

CT Scan Machine	
Doppler Ultrasound	
Blood Warmer	
Dinamap	
Suction Machine	
CRRT	
Cervical Traction Machine	
Multiple Stimulator	
Therapeutic Ultrasound	
Auto Chemistry Analyzer	
Hematology Analyzer	
ESR stand with tube	
Microscope (binocular)	
Centrifuge Machine (12hole)	
Micro Pipettes (11051011101111ul)	
Infusion pump	
Syringe Pump	
3 channel ECG Machine	

COLOR DOPPLER ULTRASOUND

The vendors should quote their latest and high end models as per the following specifications.

Ultrasound system

1. Must have a minimum of 19 inch or better screen and 12 inch or better touch screen, high definition monitor easy viewing in virtually any environment.
2. Full sized, floating keyboard allows you to enter data right where you are, reducing the strain of a reach.
Highly intuitive control layout positions with most used keys around the trackball to help focus on the patient instead of searching for the key.
The motorized/ hydraulic adjustable height enabling to fit the system according to needs with the simple touch of a button & tilting monitor.
3. Frame rate 2000 FPS or better.
4. Scanning depth 40 cm or better.
5. Processing channels 150000 or more.
6. Must support frequency range up to 18MHz.
7. Support raw data storage with possibility to change.
8. System should be capable of comparing old stored exam to current exam using automatically generated same imaging parameters.
9. Must have Retrospective and prospective clip capture to internal drive or removable media or equal.
10. Must have color power Doppler, Micro B flow HD Color/Micro-V with color/Spectral to clearly show blood flow in tiny vessels.
11. Must have 2D, M-Mode, Anatomic M-Mode, color flow Doppler, Pulsed wave Doppler (PW), High PRF=1 to 20 KHZ or better PW, continuous wave Doppler.
12. **Transducers and Accessories**
 1. 12-06 MHz or better multi-frequency convex probe for B/M/CDI/PW.
 2. 7-14 MHz or better multi-frequency linear probe for B/M/CDI/PW.
 3. Online UPS with at least 30 minutes backup.
 4. Thermal printer and DVD Writer

11/14/17

Note: Probes and main unit should be of the same company/manufacturer.

C. Other items: (standard)

1. Synchronizing other modality volume set with ultrasound live image with ability to fusion, overlay – the more modalities it supports the better and higher technical score.
2. Ability to track needle in and out of plane to support interventional procedures.
3. Every manufacturer should submit their MODEL NO/SOFT WARE VERSION/CAT/PART NO in the technical specification.
4. Every manufacturer should submit their foreign application/Technical expert contact details (Emails etc) with the technical specifications.
5. All the manufacturers should submit original brochures and TDS endorsed by the principal.
6. Technical training and service manual.
7. Quality certificates

FDA/CE/MHWL/JIS (any two)


Comprehensive warranty of 05 years with parts.


15
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SPECIFICATION FOR BLOOD WARMER

- Blood warmer with silicon temperature insulating tubing.
- Microprocessor controlled for simple operation
- Temperature setting: selectable 39C/41C/43C
- Power consumption 450VA
- Diameter of the line 4mm or better
- Preheat time <2 min or better
- Over temperature safety cutoff
- Minimum Dimensions: 135 x 145 x 295 mm (LxHxD)
- Visual and acoustic Over-temperature & under -temperature alarms
- 24hrs a day continuous duty
- Protection Class I
- Should be allows unit to attached with infusion stand and medical rails. (Universal Tubing).

Country of origin : USA ,Japan , Europe


DR. RIFAT LATIF
FCPS MSc Pain DA
Assistant Professor Anaesthesia
Ayub Medical Institute Abbottabad


Dr. Asim Abbas
Anesthesiologist
Ayub Teaching Hospital
Abbottabad

03 CHANNEL ECG MACHINE

1. Display should be color and more than 4 inches or more
2. Should view 12-Lead ECG waveform on the screen.
3. 3 channel ECG machine with 12-lead ECG signal processing.
4. 3.5" TFT Color LCD
5. 12 Leads ECG simultaneous acquisition
6. Simultaneous display of 3/6/12 leads ECG waveform
7. ECG waveform in AUTO/Manual mode
8. Diagnosing ECG waveform parameters automatically with self-interpretation
9. "Lead off" and "Lack of paper" alarms
10. Patient History Management
11. Should support SD card for external storage
12. Capable to store approx 400 ECG files without SD CARD and more than 3000 on external storage.
13. Defibrillator proof
14. Should comply with IEC-60601-2-51

Country of Origin: Europe, USA, JAPAN


DR. RIFAT LATIF
FCPS MSc Pain DA
Assistant Professor Anaesthesia
Ayub Medical Institute Abbottabad


Dr. Zahid Abbas
Anesthesiology Specialist
Ayub Teaching Hospital
Abbottabad

INFUSION PUMP

- Flow rate range should be from 1.0 – ~~10 ml/hr.~~ ^{1000 ml/h}
- Flow rate should be set as a drop count(drops/min) or in mL/h.
- Should have occlusion detection pressure.
- Should have air in line detection sensitivity.
- Should not need to be attached with a protective ground.
- Volume limit range should not be less than 9999 ml.
- Alarms should include: Empty container, Occlusion, Door open, free flow, flow error, reminder, air in line, low battery, infusion complete, power source switch, operator error and other device malfunction alarms.
- Special Functions: KVO, Auto power off, Alarm repeat, Data storage setting, Buzzer setting, power supply switched, Key lock, History, Maintenance timer, Battery refresh, Nurse call.
- Power supply should be 240 V and 50/60 Hz.
- Should have backup battery for instant switching from AC to DC.

Supplied with: Sensor, power cord, pole clamp, multi pump mount, nurse call cable, infusion stand, DC power cable and operating manual.

Country of Origin: Japan, USA, Western Europe


DR. FAISAL LATIF
FCPS, MSc Pain D.A.
Assistant Professor Anaesthesia
Ayub Medical Institute Abbottabad


Dr. Faisal Abbas
Anaesthesia Specialist
Ayub Teaching Hospital
Abbottabad

19-08-2022

MULTIPLE STIMULATOR SYSTEM

1. Must have two independent channels
2. Must have different modes like TENS, Muscle stimulators, Interferential currents, Galvanic current etc
3. Pulse duration: 20 μ s to 1 s or better
4. Pulse shape must be adjustable like , triangular and exponential pulses, rectangular pulses etc
5. Pulse intensity adjustable
6. With 05 extra set of accessories

Justifications:

Previously stimulators were provided to Physiotherapy department at the time of commencement of Physiotherapy Department, Ayub Teaching Hospital in on 08-09-1999 (23 years ago). Later on 03 stimulator systems were provided in 2010 (12 years ago) As number of patients are increasing and older models are getting out of order, therefore, we need to add more systems to provide un-interrupted services to our patients.

Availability of Appropriate Space:

We have sufficient to install this system.

Availability of Technical Hands:

Physiotherapy Department, MTI ATH has sufficient team of qualified professionals and technical staff to prescribe and operate this system.

(HOD Physiotherapy)

19/8/2022

19-08-2022

CERVICAL TRACTION SYSTEM

Specifications:

1. Traction mode both constant and interruption. With adjustable hold and relax time and force.
2. Type of traction Pre-Tension, Progression, Traction, Regression
3. Neck angle adjustable
4. Maximum strength of the cervical traction: 18 Kg
5. Maximum strength of the lumbar traction: 80 Kg
6. Number of progression steps: 1 to 10
7. Hold time between two steps: 1 sec to 30 sec
8. Number of regression steps: 1 to 10
9. Hold time between two steps: 1 sec to 30 sec
10. With 02 extra sets of accessories

Justifications:

Previously two cervical traction systems were provided to Physiotherapy department at the time of commencement of Physiotherapy Department, Ayub Teaching Hospital in on 08-09-1999 (23 years ago). One system is still functional while other has become out of order. Moreover, patient load has increased several folds and we need to upgrade the systems and also replace the older one.

Availability of Appropriate Space:

We have sufficient to install this system.

Availability of Technical Hands:

Physiotherapy Department, MTI ATH has sufficient team of qualified professionals and technical staff to prescribe and operate this system.

(HOD Physiotherapy)
14/8/2022

9-08-2022

THERAPEUTIC ULTRASOUND

1. With 1 and 3 MHz outputs.
2. Output Modes: continuous and pulsed from 10% to 100 %
3. Intensity: 0-3W/cm² continuous, 0-3W/cm² pulsed or better
4. Output Heads: 1MHz & 3MHz, with diameter 1 cm², & 5 cm²
5. With no-contact indication
6. Suitable for underwater treatment
7. Time: 0 -30 min

Justifications:

Previously 02 ultrasound machines were provided to Physiotherapy department at the time of commencement of Physiotherapy Department, Ayub Teaching Hospital in on 19-1999 (23 years ago). Later on 01 ultrasound machine was provided in 2006 by Cuban Medical Team at the time of earthquake (16 years ago). Plus one machine was donated by ERRA in 2009 (13 years ago). Out of these entire systems only one machine is fictional. Moreover the number of patients are also increasing, therefore, we need to add more systems to provide uninterrupted services to our patients.

Availability of Appropriate Space:

There is sufficient space to install this system.

Availability of Technical Hands:

Physiotherapy Department, MTI ATH has sufficient team of qualified professionals and technical staff to prescribe and operate this system.

(HOD Physiotherapy)

19/8/22

SYRINGE PUMP

Should be able to control the administration of intravenous fluids in very small amounts and at a carefully regulated rate over long periods.


- Maximum flow of up to 1200 ml/h
- Expanded number of applications e.g. supplementary feeding, blood transfusions, chemotherapy and infusion of therapeutic drugs.
- Compatible with a wide make of syringes
- Plunger monitor
- Pressure Alarm for detection of occlusion
- Computer Integration System
- Electromagnetic compatibility
- Safety mechanisms (power switch)
- Replaceable battery
- Pole clamp
- Power cord
- Operating manual
- Up till 7 special functions including operation reminder, auto power off, alarm repeat, buzzer setting, power source switch alarm, history function, and key lock function

Syringe Sizes (ml)

10,20,30,50

Country of Origin: Japan, USA or UK, *Europe*


DR REZA LATIF
FCPS M Sc Pain D A
Assistant Professor Anaesthesia
Sub Medical Institute Abbottabad


Dr. Reza Latif
Anaesthesia Specialist
Ayub Teaching Hospital
Abbottabad

**TERMS, CONDITIONS AND TECHNICAL SPECIFICATIONS FOR THE TENDER OF THE
INSTALLATION OF FULLY AUTOMATED CHEMISTRY & IMMUNOASSAY ANALYZERS FOR AYUB
TEACHING HOSPITAL ABBOTTABAD**

TECHNICAL SPECIFICATIONS FOR MAIN & BACKUP ANALYZERS WITH ISE		
S #	SPECIFICATION	DESCRIPTION
1	Analytical System Description	Fully automated system having random access/continuous loading of the samples. System must have facility of stat tests.
2	Assay Types	Endpoint, kinetic, fixed point and indirect ISE, IMT, ICT
3	Analytical Methods & principles	Colorimetry/ Spectrophotometry. Potentiometry / IMT, Indirect ISE (Sodium, Potassium & Chloride), ICT, Turbidimetry.
4	Throughput	With IMT/ Indirect ISE and ICT equal or more than 800 tests per hour.
5	Integrated Technology	Must have integrated technology for IMT/ Indirect ISE, ICT & IA analysis with minimal maintenance.
6	Operating System	Latest windows based computer with touch screen monitor.
7	Water Supply Information	Average water consumption: less than or equal to 35 liter/ hour. Water type: Deionized CAP type II/ RO water bacteria free.
8	Cuvettes	Disposable or reusable/ washable reaction cuvettes system.
9	Onboard Cooling of reagents	On board cooling for the reagents, preferably 2 - 8 °C
10	Sample Volume	Sample volume greater than 5 ul & less than 15ul
11	Reagent Volume	Minimum Reagent volume will be preferred
12	Reagent Barcode	All reagents must be auto-barcode.
13	Onboard Stability of Reagents	Onboard stability equal or more than 60 days
14	Sample Types	Ability to use Serum, Plasma, Urine, Whole Blood and other fluids.
15	Sample Tube types	System must be capable of handling multiple tube types and sizes at the same time like primary and secondary e.g. gel tubes, serum cups etc.
16	Sample Quality Analysis	Lipemia, hemolysis, icterus indices, clot detection, short sample detection probe crash protection and bubble detection will be preferred. Liquid level sensing combined with pressure differential technology for enhanced bubble and clot detection ensuring accurate sampling will be preferred. If not available
17	Make	Reagents & analyzers both must be manufactured in USA, Japan or European Union.
18	References	There must be at least 2 Company references in well reputed private/tertiary care hospitals & laboratories
19	Certification	The Principal company should be ISO certified. Instrument and kits should be FDA/CE marked (certificate must be provided).
20	Quality Control	Built-in & automated QC management, Westgard rules, plotting and Levy Jennings graphs generation.
21	Interfacing	LIS interface.
22	Bi-directional Barcode facility	Bi-directional barcode facility
23	Data Storage	System should have capacity to store data of equal or more than 10,000 patient samples.
24	Temperature & Humidity	Room temperature (18 - 30 °C). Humidity 40 - 80 % RH.
25	Drain Requirement	Built-in waste pump
26	Calibrators/ controls ready to use	Clinical chemistry (cc) calibrators and controls should be preferably in ready to use form.

Signature
11/12/2021

Technical Specifications for Educational Compound Microscope

1. Optical System

- Optical Design: Infinity-corrected optical system
- Objectives: HI Plan Achromatic objectives: 4×, 10×, 40×, 100× (oil immersion or dry)
- Objective thread: M25
- Laser-engraved identification on objectives
- Field of View: 20 mm with 10× eyepieces

2. Eyepieces and Viewing Tubes

- Eyepieces: 10×/20 mm field of view, with or without pointer
- Eyepiece Type: Fixed or focusing, reticule holder (24.5 mm)
- Viewing Head Options: Binocular or trinocular (30° or 45°)
- EZTube™ with integrated eyepieces and preset diopters
- Interpupillary Distance: 52–75 mm
- Eyepiece locking screws included

3. Illumination

- Light Source: LED, 6000 K color temperature
- Lifetime: ≥25,000 hours
- Illumination Adjustment: Continuous intensity control
- Koehler Illumination: Available with adjustable field diaphragm
- Auto Shut-Off: Enabled after 2 hours (can be disabled)

4. Condenser System

- Standard Condenser: Centerable and focusable
- Compatibility: Slot for contrast sliders (phase contrast, darkfield, compensator)
- Supports turret and flip-top condensers
- Magnification labels on condenser

5. Stage Specifications

- Stage Surface: 185 mm (width) × 140 mm (depth)
- Stage Travel: 76 mm × 26 mm
- Construction: Wear-resistant surface, SafeTStage™ design with rounded edges

- Vernier Scales for X/Y coordinates
- Rack: Non-extending

6. Focus Mechanism

- Type: Coaxial coarse and fine focusing
- Fine Focus Precision: 300 μm per full rotation, calibrated in 3 μm increments
- Additional: Weighted focus knobs for precise movement
- Self-adjusting tension mechanism

7. Microscope Stand

- Construction: Die-cast aluminum
- Nosepiece: 4-position or 5-position knurled
- Filter Holder: Drop-in slot for 32 mm filters
- USB Power Output: 5 V / 1.5 A for camera module
- EZStore™: Integrated vertical handle, cord wrap, vertical cord connection

8. Imaging Capability

- Imaging Port: Trinocular head or intermediate camera module
- Compatible with: Leica ICC50 W/E digital camera
- Light Split: 50%/50% for camera and eyepieces
- C-Mount Adapters: Standard Leica mount supported

9. Intermediate Modules (Optional)

- 35 mm ergonomic intermediate module
- 15 mm flat top module
- Analyzer module
- LSF module for reflected light

10. Make

- EU , Germany , UK,

Specifications

Hematology Analyzer

- FDA /CE
 - Technology
 - Parameters
 - Parameters
 - Histogram
 - Through put
 - Sample Volume
 - Indication of Data
 - Printer
 - Sample Distribution
 - Interfacing
 - Reagent and Sample Identification
 - Sample Numbers
 - Storage Data
 - Reagents
 - Quality Control
 - Probe Washing
 - Quality Control
 - Analyzers
 - Workshop & Trained Engineers
 - Country or Origin Machine
 - Temp and Humidity
 - LIS
 - Experience
- : Approved with ISO 9001 Certification
- : Coulter
- : 20 Parameter should be available following parameter on whole blood mode and pre -diluted mode
- : WBC ,RBC HGB,HCT,MCV,MCH, MCHC, PLT, LYMP%,MIX %, NEUT%, LYMP#,MIX#, NEUT #, RWD-SD,RWD-CV,PWD -SD,MPV, PLCR,PCT
- :At least three Histogram must be available
- : 60 sample per Hour or more
- : 20 – 50uL for whole blood and pre-diluted mode
- : Graphic Display with Back Light
- : Built in Graphics Printer
- : Sample distribution with sample rotator valve (SRV) this is accurate for Distribution of sample volume
- Capability of interact with our HIMS of data transfer through serial port (for Host computer RS232)availability of Barcode reader for sample
- and reagent identification along with storage computer compatibility
- : Bar code for reagent and sample bar code identification
- : Sample numbers is in 12 -15 numeric digits
- : 30,000 - 35,000 or more patient sample results
- : Reagent should be non toxic, Cyanide free reagents and genuine Reagent of company
- : Two QC program of LJ charts and external QC Program, proficiency testing should be provide on regular basis from UK,USA,Japan from Company free of cost
- : Automatic sample probe washing
- : Quality Control abnormal High/Low and Normal with long shelf life
- : Installation of latest model of brand new hematology analyzer with electricity backup
- : Established work=shop and qualified Engineer
- : UK, USA, Japan Germany
- : Operating Temp should be 15 - 30 C. Humidity 30% - 85%
- : Should support bidirectional LIS support
- : five years experience of Govt .institute having with comparable work

load ,current satisfaction obtained, by the head of institute describing the performance of the company.

- Installation of latest model of the hematology analyzer with electricity back up.

A handwritten signature in black ink, consisting of a large, stylized 'O' followed by several vertical strokes and a diagonal line extending to the right.

Specifications

fully Automated ESR Analyzer

- Fully Automated Analyzer
- Sample Type : Lavender tubes used for full Blood count
- Modified Westergen Method
- Analyzer different and non-dedicated tubes
- 30 results in less than 25 mints
- 3 working mode Batch,Continuos ,Mixed
- Blood Base quality Controls
- 10 inch touch screen interface
- No sample sonsumption
- No waste fluids
- Fasety
- Internal Bar Code
- Reduction of turn a round time
- Standardization
- Internal sample mixing
- Innovative Graphic Interface
- Fast turnaround time
- Environmental friendly
- No production of waste material ,without extra cost for liquid
- Waste Disposal
- Made in Italy

pathology laboratory ATH MTI Abbottabad

The following are specifications detail of required centrifuge machines

1. Speed accuracy ± 20
2. Power supply AC 220V 50 to 60 Hz
3. Max speed 2000---5000 rpm
4. Max rcf 2600xg
5. Holes 24--- 36
6. Certification CE, ISO, FDA
7. TIMER 1 to 99 min
8. Motor type brushless
9. Speed control micro processor
10. Tube volume 15----20 ml
11. Manufacturer UK, JAPAN, USA, GERMANY

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