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UNGOOFAARU REGIONAL HOSPITAL



Raa-Ungoofaaru, Republic of Maldives

Annex1: Requirement and specifications

Requirement:

Item no	Requirement	Quantity
1.	Benchtop centrifuge	1
2.	Analytical weigh scale	1
3.	Laboratory microscope	1
4.	Water bath	1
5.	Portable tube sealer	1
6.	Tube stripper	1
7.	Manual plasma extractor	1
8.	Blood bag mixer	1

Technical Specifications:

Item No:1 - Benchtop centrifuge



1. Should be suitable for application like separating serum, plasma, precipitated protein or urine sediment examination.
2. Should have a LED/LCD display with real time monitoring of all parameters
3. Maximum speed: 5000 rpm
4. Speed accuracy: +/- 10 rpm or better

5. Tube Capacity: Swing-out Rotor: 4x140 ml, Angle Rotor: 6x100 ml
6. Driven by Brushless maintenance free motor
7. Rotor and centrifuge Chamber should be made of chemical resistant and rust-free (stainless steel) and easy to clean
8. Should be able to save at least 5 programs
9. Noise ≤ 65 dB at maximum rpm
10. Safety lid interlock to prevent lid opening during centrifugation
11. Automatic door opening with emergency lid lock release facility.
12. All other accessories required for the machine operation should be provided

POWER SUPPLY REQUIREMENT

1. Power input to be 220-240 VAC, 50Hz fitted with UK Plug.

SAFETY STANDARD AND TRAINING

1. Should be USFDA, CE approved (valid documentation should be submitted).
2. Manufacture should have ISO certificate for quality standards (valid documentation should be submitted).
3. Comprehensive training for Operator and Services Support for In- House Biomedical Engineer.
- 4.24 Months warranty after the successful installation. (mandatory)
5. Availability Spare parts and all other accessories must be for 10 years.

Item No:2 – Analytical weigh scale



1. Max capacity: 200gm
2. Readability: 0.001g
3. Repeatability: 0.002g
4. Linearity: $\pm 0.004g$
5. Tare function should be available
6. Pan size: $\varnothing 80$ mm or better
7. LCD display
8. Should be spill proof

POWER SUPPLY REQUIREMENT

1. Power input to be 220-240 VAC, 50Hz or DC Adapter
2. Should have battery backup

SAFETY STANDARD AND TRAINING

1. Should be USFDA, CE approved (valid documentation should be submitted).
2. 24 Months warranty after the successful installation. (mandatory)

Item No:3 – Laboratory microscope



1. Body: Single mould sturdy stand, inclined Binocular body 30 °, 360° rotatable head.
2. Eyepieces: Highest quality 10 X/20mm wide angle anti fungus field eyepiece. one with pointer. Diopter adjustment must be present on both eye pieces.
3. Objectives: Parfocal, anti-fungus coated 4x, 10x, 40x and 100x (oil immersion) with semi planner achromatic correction.
4. Stage: Double plate rackless horizontal mechanical stage preferably 100 x 140 mm with fine vernier graduations designed with convenient coaxial adjustment for slide manipulation preferably through 30 x 70 mm double slide holder.
5. Sub stage: Abbe condenser focusable, continuously variable iris diaphragm
6. LED Illumination with life time > 10000 Hrs
7. Should have a durable textured acid resistant finish.
8. Nose piece: Backward tilted revolving nose piece suitable to accomodate four objectives with click stop and rubber grip
9. Focusing: Coaxial coarse and fine focusing knob, capable of smooth, fine focusing movement sensitivity; minimum: 300 micron; focusing stop for slide safety

POWER SUPPY REQUIREMENT

1. Power input to be 220-240 VAC, 50Hz fitted with UK Plug.

SAFETY STANDARD AND TRAINING

1. Should be USFDA, CE (valid documentation should be submitted).
2. Manufacture should have ISO certificate for quality standards (valid documentation should be submitted).
3. Comprehensive training for Operator and Services Support for In- House Biomedical Engineer.
4. 24 Months warranty after the successful installation. (mandatory)
5. Availability Spare parts and all other accessories must be for 10 years.

Item No:4 – Water bath



1. The water bath must be equipped with a microprocessor system to achieve a precise temperature, also a timer to observe the set protocol.
2. Over-temperature safety circuitry is necessary to prevent thermal runaway.
3. The product exterior must be epoxy powder-coated it benefit from outstanding chemical and corrosion resistance also the inner surface structure must be made from high quality stainless steel.
4. It should have a monochrome LCD to display the set temperature and time.
5. The alarm must be audible when the set protocol is completed.

6. The prefer tank volume should not exceed 20L.
7. Temperature range: Ambient to 100degree Celsius., Time range :1 minute to 99,9 Hours + hold position
8. Heating time : ≤ 30 min (25°C~100°C)
9. It should have a built-in water level detection device to prevent the danger of dry burning.
10. It should have provision for drainage.
- 11.Lid should be quoted

POWER SUPPLY REQUIREMENT

- 1.Power input to be 220-240 VAC, 50Hz fitted with UK Plug.
- 2.Power consumption should not cross more than 1500W

SAFETY STANDARD AND TRAINING

- 1.Should be FDA, CE approved (valid documentation should be submitted).
- 2.Manufacture should have ISO certificate for quality standards (valid documentation should be submitted).
- 3.Comprehensive training for Operator and Services Support for In- House Biomedical Engineer.
- 4.On site Comprehensive warranty for 2 years (Mandatory).
- 5.Availability Spare parts and all other accessories must be for 10 years

Item No:5: Tube sealer



1. Should be designed for portable use
2. Powered by rechargeable battery pack
3. Should be of light weight
4. Should have good battery backup that supports up to 1000 seals per full charge on standard blood bag tubes
5. Sealing quality should not be affected by the battery capacity
6. Sealing time should be automatically adjusted depending on the tube thickness
7. Sealing unit length > 1.5 M
8. Should be supplied with carry bag

POWER SUPPLY REQUIREMENT

1. Power input to be 220-240 VAC, 50Hz fitted with UK Plug or DC Adapter

SAFETY STANDARD AND TRAINING

1. Should be FDA, CE approved (valid documentation should be submitted).
2. Manufacture should have ISO certificate for quality standards (valid documentation should be submitted).
3. Comprehensive training for Operator and Services Support for In- House Biomedical Engineer.
4. On site Comprehensive warranty for 2 years (Mandatory).

5. Availability Spare parts and all other accessories must be for 10 years

Item No:6: Blood stripper



Purpose of Equipment:

The blood bag tube stripper is a “plier-like” tool, intended to be used with PVC blood tubing, to strip undiluted blood from the donor tubing. It can be used with different sizes of blood bag tubes due to the screw mechanism that allows to adjust the distance between the rollers.

GENERAL SPECIFICATION

It must be lightweight (~125 g)

Diameter of the rollers: 12 mm

It must be compatible for various size of blood tube

Item No:7 - Manual Plasma extractor

Purpose of Equipment: Plasma Extractor is designed to extract blood component from centrifuged bags. It is a mechanical device, which exerts uniform pressure on the blood bag during the separation of components



GENERAL SPECIFICATION

- 1.It should have a stainless steel spring-loaded acrylic plate which exerts uniform pressure on the blood bag.
- 2.Mode of operation: Manual
- 3.Transparent plate allows easy visibility of the bag contents.
- 4.Accommodates all types of blood bags up to volumes of 500 mL
- 5.It must have a handle with ball end provides a comfortable grip.
- 5.Hook keeps the handle in place before and after expression.
6. Easy to transport.
7. Backplate with suspension pins to secure Blood-Pack Unit Anti-slip feet keep unit in place Serialized medical device with powder coated base for durability.

Item No:8 – Blood bag shaker



1. Should have a LED display with control keys
2. Weighing range: 0-1000ml
3. Measuring accuracy: 2%
4. Swing frequency: 20-30 r/min
5. Collection speed: 0.5-4 ml/s
6. Shall have taring and auto calibration functions
7. Shall have a preset volume of blood collection function
8. Should have alarms for high and low flow conditions
9. Should alarm when preset volume has been reached
10. Should have memory to save previous procedures (Minimum 100)

POWER SUPPLY REQUIREMENT

1. Power input to be 220-240 VAC, 50Hz fitted with UK Plug

SAFETY STANDARD AND TRAINING

1. Should be USFDA, CE, UL or BIS approved (valid documentation should be submitted).
2. 24 Months warranty after the successful installation. (mandatory)