

Technical specifications

Low Volume sample analysis / UV Vis Spectrophotometer

- A spectral scanning unit for UV-visible-Near IR wavelength range, semi-micro, micro, ultra-micro (with no extra attachments) and should be able to read 6, 48, 96 & 384 microwell plate format.
- Should have Ready-made colorimetric protein assays and Turbidimetric assay
- It should work as a standalone system without a computer and also be able to run with computer-controlled software.
- Analysis Software supplied should be supplied with an unlimited user license.
- Should be able to read endpoint, kinetics, spectral scanning, and also kinetic spectral scan.
- The instrument should have the option to upgrade at least 32 low-volume samples of 2µl-10µl using low volume analysis plate in case of DNA/RNA purity & concentration check-in directly with standalone mode.
- The instrument should have a memory of 99 inbuilt protocols in stand-alone mode
- Communication options: USB ports to PC, Wi-Fi dongle and data transfer devices, 1 ethernet port
- Access data via cloud-based capabilities, wired or wireless network connection.
- The instrument can provide a wavelength range from 200nm to 1000nm with 1 nm steps.
- Spectral scanning speed: 10 sec from 200 to 1000 nm with 1 nm steps per sample.
- Performance Specifications: **Bandwidth: < 2.5 nm or better and Xenon flash lamp life should be for 10 million 96 well Microplate.**
- The instrument should have inbuilt **incubation** and **linear shaking** options for longer kinetic assays etc.
- Incubation **temperature: from ambient +2 °C to +45 °C.**
- Spectral scanning speed of 200 to 1000nm should be 10 sec. or less.
- Measurement speed should be 6 sec. for 96 well and 10 sec. for 384 well plate
- The instrument should have a minimum 2 USB ports, one for easy data transfer and be able to connect Wi-Fi dongle and Microsoft OneDrive cloud-based capabilities.
- The system should have a Power Save function for reduced energy consumption when the instrument is 'on' but not in use.
- Visualize data in both numerical mode and heat-map/virtual image of the plate.
- **Multiple Software should have language versions: English, German, French, Spanish, Portuguese, Russian, Chinese, and Japanese for multi student's usage.**

Data Analysis Software:

- Software should allow multiple absorbance /photometry steps in a single program for differential analysis assays, including a plate-out option during the program to add required compounds and then continue the program for further analysis.
- Allow multiple absorbance reading steps within the same program i.e. in case of two sets of reading before and after adding the compounds.

- Database-based software to run backups of all data, and restore backup data (in case of hardware failure of an original computer).
- Should have an **area selection** option, for different measuring parameters for different areas in the same plate.
- Spectral scanning of all 96 samples or 384 samples should be able to be viewed in a single graph plot.
- Data export can be in .pdf,, excel, xml, and note format.
- The system should be supplied with a one-year warranty
- A computer system with the latest specs should be supplied along with the equipment