

Fluorescence Microscope

Fluorescence microscope, Axio Imager Z1, from Carl Zeiss is a trinocular, fully motorized, PC controlled high-performance research microscope with transmittance and reflectance modes for optical imaging. It consists of 'Apotome' accessory that enables us to image fluorescence from particular optical section through structured illumination eliminating background fluorescence. The reflector turret has ability to accommodate 10 modules and presently consists of 5 filter sets suitable for different fluorophores covering entire visible range. With the help of multidimensional acquisition feature in the software, it is possible to image samples with 2 or more fluorescent dyes, at different z-stacks and at required time intervals.

Specifications:

- **Make and Model:** Carl Zeiss, Axio Imager Z1
- **Objectives:** 1×, 5×, 10×, 40×, 50× and 100× (Epiplan/Plan-Neofluar or Plan - Apochromat)
- **Filter sets for Fluorescence:** DAPI, FITC, GFP, Cy3 and Rhodamine
- **Light sources:** Two halogen lamps (100W), each for reflectance and transmittance and Metal halide lamp for fluorescence
- **Other Reflector Modules:** RGB filter set, Dark field, Circular-DIC
- **Camera:** Peltier cooled CCD camera with 16-bit pixels (AxioCam HRm Rev 2.0)
- **Axiovision software:** 3D Image visualization and analysis is possible
- **'Apotome' accessory:** enables to image fluorescence



Process Capabilities:

- **Substrates used :** Antibody Immobilized SiO₂ wafers, Su-8 wafers, Gold deposited SU-8 Wafers
- **Substrate size :** 2" wafers and pieces

Applications:

- **Fluorescence imaging:** High contrast, Glare-free, Fluorescence imaging
- **Fields of research:** Life science, Biosensors and etc.,