

Technical specifications

Enclosure - I

1. (a) ELISA reader

- i. Should be 8-channel optical measuring system.
- ii. Should be an open system which allows to program & save different ELISA protocols.
- iii. Should have capability for Mono, Bichromatic measurements.
- iv. Instrument should be able to read all types of micro well plates with transparent bottom-flat, C-, U- and V- shaped.
- v. Should be able to read end point and kinetic reaction.
- vi. Should have at least 5 standard filters – 405,450,492,550 & 620 nm and should have at least 3 open positions for future additions.
- vii. The results and interpretation graphs should be displayed on the screen and printout possible
- viii. Should work with a LED, keypad.
- ix. Should have in built plate shaking with minimum of 3 speeds and minimum upto 5 minutes.
- x. Instruments should have external printer facility with USB port based printers.
- xi. Memory back up option should be available for data management.
- xii. The On-board software should have capability of storing the calibration curve data.
- xiii. The system must have internal printer & accept external dot matrix printer and must print results in preformatted matrix form giving details such as Sample No., Value, Abs and interpretations, with cut-off equation for qualitative results.

(b) ELISA plate washer

- i. Washer manifold should be 8 or 12 channel.
- ii. Pump used for aspiration and dispensing should be Vacuum Pump.
- iii. Needle height should be adjustable for dispensing and aspiration according to the size of the wells.
- iv. Strip mode & Plate Mode washing both should be present.
- v. Should be able to adapt both U, flat or curved bottom plates.
- vi. Automatic Printing should be done at the registered change of Buffer.
- vii. Plate carrier should be autoclavable.

L. Khami

Sarve Hijran
16/8/18

Pargulā Navon
10/8/18

ref: 14/08/18

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2. Digital Colorimeter:

- | | | |
|----|--------------------|--|
| a) | Optical System | Glass Filters at least 8 in nos. |
| b) | Wave length | 400-700 nm |
| c) | Peak wave length | 400, 490, 520, 540, 590, 620, 650, 700 nm (on wheel) |
| d) | Auto zero Facility | In all filters (i.e. 400-700 nm) |
| e) | Display | LED |
| f) | Detector | Highly sensitive Photodiode |
| g) | Reagent Volume | Minimum 1ml |
| h) | Key pad | Switch Key Board |
| i) | Light Source | 6V, 6W, Tungsten Lamp |
| j) | Test | Glucose, Urea, Cholesterol, Total protein, Albumin, Uric Acid, Uric Acid Urine, Haemoglobin, Chloride, BUN, Triglycerides, Calcium, Potassium, Bilirubin (Bili1), Bilirubin (Bili2), Creatinine, Creatinine Urine. |
| k) | Operating modes | Calibration / Measurement |
| l) | Reading Memory | Direct reading in Conc. /O.D |
| o) | Table Top | |
| q) | Input voltage | AC Mains: 230V, 50Hz |
| r) | Battery operable | 12V |

3. Glucometer:

- Should be a hand held meter
- Should require no routine maintenance
- Should have reading range/ linearity from 20 to 600 mg/dl
- Should have a reading time of less than 10 sec.
- Should use electrochemical technology
- Should use a minimum blood sample less than 1.5 μ l
- Should have a LED display
- Should have measuring unit in mg/dl
- Should have wide operating temperature
- Should have a minimum memory of 50
- Should have easy code entry technique
- Battery should be replaceable without any tools.
- Should have facility to ensure accuracy of measurements.

4. Glucose strips:

- Should be able to use capillary blood samples.
- Should have a minimum of 4 months shelf life after opening the strip vial.
- All strips should have at least one year expiry date from the date of supply.
- 50 strips should be supplied along with the equipment.
- Strips should be available in the local market.

L. Haini

Sanis Hujan
10/8/18

Sanguta Nares
10/8/18

Sandy
14/08/18

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5. Digital balance :

- a) Digital display
- b) Capacity 1000 gm
- c) Resolution = 0.01 gm

6. Centrifuge Machine

- Specifications : Table top model
Max. speeds : Not less than 5000 rpm
Max RCF : Not less than 3600 g
Swing out heads : 16 or more (16×ml)

7. Boiling water bath

- 1) Rectangular shaped double walled
- 2) Electrically heated
- 3) 220/230v output compatible
- 4) Digital temperature control
- 5) 6 hole capacity or more