

DESCRIPTION

ACUCAL Digital Biological Microscopes are Compound Research Benchtop Microscopes which is a complete System with illumination system for proper viewing and enumeration of individual cells, even living ones using latest generation Tablet display integrated with microscope.

Compound Microscopes are primarily used to observe and study organism and microorganisms. These Microscopes are usually used to observe transparent and translucent objects, such as animal and plant cells, tissues, bacteria as well as various kinds of tiny particles by means of sectioning.

**APPLICATIONS**

- Suitable for use in educational, academic, agricultural, medical and Scientific Research.
- To Detect acid fast bacilli in sputum smear and other materials for use in Tuberculosis Control Programme.
- Widely used in Hospitals, Physiology 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.
- For optimal visualization of biological specimens like spermatozoa, epithelial cells, hair and fibers etc.

TECHNICAL SPECIFICATION**Main Body & Optical System**

- Upright Modular Frame, Highly Rigid & Robust, Non Hinged Type, Vibration free Aluminium alloy Single die casting, Anti rust heavy metal stand, Anti-Microbial & fungus resistant treated optics for Tropical Use, Ergonomics shaped Sturdy Design & Stable with built in transmitted light LED power supply & Brightness Control, Built in window for easy carriage integrated in the base. All Critical Movements based on Ball Bearing & wire guides thereby ensuring smooth and precise manipulation.
- High Contrast, Universal IOX Infinity Corrected, Strain free Optical System
- Conforming to Pathological IS:4381 latest, Research IS:5204 latest Indian Standards.
- All metallic parts are corrosion-proof, acid proof, and stain-proof.
- A durable textured acid resistant finish.
- All moving parts on Ball bearing Guides to give highly sensitive and smooth working.

Observation Head- Antifungal Coated Prisms (Trinocular)

- Sidentopf Ergonomics Binocular Observation tube Inclined at 30°, Rotatable 360°
- Trinocular Tube & Port for imaging facility Observation tube Inclined at 30°, Rotatable 360°, C mount adapter with camera module.
- Beam Splitting ratio 50%/50% for simultaneous observation through camera & eyepieces.
- LCD Display integrated Camera attached with the microscope on Trinocular Port.

Eyepiece

- Compensating High Eyepoint Wide field CWF 10X (paired) Bright Field Br, Focusable Foc., Field of view number F.N. 20mm, lockable, with eyeguards.
- Diopter adjustment Facility ± 5 on left Eyepiece.
- Inter-pupillary distance adjustment from 48mm to 75mm.
- 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.
- Compensating designed eyepiece provides relief from eye fatigue and renders colour-compensated wide-field image of utmost clarity.

Nose Piece

- Low position Inward Facing Quadruple / Quintuple smooth & jerk free Revolving , precision ball bearing type mechanism with positive click stops
- Nosepiece provided with Knurling rubber grip on metal rim for easy rotation mounted on a precision ball bearing mechanism for smooth and accurate alignment.

Objectives: High Contrast Infinity DIN Size Plan Achromatic, High Resolution & Long Barrel, Infinity color Corrected Anti-fungal treated & Anti-reflection coated, Uniformly parcentred, Interchangeable & Parfocal , Covered with standard cover glass thickness 0.17

- 4 X N.A.: 0.10, WD 20mm
- 40 X N.A.: 0.65, WD 0.6mm spring
- 20 X N.A.: 0.40, WD 5.0mm (Optional)
- Objectives have Suitable prominent marking for easy identification : Color coded ring, magnification, NA and nature of objective mentioned.
- Provided with Immersion oil.
- 10 X N.A.: 0.25, WD 6.5mm
- 100 X Oil N.A.: 1.25, WD 0.2mm spring

Condenser

- Centerable Sub Stage Abbe Condenser NA 1.25 with Aspheric Lens, Rack & pinion focusable.
- Continuously variable Inbuilt Aperture Iris Diaphragm with swing in and out filter holder.
- Suitable for Bright field.

Mechanical Stage

- Low position Coaxial Graduated uniformly horizontal Mechanical Rectangular Stage with fine Vernier Micrometer graduation.
- Mechanical Stage Size 140x140mm, adjustment for slide manipulation allows smooth travel in transverse directions through X/Y 76 x 45 mm or customized
- Maintenance free built in Low position /Low drive right handled movement.
- Ball Bearing Loaded with soft feel drive with Coaxial Control.
- Ceramic coated surface for scratch resistance. Well contoured SS Specimen Slides holder spring clip to prevents damage to slides. can accommodate up to 3"x 2" slides.
- Rackless wire driven Stage for friction and jerk free movement. (Optional).

Focusing Control

- Co axial Coarse and Fine focusing Mechanism on ball drive system for smooth operations on both sides, with maximum height lockable stopper (upper limit focus stopper preventing contact between objective and specimen for slide safety), Ergonomically designed for easy grip with torque adjustment ring.
- Based on a 4- gear reduction system traveling on ball bearing guides with highly sensitivity fine motion with a graduation reading to 0.002mm. The Co-axial system provides highest deg. of working convenience and precision.

Transmitted Kohler Illumination

- Scientific grade natural White LED 3W or Halogen illumination with variable intensity control, on-off switch and LED life of more than 50,000 Hrs.
- Intensity control regulator and well designed collector lamp optics enable homogenous balanced illumination of entire field of view.
- LED Battery Backup Feature with rechargeable batteries & ECO mode to save light and increase light life (Optional)

Electronics :

- Line voltage - Kohler Universal Input 100-240 V AC($\pm 10\%$) i.e. voltage setting of the instrument need not be changed , Line frequency 50 / 60 Hz .

Standard Accessories : : Operating & Service Manual, Dust Cover, Power Cable, Guarantee Card, Micrometer scale, Thermocole Molded packing & outer corrugated box.

Optional Accessories : Quintuple Nosepiece, LED fluorescence, High Resolution Microscopy Camera

EXCLUSIVE SCREEN FEATURES

Display Screen : 10.1 " IPS TFT LCD.

Camera: 12 Megapixels Resolution CMOS Research Grade Digital Camera.

Image Sensor	Sony IMX307(C)
Sensor Size	1/2.8"
Maximum Resolution	1920*1080 (HD Output)
Pixel Size	2.9umx2.9um
Dual USB-C Ports	Port 1: Can connect external USB mouse and USB flash drives Port 2: Can connect external PCs, USB mouse and USB flash drives
SD Card Slot	Supports
Power Button	Short press to power on; long press to power off.
Video Recording	Video Format: (1920*1080@30fps) MP4 Video File

Software

- Preloaded Image & Video Capture and Measurement software.
- Features like clicking pictures, capturing videos, measurements, gain, brightness, auto exposure, colour adjustment, stitching, binning, enhancement and many more.

Operating System (USB Output): Microsoft® Windows® 8/8.1/10/11 (32&64bit)
OSx (Mac OSX)

CONTACT US:

ACUCAL SERVICES
901 A/6, Ashok Vihar, Ambala City-134003
Haryana (India)
Website: www.acucalservices.com

