

CORRIGENDUM

IGIB/2-1NC/225/24-25(797)

04.11.2024


Subject: Stereozoom Fluorescence microscope with imaging and documentation system

Ref: CPPP Tender ID No. 2024_CSIR_212010_1

With reference to the above tender this is to inform that the technical specification has been revised.

Bidders are requested to submit their bid as per the revised technical specification (enclosed with the corrigendum). All others terms and conditions of the tender document will remain same.

Revised technical specification Encl.


Stores and Purchase Officer

Technical Specifications for Stereozoom Fluorescence Zoom Microscope with Imaging and Documentation System

1. **OPTICS:** Parallel Optical Zoom System.
2. **ZOOM:** Stereo Zoom Body. The microscope should have stereo-zoom variable magnification system with a **zoom ratio of at least 1:16 or more** with built-in aperture-iris diaphragm.
3. **APPLICATION:** Stereo observation for brightfield and fluorescence imaging should be possible with the system. Should be compatible with imaging zebrafish embryos and zebrafish adult animal skin.
4. **EYE PIECE TUBE:** It should have a Trinocular tube inclined at 30° - 37° with two-way light path selection along with interpupillary distance adjustment facility. Light should not be split with a Beam splitter.
5. **EYEPIECE:** The Trinocular head should have paired 10X eyepieces with F.N. 22 or higher and diopter adjustment in both eyepieces.
6. **FOCUS:** Focusing should be with both coarse and fine focusing with counter balancer mechanism to stop the counter movement.
7. **NOSEPIECE:** Should come with a nosepiece that can hold at least 2 objectives or more.
8. **OBJECTIVES:** Distortion Free Plan Achromat Parfocal Objective 1X, N.A. 0.15, (W.D. 60 mm) or higher giving total magnification of up to 115X or higher in combination with 10X eyepieces as well as a Parfocal Plan Achromat 2X Objective with high N.A. of at least 0.30 or higher giving total magnification of up to 230X or higher in combination with 10X eyepieces. This objective should be equipped with a correction collar allowing aberration correction when imaging through plastic dishes, or up to 5mm of water. The objective should provide a superior resolution of at least 900 line pairs/mm.
9. **Slim Transmitted LED light illumination base** with white LED having average life approx. 50,000 hours or better. The base should have four positions turret for cartridge or accessories for various biological applications. The microscope should be quoted with the cartridge/accessory for standard brightfield illumination & Oblique contrast illumination. Option for adding to more cartridge/accessories. Light intensity adjustment possible using a continuously variable dial.
10. The system should be equipped with reflected **LED Cold-light Dual inter-lock Fiber light Guide**.
11. The system should come with a **vertical reflected light fluorescence illumination** which corresponds to microscope zoom function. Zooming of illuminator should be independent to zoom function of microscope body. The system should come with a shutter that prevents flashlight caused by switching.
12. **LED fluorescence Light source** with lifetime >20,000 Hours. Instant on/off and irradiance control in 1% steps from 0 – 100%. **Should work for all wavelengths from 365nm-680nm.**
13. Five-position turret to accommodate up to 5 sets of excitation/emission filter sliders or cubes. Suitable filter for DAPI, GFP, tdTomato and mCherry should be provided. The filter should be with minimum cross talk and minimum pixel shift.
14. The microscope should be controlled through a computer interface to connect, control and acquire images on the computer.
15. **Digital Camera** attachment:
 - Type of sensor: $\geq 1''$ or (35.8 X 23.8mm), (sensor size in micron) CMOS chip, more than **20 MP resolution**, CMOS camera. Pixel size at least 3.4 X 3.4 μm (+/- 0.1 μm) square or more.
 - ii. Sensor: CMOS with Cooling system, cools at least 4 degree below ambient temperature. Peltier device (active cooling)

- iii. Sensitivity: at least ISO 200-1000; Bit depth of at least 12 bit
 - iv. Live display: ≥ 7 FPS (at full resolution of 4K X 3K); ≥ 60 FPS (at 1920 X1080 / HD resolution)
 - v. Suitable Mount and adapter to provide FOV ≥ 25 mm.
 - vi. All the necessary cables/ power supply must be included
 - vii. Camera should work in color and monochrome as per sample and requirement.
 - ix. The camera should have a functionality of capturing the image of complete slide by capturing multiple images and stitching them together. This should be available with manual stage also and no motorized stage is required. Adapter 0.5X C-Mount adapter.
16. **Image Analysis Software:** The imaging software should have the following features/modules: Software for image capturing , user experience customization, overlay multiple images, document groups for side by side image comparison, movie playback, Tile image, slice view for orthogonal plane viewing of 3D or time lapse data sets, snap /movie acquisition, timelapse at specific intervals, Z stack, Manual Multiple image alignment (MIA), Instantly create Extended focal images (EFI), Live deblurring, Image processing, Image analysis, Count and Measure Basic (Phases/regions), Experiment Manager, Capable of running pre trained Neural network for A.I, Deconvolution, Voxel viewer for iso-surface and volumetric rendering of 3D and 4D data, Live deblurring, Colocalization, sets automatically compose word report. Multichannel 5D Acquisition – The Process Manager makes quick work of complex acquisition by coordinating microscope, shutters, filter wheels, and z devices. Capture multiwavelength, z-stack, and timelapse experiments in any combination. Get maximum information out of your multi-wavelength data with fluorescence unmixing and colocalization analysis tools.
 17. **Suitable PC** with Intel i7 13th generation or equivalent Processor, 32 GB RAM, 1TB SSD, 1 TB HDD, Windows 10 (64-bit), USB 3.0 Port, Keyboard, Mouse, 24" inch LED Monitor, USB 3.2 Port (Gen2 Type C to Type C) Pre-loaded Genuine Windows 10/11 OS (64-bit) along with UPS 1KVA are required.
 18. The microscope, camera and software should be from the **same** manufacturer to ensure better system integration, compatibility and upgradability option.
 19. **Bidders:** Bidders must provide the respective web links (of the manufacturer's website) for the quoted microscope, camera and software for confirmation of compliance to the specifications.
 20. **Compliance:** System should be USFDA/CE/BIS Complied, and manufacturer should have ISO Certification.
 21. POs and list of users who procured the quoted model within the last 5 years should be attached.
 22. **Warranty:** The system should be quoted with a minimum 3-year warranty. Please quote for additional 5 years of CMC, this will not be counted towards comparison of bids.
 23. **Demo** should be provided on request off site within Delhi-NCR or on site.