

Specification of Equipments

1. HEMOGLOBIN METRE



Portable hemoglobin testing
Reliable POCT
Easy to use
Accurate results

HemoTest Hemoglobin Meter

Specifications:

Parameter: Hemoglobin

Principle: Optical reflectance

Sample: Capillary or venous whole blood (15~20 ul)

Strip: H12 Hemoglobin Test Strip

Speed: Result in 10~30 seconds

Range: 4.0g/dL~24.0g/dL

Memory: 250 test results

Calibration: Factory Calibrated according to ICSH

Automatization: Self-checking, auto-judging and displaying malfunction

Power: One CR2032 Battery

Accuracy: accuracy $\geq 96\%$, the correlation is very good in the comparison between HemoTest and ICSH method.

Precision: $CV < 5\%$, testing the samples including high, medium & low concentration, the CV of 10 repeated test results is 1.8%、2.2%、2.7% respectively

2. GLUCOMETRE



MODEL	Glucometer Elite
REAGENT STRIPS	GLUCOMETER ELITE
Packaging	Foil-wrapped packs of 25 and 50
KIT COMPONENTS	Monitor, normal control solution, 10test strips, Microlet Lancing Device, lancets, check paddle, carrying case, log book
TECHNIQUE	Electrochemical
INSTRUCTIONS (BATTERY)	User guide, optional videotape upon request
DIMENSIONS (HXWXD) CM, (IN)	8.4x 5.1 x 1.3 (3.3x 2 x 0.5)
(DISPLAY)	
WEIGHT, g (oz) (BATTERY)	85.1(3)
SPECIMEN REQUIREMENTS (PROGRAM PANEL)	Capillary whole blood
Minimum sample volume, mL (BATTERY)	3
MEASUREMENT RANGE, mg/dL	20
AUTO SHUTOFF	After 3 min
DATA STORAGE CAPACITY	
Tests storage (DATA STORAGE CAPACITY)	20
Battery (POWER NEEDED)	
Kind of battery (BATTERY)	Lithium (2)
Battery-life (BATTERY)	~1,000 tests
Low battery indicator (BATTERY)	Visual
Memory loss if batteries removed (BATTERY)	Yes
CALIBRATION CHECK (DATA STORAGE CAPACITY)	Check strip
Frequency (REPORT DISPLAY)	Each new box of test strips
TEST DURATION, SEC. (DATA STORAGE CAPACITY)	30
BATCH-SPECIFIC CALIBRATION	Yes
AUDIBLE SIGNAL DISABLE	Yes
READOUT	LCD
HEMATOCRIT RANGE, %	20
QC	GLUCOMETER ELITE low, normal, and high controls
ENZYME(S) USED (BATTERY)	Glucose oxidase
MARKETING REGION (Interference compensation)	Worldwide

3. STETHOSCOPE

Design Criteria and Specifications

These are the criteria and specifications that were chosen to create a working digital stethoscope that aims to improve upon previous designs and to assist in making the Mashavu kiosks successful.

Record Heart Sounds

The stethoscope must be able to record heart sounds with the quality that would be heard by a doctor with an in-ear stethoscope. Heart sounds consist of the first heart sound and second heard sound which correspond to the closing of the atrioventricular heart valves and the semilunar heart valves, respectively. Both of these are low frequency sounds between 60 and 120 Hz. Abnormal heart sounds occur at a slightly higher frequencies from 200 to 500 Hz and are caused by turbulent flow of blood. There are no quantitative measurements that must be taken from the recording; rather, doctors will listen to the audio file of sounds recorded by the stethoscope so that they can determine if abnormal heart sounds are present.

Specifications

Manufactured Head

Head: Double-sided aluminum, 1 3/8" diameter with a highly sensitive 1 3/4" diaphragm

Microphone

Diameter: 9.83mm

Supply Voltage: (V+) 1.5-10V

Nominal Supply: 4.5VDC

Current Drain: 0.5mA (max.)

Signal/Noise: 40dB (min.)

Sensitivity: -65dB \pm 4dB

Output Impedence: 1k Ω

Frequency Range: 30Hz-15000Hz

Structural Components

Audio Cord Extension: 3 meters long

Foam: 1 cm thick



4. DIGITAL B.P. APPRATUS

SPECIFICATIONS OF VITAL AUTOMATIC DIGITAL BP MONITOR (MEDIUM CUFF (22-32CM), OFF WHITE)



Summary of Vital Automatic Digital Bp Monitor (Medium Cuff (22-32cm), Off White)

Key Features

Pulse Rate Indicator

Memory Recall

One Touch Operation

Digital Sensor

Auto Shut off Function

Clinically Proven

4 AA Battery Operated

If you choose self-care and personal monitoring to keep a check on your health then Vital Automatic Digital BP Monitor would be suitable for you. This Vital digital BP monitor provides professional accuracy at the confines of your home. Your apprehension regarding the accuracy of this monitor will linger no more, as this BP monitor is clinically proven.

The Digital Blood Pressure Monitor by Vital features a fully automatic operation providing quick and accurate readings with its easy one touch operation. The Auto-off function provided by the digital BP monitor adds to its efficiency and unprecedented functioning.

Build

Simple and easy to use, the Vital automatic BP monitor has a main unit with a one touch operation button and alongside also displays a large LCD display that enhances visibility. The medium sized cuff that comes with the BP monitor can be attached with ease and comfort. The pump is internally built that enables inflation and deflation of the cuff.

Performance and Feature

Using digital sensor, this Vital BP monitor supports automatic inflation and deflation which eventually provides readings automatically in a digitized format. With an accuracy rate of +/- 3mmHg for deriving blood pressure and +/- 5% of reading for pulse rates, this BP monitor simultaneously displays systolic and diastolic pressure along with pulse rates. The Automatic Vital BP monitor provides a measurement range from 40 to 260 mmHg for pressure and 40 to 160 beats per minute for pulse. The digital BP monitor runs with 4 AA replaceable batteries.

IN THE BOX

Sales Package: Main unit, Medium Cuff, 4 AA batteries, Instruction manual

PRODUCT DETAILS

Type: Upper Arm

Variant: Medium Cuff (22-32cm)

Color: Off White

Model ID: Automatic Digital

Brand: Vital

DEVICE CHARACTERISTICS

Memory Function: Yes

Pulse Rate Indicator: Yes

Display: LCD

MEASUREMENT

Measurement Method: Digital Sensor

Measurement Accuracy Pressure (mmHg): ± 3 mmHg

Measurement Range Pressure (mmHg) (Min): 40 mmHg

Measurement Range Pressure (mmHg) (Max): 260 mmHg

Measurement Range Pulse (beats/min) (Max): 160 beats/min

Measurement Range Pulse (beats/min) (Min): 40 beats/min

Measurement Accuracy Pulse (% of reading): ± 5 % of reading

POWER REQUIREMENTS

No. of Battery: 4

Power Source: Battery

Battery Type: AA

Schedule 5. - Equipment Specifications for Suction Machine/Aspirator (Mains/Battery)

- 1 Description of Function
 - 1.1 To extract fluid from the body during emergency treatment
- 2 Operational Requirements
 - 2.1 Shall have Crompton Greaves/American Universal/GEC Motor of minimum ¼ H.P. capacity
 - 2.2 The machine should be portable on four wheels and handle for transportation
- 3 Technical Specifications
 - 3.1 The Suction pump should be oil immersed fitted on Motor shaft
 - 3.2 Suction pump should have line grinding internally.
 - 3.3 To facilitate maintenance the cover of machine should be easy to open from the top & sides
 - 3.4 The suction machine should be capable of producing minimum vacuum of 500 approx mm Hg. which should be adjustable and monitored by vacuum gauge of suitable range. The suction capacity should be 15 litres per minute and can be regulated.
 - 3.5 It should have two bottles of 1 or 2 liters (as per requirement) with synthetic rubber lids. The bottle shall be fitted with the arrangement to prevent overflow of fluid.
 - 3.6 ON/OFF Switch and Power indicator should be available
 - 3.7 Body material: Base, top & panel made of rust proof and corrosion resistant molded ABS/Stainless Steel. Jar/Bottle material: Autoclavable polycarbonate.
 - 3.8 Inbuilt maintenance free battery. Battery backup up to 60 minutes on full charge. Provided with cable for ambulance/car use.
- 4 System Configuration Accessories, spares and consumables
 - 4.1 System as specified-
 - 4.2 3 core lead of 2 meter along with one 3 pins 15 amp. Plug-01
 - 4.3 Power cable-3 core lead of 5 meter along with one 3 pins 15 amp. Plug -01
 - 4.4 The Following spares per machine are also required: -
 - (i) Bottles 2 Nos.
 - (ii) Lids 2 Nos.
 - (iii) Rubber Seals 2 Nos.
 - (iv) Blades 2 Nos.
 - (v) Suction Tubing set 1 No
- 5 Environmental factors
 - 5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%
 - 5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%
- 6 Power Supply
 - 6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
 - 6.2 A fuse or a resettable circuit breaker of an appropriate capacity should be incorporated for protection of motor
 - 6.3 Should work on 220-240V AC as well as batteries. Mains adaptor to be supplied
- 7 Standards, Safety and Training
 - 7.1 Manufacturer/Supplier should have ISO certification for quality standards.
 - 7.2 Comprehensive warranty for 5 years
- 8 Documentation
 - 8.1 User/Technical/Maintenance manuals to be supplied in English.
 - 8.2 Certificate of calibration and inspection.
 - 8.3 List of important spare parts and accessories with their part number and costing

Schedule 6.- Portable Suction foot operated

- 1.1 To extract fluid from the body during emergency treatment
- 1.2 The suction machine should be capable of producing minimum vacuum of 500 approx mm Hg. which should be adjustable and monitored by vacuum gauge of suitable range. The suction capacity should be 10 litres per minute and can be regulated.

- 1.3 It should have two bottles of 01 liters with synthetic rubber lids. The bottle shall be fitted with the arrangement to prevent overflow of fluid.
- 1.4 Body material: Base, top & panel made of rust proof and corrosion resistant molded ABS/Stainless Steel. Jar/Bottle material: Autoclavable polycarbonate.
- 1.5 The Following spares per machine are also required: -
 - (i) Bottles 2 Nos.
 - (ii) Lids 2 Nos.
 - (iii) Rubber Seals 2 Nos.
 - (iv) Blades 2 Nos.
 - (v) Suction Tubing set 1 No
- 1.6 Foot operated
- 1.7 Proposal for full Warranty up to 2 years from date of installed properly, covering on-call technical interventions, spare parts and travel.

Schedule 7.-Equipment Specifications for Bilirubinometer:

- 1 Description of Function
 - 1.1 Bilirubinometers are instruments that are simple to operate and are designed to measure the concentration of bilirubin in the blood.
- 2 Operational Requirements
 - 2.1 It should be dedicated bilirubinometers that use spectrophotometric techniques to analyze whole blood, serum, or plasma samples
- 3 Technical Specifications
 - 3.1 It should be Bench top point-of-care bilirubin meter.
 - 3.2 It should directly reading photometry determining Total Bilirubine in serum / plasma.
 - 3.3 It should have On switch and auto-off facility
 - 3.4 It should have automatic calibration setting between measurements
 - 3.5 It should have dual wavelength measurement: 455nm and 575nm
 - 3.6 It should have correction for Hb at 550 nm.
 - 3.7 It should measure sample size: 1 capillary tube with serum / plasma
 - 3.8 It should have main light source of 5 W tungsten lamp
 - 3.9 It should have measuring range of 0 to 700 μ mol/ or 0 to 40 mg/100 ml
 - 3.10 It should have accuracy equivalent to laboratory spectrophotometer (approx \pm 5%)
 - 3.11 It should have read-out switch able between mg/100 ml of μ mol/l
 - 3.12 It should have fast analysis time <5 sec
 - 3.13 The unit should have large LED display readable in low light working situations, display cover durable plastic & with integrated printer (optional)
- 4 System Configuration Accessories, spares and consumables:
 - 4.1 System as specified should provide Disposable cuvettes to avoid sample cross-contamination; troubleshooting codes; plain cuvette for check and calibration optional printer, standard accessories. reference solution packages, box of micro capillary tubes, inner diam 1mm, length 7mm, heparinized , pack of sealing compound for micro capillary tubes, spare lamp, dust cover
- 5 Environmental factors:
 - 5.1 Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive.
 - 5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%
 - 5.3 The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%.
- 6 Power Supply:
 - 6.1 Power input to be 220-240VAC, 50Hz
 - 6.2 Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)
- 7 Standards, Safety and Training:
 - 7.1 Should be safety certified approved product
 - 7.2 Manufactures/Supplier should have ISO certificate to Quality Standard.
 - 7.3 Electrical safety conforms to standards for electrical safety IEC-60601 / IS- 13450

- 8 Documentation:
 - 8.1 User/Technical/Maintenance manuals to be supplied in English.
 - 8.2 Certificate of calibration and inspection.
 - 8.3 List of important spare parts and accessories with their part number and costing.
- 9 Warranty
 - 9.1 Proposal for full Warranty upto 5years from date of installed properly, covering on-call technical interventions, spare parts and travel.

Schedule 8- Stethoscope, binaural, neonate

Technical Specifications:

- Double cup neonatal stethoscope
- Chest piece in stainless steel with non-chill plastic rim
- Diaphragm approx: 20 mm
- Sensitivity approx 3.0 dB from 50 to 500 Hz (cardio)
- Sensitivity approx 8.0 dB from 600 Hz to 1500 Hz (pneumo)
- Y tube: treated rubber with large diameter
- Arms: stainless steel or chrome brass, with treated spring for lasting elasticity and comfort
- Removable plastic ear-pieces
- Device is produced by ISO 9001 certified manufacturer (Certificate to be submitted, further details see "Technical Provisions")

Supplied with:

- 1 x spare set of earpiece
- 1 x spare diaphragm
- User manual with trouble shooting guidance, in English
- Technical manual with maintenance and first line technical intervention instructions, in English
- List of priced accessories
- List of priced spare parts
- List with name and address of technical service providers in India
- Proposal for full Warranty upto 1 years from date of installed properly, covering on-call technical interventions, spare parts and travel.

Schedule 9. - Tape, measure, vinyl-coated, 1.5m.

Technical Specifications:

- Vinyl-coated fibreglass measuring tape
- Metal tip finishing at both ends
- Reads both in cm and inch
- Length, 1.5 m / 5 ft
- Minimal graduation: 0.5 cm / 0.2 inch
- Width, approx: 1.3 cm
- Thickness, appox: 0.36 mm
- Device is produced by ISO 9001 certified manufacturer (Certificate to be submitted, further details see "Technical Provisions")

Schedule 10.- Ambu Bag

1. Ambu bag must be autoclave
2. Bag made of silicon, latex free double layered rubber which retains sensitivity and resistant to rough use.
3. Inlet end of bag should have separate port for oxygen supplement.
4. Outer port should be such that re-breathing valve or non return valve can be attached.
5. Should be supplied with oxygen reservoir bag and deliver tidal volumes of 250/500/750/1000 ml.
6. Warranty for 1 Year
7. Complete set should be quoted

Schedule 11.- Syringe pump, 10, 20, 50 ml, elec 220V**Technical Specifications:**

Digital and self regulating volume controlled portable syringe pump

Can be mounted on standard bed/wall rail or mobile pole/stand (supplied with fixation)

Suitable for all intravenous and intra-arterial infusions

Continuous volumetric delivery with syringes 10, 20 and 50 ml

Open system, suitable for different brands of syringes

Programmable, user entry: infusion volume and time or flow rate

Rate, adjustable: 0.1 to 999 ml/h, steps of 1 ml/h

Accuracy: ca 1 % of total volume delivered

With occlusion detection and alarm

Display reports systems errors, end of infusion and built-in battery status

Audio visual alarm with silencing feature for audio alarm

Automatic switch from mains to batteries in case of power failure

Power requirements: 220 V / 50 Hz or internal re-chargeable battery (autonomy approx 6 hrs, automatic recharge)

Power consumption: 50 W

Device is produced by ISO 9001 certified manufacturer (Certificate to be submitted, further details see "Technical Provisions")

Device is safety certified according CE 93/42, FDA 510k or equivalent (Certificate to be submitted, further details see "Technical Provisions")

Supplied with:

1 x spare battery

1 x spare set of fuses

User manual with trouble shooting guidance, in English

Technical manual with maintenance and first line technical intervention instructions, in English

List of priced accessories

List of priced spare parts

List with name and address of technical service providers in India

Training and installation at end-user site

Proposal for full Warranty up to 5 years from date of installed properly, covering on-call technical interventions, spare parts and travel.

Schedule 12.- Pulse oxymeter, bedside, neonatal**Technical Specifications:**

Compact portable bedside pulse oxymeter with LCD display

Continuous monitoring of SpO₂ (arterial blood oxygen saturation), pulse rate and signal strength

Measuring range:

a. SpO₂: 30 to 100 %, minimal graduation 1%

b. Pulse rate: 20 to 250 bpm, minimal graduation 1 bpm

Accuracy SpO₂: 50 to 69% ($\pm 3\%$), 70 to 100% ($\pm 2\%$)
Display shows SpO₂(%), HR(bpm) and signal strength bar
Large display readable from distance, display cover durable plastic
User preset of high/low alarms on SpO₂ and pulse rate monitoring
Audio visual alarm for SpO₂ and pulse rate in case measurements are outside preset range
Silencing feature for audio alarm
Display reports system errors, probe failure and built-in battery status
Automatic switch from mains to batteries in case of power failure
Power requirements: 220 V / 50 Hz and internal re-chargeable battery (autonomy approx 6 hrs, automatic recharge)
Power consumption: 50 W
Device is produced by ISO 9001 certified manufacturer (Certificate to be submitted, further details see "Technical Provisions")
Device is safety certified according CE 93/42, FDA 510k or equivalent (Certificate to be submitted, further details see "Technical Provisions")

Supplied with:

2 x reusable SpO₂ sensors neonate, clip-on type (including connection cable)
10 x reusable SpO₂ sensors neonate, wrap around type (including connection cable)
1 x spare rechargeable battery
1 x spare set of fuses
User manual with trouble shooting guidance, in English
Technical manual with maintenance and first line technical intervention instructions, in English
List of priced accessories
List of priced spare parts
List with name and address of technical service providers in India
Training and installation at end-user site
Proposal for full Warranty up to 5 years from date of installed properly, covering on-call technical interventions, spare parts and travel.

Schedule 13.- AIR CONDITIONER

1. The unit should be of 1.5 ton capacity
2. It should be a split AC system
3. The system should operate by a Remote control.
4. The unit should have a digital display displaying temperature
5. The supplied unit must work on 230 volts.
6. The front panel must be easily open-able to regularly clean the dust in the filters
7. The Supplied system must be from a leading Brand in the market and should have a service network in the state of Bihar
8. Proposal for full Warranty up to 2 years from date of installed properly, covering on-call technical interventions, spare parts and travel.

Schedule 14.- MICROSCOPES

Optical System:

- Infinitely corrected optics par focal, plan achromatic lenses with anti fungal properties.

Illumination:

- Built in transmitted Koehler illumination.
- 6 V, 20 to 30 W halogen bulb
- 220-240V 0.85/0.45A 50Hz

Focusing

- Stage height movement by roller guide (rock & pinion)
- Upper limit stopper
- Tension adjustable on coarse focus adjustment knob

Revolving nosepiece

- Quintuple with inward tilt

Observation tube:

- Tube inclination – 30 -45 0
- Interpupillary distance adjustment range – minimum 50 to 70 mm
- Stage
- Movement range – 76 mm X - direction X 50mm Y - direction
- Rectangular scratch resistant stage with right hand control with double slide holder and vernier calipers on X Y axis.

Condenser

- Type – Abbe condenser
- N.A. – 1.2 dry type
- Aperture iris diaphragm - built – in

Objectives, Plan Achromat 4x, 10x, 20x, 40x & 100x

Minimum working distance for 100X should be 0.13 to 0.2 mm

Eyepiece

- 10X with F.N 20

All the necessary adapters and power cords should be provided for functioning of microscope.

Proposal for full Warranty up to 2 years from date of installed properly, covering on-call technical interventions, spare parts and travel. CMC from 3rd to 5th year.

Schedule 15.- Centrifuge, hematocrite, bench top, up to 12000 rpm, including rotor

Technical Specifications:

Benchtop centrifuge for quick assessment of hematocrit

Rotation upto 12000 rpm, adjustable in increments of 100

Timer settable in minutes, maximum preset 99 minutes

Safety lid-lock feature and emergency lid release

Motor overheating protection and imbalance shut-off

Digital display shows rpm and time

Angle rotor, 24 positions, maximum approx 16000 rcf

Power requirements: 220 V / 50 Hz

Power consumption: 200 W

Device is produced by ISO 9001 certified manufacturer (Certificate to be submitted, further details see "Technical Provisions")

Device is safety certified according CE 93/42, FDA 510k or equivalent (Certificate to be submitted, further details see "Technical Provisions")

Supplied with:

1 x box of micro capillary tubes, inner diam 1mm, length 7mm, heparinized,

1 x pack of sealing compound for micro capillary tubes

1 x spare set of fuses

User manual with trouble shooting guidance, in English

Technical manual with maintenance and first line technical intervention instructions, in English

List of priced accessories

List of priced spare parts

List with name and address of technical service providers in India

Training and installation at end-user site

Proposal for full Warranty up to 2 years from date of installed properly, covering on-call technical interventions, spare parts and travel.