration: recommended 6-month interval  Includes:  -Al Standard crucible with lid 6x1,5mm 40µl (not crimpable)  - Sample press for crimping crucibles Incl. tool for 30293043, 30293044, 30293045 and 30293046  -L63/PRESSANDTOOL – Aluminum crucible (40 µl, for crimping)</p>

	<ul style="list-style-type: none"> <li>- Aluminum lid for 40µl and 100µl crucibles for crucibles 30293043 and 30293045, non pierced</li> <li>- Pierced aluminum lid for 40µl and 100µl crucibles for crucibles 30293043 and 30293045</li> <li>- L40/3051 manual gas control 1 gas</li> <li>- Liquid Nitrogen Quench-Cooling Option</li> <li>- High sensitivity ceramic sensor for chip DSC, High resolution Sensor for maximum sensitivity (up to +35%). Recommended for polymer applications (e.g. glass transition, melting point and crystallization) Compatible with all ChipDSC systems and accessories.</li> <li>- State of the Art Desktop-PC incl. Windows® OS Intel Core i3-1300, 8GB, DDR4, &gt;23,8"</li> <li>- Software module for temperature modulation (Cp determination)</li> <li>- Starter Kit</li> <li>- UPS 5KVA</li> <li>- AVR 5KVA</li> <li>- With one year warranty</li> <li>- With calibration certificate</li> <li>- With personnel training</li> </ul>	<ul style="list-style-type: none"> <li>- Aluminum lid for 40µl and 100µl crucibles for crucibles 30293043 and 30293045, non pierced</li> <li>- Pierced aluminum lid for 40µl and 100µl crucibles for crucibles 30293043 and 30293045</li> <li>- L40/3051 manual gas control 1 gas</li> <li>- Liquid Nitrogen Quench-Cooling Option</li> <li>- High sensitivity ceramic sensor for chip DSC, High resolution Sensor for maximum sensitivity (up to +35%). Recommended for polymer applications (e.g. glass transition, melting point and crystallization) Compatible with all ChipDSC systems and accessories.</li> <li>- State of the Art Desktop-PC incl. Windows® OS Intel Core i3-1300, 8GB, DDR4, &gt;23,8"</li> <li>- Software module for temperature modulation (Cp determination)</li> <li>- Starter Kit</li> <li>- UPS 5KVA</li> <li>- AVR 5KVA</li> <li>- With one year warranty</li> <li>- With calibration certificate</li> <li>- With personnel training</li> <li>- <b>Calibration on site with Certificate and sticker</b></li> <li>- <b>Certificate of Distributorship from Manufacturer</b></li> <li>- <b>Training Certificates of Service Engineer from Manufacturer</b></li> </ul>	
67	<p>Water Activity Meter,</p> <ul style="list-style-type: none"> <li>- Working temp. -10°C~50°C; Working humidity 0~95% RH; Display LCS</li> <li>Display; Measuring range temperature -10°C~50°C; Water Activity 0~1.000aw; Measurement accuracy temperature ±0.5°C water activity ±0.012(@23°C±5°C); Measurement time 5~40min; Measurement points 1~4; Temperature coefficient ≤0.0005/°C; Activity Repeatability ≤0.008</li> <li>- With one year warranty</li> <li>- With calibration certificate</li> <li>- With personnel training</li> </ul>	<p>67</p> <p>Water Activity Meter,</p> <ul style="list-style-type: none"> <li>- Working temp. -10°C~50°C; Working humidity 0~95% RH; Display LCS</li> <li>Display; Measuring range temperature -10°C~50°C; Water Activity 0~1.000aw; Measurement accuracy temperature ±0.5°C water activity ±0.012(@23°C±5°C); Measurement time 5~40min; Measurement points 1~4; Temperature coefficient ≤0.0005/°C; Activity Repeatability ≤0.008</li> <li>- With one year warranty</li> <li>- With calibration certificate</li> <li>- With personnel training</li> <li>- <b>Calibration on site with Certificate and sticker</b></li> <li>- <b>Certificate of Distributorship from Manufacturer</b></li> <li>- <b>Training Certificates of Service Engineer from Manufacturer</b></li> </ul>	
		<p>68</p> <p>Hot Plate/Magnetic Stirrer,</p> <ul style="list-style-type: none"> <li>Number of stirring positions 1</li> <li>Stirring quantity max. per stirring position (H<sub>2</sub>O) [l] 10</li> <li>Motor rating output [W] 1.5</li> <li>Direction of rotation left Speed control scale 0 - 6</li> <li>Speed range [rpm] 100 - 1500</li> <li>Stirring bar length max. [mm] 80</li> <li>Heat output [W] 1000</li> <li>Heating temperature range [°C] 50 - 500</li> <li>Heat control LED</li> <li>Heating rate heating plate [K/min] 5</li> <li>Connection for ext. temperature sensor ETS-D5 Fixed safety circuit [°C] 550</li> <li>Set-up plate material ceramic</li> <li>Set-up plate dimensions [mm] 180 x 180</li> <li>Dimensions (W x H x D) [mm] 220 x 105 x 330 Weight [kg] 5</li> <li>Permissible ambient temperature [°C] 5 - 40 Permissible relative humidity [%] 80</li> <li>Protection class according to DIN EN 60529 IP 21</li> <li>Voltage [V] 230 / 120 / 100</li> <li>Frequency [Hz] 50/60</li> <li>Power input [W] 1020</li> <li>- With one year warranty</li> <li>- With calibration certificate</li> <li>- <b>With personnel training</b></li> <li>- <b>Calibration on site with Certificate and sticker</b></li> <li>- <b>Certificate of Distributorship from Manufacturer</b></li> <li>- <b>Training Certificates of Service Engineer from Manufacturer</b></li> </ul>	

68	<p>Hot Plate/Magnetic Stirrer,  Number of stirring positions 1  Stirring quantity max. per stirring position (H2O) [l] 10  Motor rating output [W] 1.5  Direction of rotation left Speed control scale 0 - 6  Speed range [rpm] 100 - 1500  Stirring bar length max. [mm] 80  Heat output [W] 1000  Heating temperature range [°C] 50 - 500  Heat control LED  Heating rate heating plate [K/min] 5  Connection for ext. temperature sensor ETS-D5 Fixed safety circuit [°C] 550  Set-up plate material ceramic  Set-up plate dimensions [mm] 180 x 180  Dimensions (W x H x D) [mm] 220 x 105 x 330 Weight [kg] 5  Permissible ambient temperature [°C] 5 - 40 Permissible relative humidity [%] 80  Protection class according to DIN EN 60529 IP 21  Voltage [V] 230 / 120 / 100  Frequency [Hz] 50/60  Power input [W] 1020  - With one year warranty  - With calibration certificate</p>	72	<p>Water Bath,  -Working temperature range 5°C - 100°C  -Temperature stability <math>\pm 0.1^{\circ}\text{C}</math>  -Temperature calibration capability 1-point  -Working access (LxWxD) 24.1x43.2x15.2cm  -Flammability class (DIN 12876-1) I (NFL)  -Displays actual and set point temperature simultaneously  -Programmable presets for frequently used temperatures  -Intergrated timer  -Primary and automatic safety thermostats  -Also compatible with waterless bath beads  -Reservoir Capacity 20 Liters  -Reservoir tank material: Stainless Steel  -Reservoir cover: Hinged Gable  -Over temperature protection/ failsafe heater control: yes  -Reservoir drain: Yes  -Maximum ambient temperature 40°C  -Overall Dimension (LxWxH) 38.4x57.2x38.4cm  -Shipping Weight 11.3 kg  - With one year warranty  - With calibration certificate  - <b>With personnel training</b>  - <b>Calibration on site with Certificate and sticker</b>  - <b>Certificate of Distributorship from Manufacturer</b>  - <b>Training Certificates of Service Engineer from Manufacturer</b></p>
72	<p>Water Bath,  -Working temperature range 5°C - 100°C  -Temperature stability <math>\pm 0.1^{\circ}\text{C}</math>  -Temperature calibration capability 1-point  -Working access (LxWxD) 24.1x43.2x15.2cm  -Flammability class (DIN 12876-1) I (NFL)  -Displays actual and set point temperature simultaneously  -Programmable presets for frequently used temperatures  -Intergrated timer  -Primary and automatic safety thermostats  -Also compatible with waterless bath beads  -Reservoir Capacity 20 Liters  -Reservoir tank material: Stainless Steel  -Reservoir cover: Hinged Gable  -Over temperature protection/ failsafe heater control: yes  -Reservoir drain: Yes  -Maximum ambient temperature 40°C  -Overall Dimension (LxWxH) 38.4x57.2x38.4cm  -Shipping Weight 11.3 kg  - With one year warranty  - With calibration certificate</p>		
73	<p>Fumehood,  External Size (W*D*H) 1247*800*2450mm  Internal Size (W*D*H) 987*560*700mm  Work Surface Height 820mm  Max Opening 740mm  Air Velocity 0.3~0.8m/s  Noise <math>\leq 68\text{dB}</math>  Illuminating Lamp  -LED lamp  -30W*1  Blower  -Built-in PP centrifugal blower (2 blowers for FH1800(P) only); Speed adjustable  Front Window  -Resistant to acid and alkali, Manual, 5mm toughened glass, height adjustable.  Power Supply AC220V<math>\pm 10\%</math>, 50/60Hz; 110V<math>\pm 10\%</math>, 60Hz</p>		

<p>Consumption 360W Material: -Main Body Made of Porcelain white PP, thickness 8mm, resistant to strong acid, alkali and anti-corrosion -Work Table Chemical resistant phenolic resin Standard Accessory: -Illuminating Lamp, Water tap, Gas tap, Water Sink, Base cabinet -Waterproof socket*2, PP centrifugal blower, pipe strap*2(4 Pcs for FH1800(P) only) -4 meters PVC duct -(2 Pcs of 4 meters PVC dust for FH1800(P) only), Diameter:250mm - PP work table, epoxy resin board or ceramic board, Active carbon filter, Optional Accessory -Outer PVC centrifugal blower (only need to select when the duct more than 4m) Gross Weight 253kg Package Size(W*D*H) -Main Body 1388*938*1612mm -Base Cabinet 1388*888*1000mm Includes: -AVR 5KVA -With one year warranty with installation</p>	<p>73 Fumehood, External Size (W*D*H) 1247*800*2450mm Internal Size (W*D*H) 987*560*700mm Work Surface Height 820mm Max Opening 740mm Air Velocity 0.3~0.8m/s Noise ≤68dB Illuminating Lamp -LED lamp -30W*1 Blower -Built-in PP centrifugal blower (2 blowers for FH1800(P) only); Speed adjustable Front Window -Resistant to acid and alkali, Manual, 5mm toughened glass, height adjustable. Power Supply AC220V±10%, 50/60Hz; 110V±10%, 60Hz Consumption 360W Material: -Main Body Made of Porcelain white PP, thickness 8mm, resistant to strong acid, alkali and anti-corrosion -Work Table Chemical resistant phenolic resin Standard Accessory: -Illuminating Lamp, Water tap, Gas tap, Water Sink, Base cabinet -Waterproof socket*2, PP centrifugal blower, pipe strap*2(4 Pcs for FH1800(P) only) -4 meters PVC duct -(2 Pcs of 4 meters PVC dust for FH1800(P) only), Diameter:250mm - PP work table, epoxy resin board or ceramic board, Active carbon filter, Optional Accessory -Outer PVC centrifugal blower (only need to select when the duct more than 4m) Gross Weight 253kg Package Size(W*D*H) -Main Body 1388*938*1612mm -Base Cabinet 1388*888*1000mm Includes: -AVR 5KVA -With one year warranty with installation <b>-Recertification and Calibration on Site with Certificate and Sticker</b> <b>- With Personnel Training</b> <b>- Certificate of Distributorship from Manufacturer</b> <b>- Training Certificates of Service Engineer from Manufacturer</b></p>
<p>SECTION II. INSTRUCTIONS TO BIDDERS</p> <p>5.3. Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder must have a SLCC that is similar to the Project, as described in the BDS, with a value, adjusted to current prices using the PSA's CPI, that is at least equivalent to: fifty percent (50%) of the ABC for Lot No. 1, and fifty percent (50%) of the ABC for Lot No. 2.</p>	<p>SECTION II. INSTRUCTIONS TO BIDDERS</p> <p>5.3. Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder must have a SLCC that is similar to the Project, as described in the BDS, with a value, adjusted to current prices using the PSA's CPI, that is at least equivalent to:</p> <p><b>The bidder should have completed at least two (2) similar contracts, and the aggregate contract amounts which are equivalent to:</b></p> <p>fifty percent (50%) of the ABC for Lot No. 1, and fifty percent (50%) of the ABC for Lot No. 2.</p>

For the guidance and information of all concerned.

  
**ATYY. WILMARK J. RAMOS, DBA**  
 Chairperson – Goods and Services