## Specifications for Microplate (ELISA) Reader

1. Should have minimum wavelength range of 400–750 nm and photometric range of 0.0–3.5 OD
2. Should have linearity of ≤1.0% from 0.0–2.0 OD; ≤2.0% from 0.0–3.0 OD; accuracy of ≤1.0% or 0.010 from 0.000–3.000 OD at 490 nm; precision of 1.0% or 0.005 OD from 0.0–2.0 OD; 1.5% from 2.0–3.0 OD and resolution of 0.001 OD
3. Should have minimum 8 filter wheel capacity with 415, 450, 490, 595, 655, and 750 nm included filters
4. Should have minimum 3 speed plate shaking with adjustable duration of 0–999 sec
5. Read time should not be more than 6 sec at single wavelength or 10 sec at dual wavelengths
6. Should have onboard graphical thermal printer and USB2 interface with PC or Mac data stations for data output
7. Should be able to store data for over sixty assay protocols
8. System should come with a comprehensive software package allowing colorimetric and turbidimetric analyses, as well as report analysis for raw data, absorbance, limit, matrix, normalization, and curve fit
9. Software should have the functionality of flexible template creation for any microplate format up to 1,536 wells
10. Software should be either license free or license for minimum 5 systems should be provided

## Specifications for Microplate washer

- Automatic washer compatible with strips and 96-well microplates that have flat-, U-, or V-bottom wells.
- Programmable needle positions (horizontal or vertical) to an accuracy of 0.1 mm for bottom washing, crosswise aspiration, and overflow washing.
- Dispensing speed control
- A plate shaking option to help minimize bubbles and adherence of liquid to well sides.
- Wash bottle sensor to detect high waste liquid levels
- Up to 75 programmable washing sequences
- Easily removable 8- or 12-way manifolds
- Easily accessible manifold interior for maintenance
- Removable and autoclavable plate carrier
- An aerosol protection cover
- Integrated vacuum and dispensing pumps to ensure accurate and quiet washing and to eliminate the need for external pumps.
- Residual well volume should be < 6 µl
- Wash bottle volume should be 2000 ml
- Soak time in strip mode 0-9.9 sec and in plate mode 0-59 minutes.
- Should come with 8-way manifold and 12-way manifold should be quoted in optional.
- On-board software should be capable of storing up to 110 wash protocols.
- Operating temperature 15-40 °C.
- Dimensions (WxDxH) not more than 35x43x20 cm
- Both instruments should be of from same manufacturer.