

DESCRIPTION

ACUCAL Biological Microscopes are compound microscopes that are primarily used to observe and study organisms and microorganisms. These microscopes adopt LED illumination, which save energy and have long working life, it is also very comfortable for observation. High Contrast, Universal Plan Infinity Corrected, Strain free Optical System.



APPLICATIONS

- Suitable for use in educational, academic, agricultural, medical and Scientific Research.
- Widely used in Hospitals, Laboratories, Schools, Wastewater treatment plants, Veterinary, Histology and Pathology.
- To View blood cells, cheek cells, parasites, bacteria, algae, tissue, and thin sections of organs.
- To view samples that cannot be seen with the naked eye.

TECHNICAL SPECIFICATION

Main Body & Optical System

- Upright Modular Frame , Highly Rigid, Non Hinged Type, Vibration free Aluminium alloy casting, Anti rust heavy metal stand, Anti-Microbial treated optics, Ergonomics shaped Sturdy Design & Stable with built in transmitted light LED power supply & Brightness Control integrated in the base. All Critical Movements based on Ball Bearing.
- High Contrast, Universal Plan Infinity Corrected, Strain free Optical System
- Conforming to Pathological IS:4381 latest, Research IS:5204 latest Indian Standards.
- Observation Method: Bright Field, Upgradeable to Phase contrast, Polarisation, Dark field, Dual view attachment, DIC attachment, Pentahead attachment, minimum 6 position Fluorescence Turret for FISH and Karyotyping applications.

Observation Head- Binocular or Trinocular

- Sidentopf Observation head 30° inclined, 360° rotatable.
- Diopter adjustment Facility ± 5 on Eyepieces
- Inter-pupillary distance adjustment from 48mm to 75mm.
- Light Distribution by Beam Splitting : 100: 0 / 80:20 (Trinocular Head)

Eyepiece

- Compensating High Eyepoint Wide field 10X (paired) field of view 20/22/23mm & F.N. 20/22/23
- Anti-fungal & Anti-reflection hard coated conforming to IS: 8275/1976 (latest)
- High Quality & Anti mould eyepieces to get the Image of object well defined over the entire field with good contrast rendition and practically free from spurious color effects

Nose Piece

- Low position Inward Facing Quintuple Revolving, ball bearing type with positive click stops
- Nosepiece provided with rubber grip for easy rotation mounted on a precision ball bearing mechanism for smooth and accurate alignment.
- Provided with slot for analyzer or DIC slider.

Objectives: High Contrast Infinity Plan Achromatic OR Semi Apochromatic OR Apochromatic, High Resolution & High Contrast, Infinity Corrected Anti-fungal & Anti-reflection, Uniformly Centred, Interchangeable & Parfocal , Covered with standard cover glass thickness

- ∞ 4X, N.A. 0.11 W.D. 12.10 mm ∞ 10X, N.A. 0.25 W.D. 10.6 mm,
- ∞ 20X, N.A. 0.45 (Spring) W.D. 3.33 mm, ∞ 40X, N.A. 0.66 (Spring) W.D. 0.65 mm,
- ∞ 100X, N.A. 1.25 (Spring, Oil) W.D. 0.24 mm,
- Objectives have Suitable prominent marking for easy identification : Color coded ring, magnification, NA and nature of objective mentioned.
- Provided with Immersion oil.

- ∞ 2 \times , N.A. 0.06, W.D. 7.2mm (Optional)
- ∞ 60 \times , N.A. 0.80(S), W.D. 0.33mm (Optional)
- ∞ 100 \times , N.A. 1.15(S, W), W.D. 0.19mm (Optional)

Condenser

- Centerable Abbe Condenser NA 1.25 (4X-100X) with focusable with rack & pinion movement having Aspheric Lens. Rack & Pinion movement on stainless steel guides.
- Inbuilt Continuously variable Iris Diaphragm with removable frosted white filter, Anti-fungal & Anti-reflection coated.
- Swing Out Condenser, N.A. 0.9/0.13, with iris diaphragm. (Optional)

Mechanical Stage

- Hard core anodized surface / Ergo stage ceramic surface Manual right hand, offering faster, smoother & safer movement & Starchless Double Plate Stage with 2-Slide holder.
- Size 175mm X 145mm, Vernier scale for X/Y Coordinates having Travel Range 78mm X 55mm
- Division 0.1mm & Low drive right side movement
- Wear resistant & Spill resistant, Coaxial stage with right hand low drive control with rotating mechanism and torque adjustment.
- Integrated stage, Stage size: 182 mm×140mm, Travel range: 77mm×52mm Two-slide holder (Optional)

Focusing Control

- Co axial Graduated Coarse and Fine focusing on both sides having gear systems for smooth operations.
- Coarse Stroke: 37.7mm, Moving Range 24mm, Fine Division 0.002mm per rotation
- With Safety Stop Screw (Upper Limit Stop) to prevent contact between objectives and specimen , Tension/Torque Adjustable

Illumination

- High Luminescent White LED 3W/5W Transmitted illumination with variable control & Blue Filter.
- Life time more than 1,00,000 hours.
- Gradual glow of LED to avoid strain in operator eyes.

Electronics : Kohler Universal Input 100-240 V AC, 50/60 Hz.

Standard Accessories : Operating & Service Manual, Dust Cover, Guarantee Card and Thermocole Molded packing & outer corrugated box.

Optional Accessories :

- **Fluorescence Attachment :** Epi fluorescence unit (six-hole disc media which can be fixed with UV/V/B/G and another filters) ,100W mercury lamp or 5W-LED fluorescence lamp.
- **Phase Contrast Unit :** Quintuple turret phase contrast unit with 10X/20X/40X/100X infinity plan phase contrast objective for phase contrast and bright field observation
- **Dark Field Unit :** Dark field condenser (dry) apply to 4×- 40× objective
Dark field condenser (wet) apply to 100× objective
- **Polarizing Attachment :** Analyzer / Polarizer

FEATURES :

- All optical parts including objectives, eyepieces and prisms have anti-reflective coating for anti fungal property.
- All metallic parts are corrosion proof, acid proof and strain proof.
- All controls are in a position for comfortable and prolonged use.
- Color corrected infinity optical system.
- Ergonomic design, low location of control knobs makes user more comfortable.
- Mounting screws on all objectives to be sized to standards of the Royal Microscopical Society for universal compatibility.
- ISO & CE Certified.

OPTIONAL UPGRADATION FEATURES :



Polarizer, Analyzer for simple
Polarizing Unit



Quintuple turret Phase Contrast Unit



Fluorescence Unit
Halogen / LED



Dark field Condenser Dry & Wet