

## Specifications for ChemiDoc

1. System with true 16 bit CCD (not A/D) camera; pixel density of 65,536 gray levels.
2. Individual pixel size should be at least 4.54 x 4.54  $\mu\text{m}$  or bigger.
3. Camera resolution should be 6 megapixel or more.
4. The instrument should provide excellent quantitative data from a single blot having very intense and weak signals in a single image; to facilitate the same instrument's dynamic range should be at least 4 orders of magnitude for all applications (please support with relevant technical data)
5. Instrument should provide highest level for sensitivity and hence must have minimal dark current with maximum limit of 0.002 e/p/s and low read noise of not more than 6e-.
6. The camera should have Peltier based cooling.
7. Quantum efficiency at 425 nm should be 70% or more, this will ensure that the instrument is highly sensitive to very faint signals from chemiluminescent blots.
8. Motorized zoom fast lens with f/0.95 or better should be provided.
9. Light sources/excitation should include – Trans-UV (302 nm), Epi White, trans-white (requires White sample tray), Epi-Blue, Epi-Green, Epi-Red , Epi-far red , Epi-near IR and should have option for trans-blue light (for SYBR safe DNA application) and fluorescence multiplexing imaging.
10. Instrument should have provision for protective UV shield for use during band excision with safety interlocks to avoid unintentional UV exposure to the user.
11. Minimum imaging area for white light and chemiluminescence application should be 20 cm x 16 cm or more.
12. Should provide image acquisition with automatic zoom, focus, and iris adjustment without the need for users to focus or adjust aperture settings.
13. The instrument should have onboard attached touchscreen with multi-touch capability (2 points) enabling users to easily interact with the touchscreen to acquire, assess and export images. Touchscreen actions should include – tap, double tap, pan, scroll and pinch to zoom.
14. Instrument should have multiple input/output ports with minimum 3 USB ports allowing users to connect USB devices (like keyboard, mouse, data storage, and printer). At least one USB port should be provided on the front panel for easy export to USB.
15. The system should have Ethernet port so that users can transfer image files via Ethernet to networked computers.
16. Factory calibrated flat fielding for ensuring uniform data for all applications. System should be calibrated for image area, focus, and flat field correction at the factory and files stored in the integrated PC.
17. Users should be able lock the system for data protection & to avoid setting interruptions.
18. System compatible with stain free technology and total protein normalization is required and should be supported with publications.
19. The system should provide flexibility in selecting the pixel binning options, should be possible to select minimally 2x2, 4x4 and 8x8 binning.
20. System should have tray technology features to recognize the application specific tray and adjusts imaging parameters, iris settings and software options accordingly.
21. Should be supplied with a compatible desktop with original software and a minimum hardware configuration of i3 processor, 8 GB RAM & 512 SSD and 2 KVA Online UPS with at least 10-15 mins back up.
22. Chemidoc System should come with minimum 2 years warranty

### Note:

The specifications should be authenticated by brochures and company website/catalog. Technical catalogue or brochure of the model must be provided. Instant preparation of the same based on the specifications provided and its onward submission will disqualify the bidder without any further communication.