

Upright Research Biological Microscope Type: ACUBL-U7(B)

DESCRIPTION

ACUCAL Upright Research Biological Microscope Series ACUBL-U7 is designed for a wide range of applications. It features a very high contrast, which ensures an outstanding image quality and resolution. This makes it ideal for demanding and professional applications. The intelligent automatic brightness control and the ergonomic is specially designed for life science research and can meet the needs of various microscopic imaging in the laboratory. Stable and compact mechanical structure, ergonomic design, reasonable layout, comfortable to use, can operate the microscope in a natural posture.



The microscope adopts a modular design and can realize observation methods such as Bright field, Dark field, Fluorescence, Phase Contrast and Polarized light. LIM Option for Illumination Intensity auto adjustment with change of Objective.

Anti-fungus treatment for component durability; an effective anti-fungus treatment is applied to the objectives, eyepieces and observation tube for consistent image clarity and long operating life in hot and humid work conditions

The microscope offers excellent optical performance and ease of use, and is ideal for scientific tasks. It is the perfect laboratory microscope for life sciences, histology, microbiology etc.

TECHNICAL SPECIFICATION**Main Body & Optical System**

- Universal Infinity System color corrected **Chromatic aberration-Free (or Chrome Free) Infinity CFI OPTICAL SYSTEM** can provide high contrast and very flat image with sharp, excellent resolution and high signal-to-noise ratio imaging
- Upright Modular Frame, Highly Rigid, Rugged, single die cast, sturdy ergonomic design, Vibration free Aluminium alloy casting, all critical movements on ball bearing and wire movements, Anti rust heavy metal stand, Anti-Microbial or fungus treated optics, anti-fungal, anti-bacterial coated multi-layered hard coated, Ergonomics shaped Sturdy Design & Stable with Koehler illumination.
- low-hand focus mechanism, low-hand stage and other ergonomic designs to ensure the user can perform microscope operation in the most comfortable situation.
- Conforming to Pathological IS: 4381 latest, Research IS: 5204 latest Indian Standards.

Observation Head : Binocular or Trinocular

- Sidentop (Butterfly Design) Binocular Viewing Head, Inclination 25°/30°, 360° rotatable.
- Sidentopf (Butterfly Design) trinocular head, inclined at 25°/30°, interpupillary 47-78mm, dual visibility adjustable, splitting ratio of eyepiece/camera: 50/50 OR 100/0, 0/100 (For Trinocular)
- Diopter adjustment Facility (± 5) on Eyepieces.
- Inter-pupillary distance adjustment from 47mm to 78mm.
- Tube is secured against dropping by special dovetail. Eyepoint height :adjustable to 2 positions.

Display LCD Screen

- The LCD screen on the front of the microscope displays the use status of the microscope, including magnification, light intensity, standby status, lock for lighting-adjustment, time sleeping etc.
- 5- element display on Front side of the stand and long-life blue LEDs.
- LCD screen quickly confirm the magnification and illumination status. All controls marked with easy-to understand illustrations for intuitive and efficient operation.
- This intensity display is well readable from several meters distance.

Eyepiece

- Compensating CFI Infinity harmonic corrected High Eyepoint (suitable for spectacle wearers) Wide field 10X (paired) Field of View & Field number 20.
- Compensating CFI Infinity corrected Wide field 15X (paired) FOV & Field number 12 (Optional).
- Anti-fungal & Anti-reflection multi-layered coated 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. abrasion free, aplanatic.
- The 20 mm field of view produces an wide-angle image for a more comprehensive observation content and faster sample observation.
- Retrofittable eyepiece pointer facility available (Optional).
- Eyepieces secured with setscrews against unauthorized removal.

Nose Piece

- Coded Inward reverse Facing Quadruple/Quintuple Revolving, ball bearing type with click stops.
- Nosepiece provided with rubber grip for easy rotation mounted on a precision ball bearing mechanism for smooth and accurate alignment.

Objectives: Chromatic Aberration-Free (or Chrome Free) Infinity CFI BE2, Strain Free INFINITY PLAN Achromatic, High Resolution & High Contrast, Anti-fungal & Anti-reflection, Uniformly Centred, Interchangeable & Parfocal, Covered with standard cover glass thickness.

Upright Research Biological Microscope

Type: ACUBL-U7(B)

- ∞ 4x/0.10, W.D.25mm
- ∞ 10x/0.25, W.D. 18.5mm
- ∞ 40x/0.65, W.D.1.5mm
- ∞ 100x/1.25(Oil), W.D.0.14mm
- ∞ 20x/0.45, W.D.3.7mm (Optional)
- ∞ 60x/0.8, W.D.0.25mm (Optional)
- Objectives have Suitable prominent marking for easy identification : Color coded ring, magnification, NA and nature of objective mentioned.Provided with Immersion oil.
- Objectives secured against unauthorized removal.

Condenser :

- Inserted abbe N.A. 0.90/1.25 condenser with aperture diaphragm, which could straightly set the best position of aperture diaphragm i.e. Pre-centered & pre-focused.
- Color coded position guide marking labels of aperture diaphragm is corresponding to objective magnification.
- upgradable to Phase Contrast and Dark-field on site.

Mechanical Stage

- Hard core anodized surface / Ergo stage ceramic surface Manual right hand, Rackless, wire movement & Scratch less Round edge Double Plate Stage, Extremely stable stand to broad base and low center of gravity. The movable claw made of resin for smooth repeated specimen exchanges.
- Double Layer Mechanical Stage Full Size 180x132mm, Moving Range 80x55mm,
- Vernier scale on the two axes, accuracy: 0.1mm
- Right hand control and equipped with single/double specimen holder.
- Wear, scratch resistant, Spill resistant & Water-resistant stage with Ag treatment to avoid any contamination.
- Coaxial stage with right hand low drive control with rotating mechanism and torque adjustment.

Focusing Control

- Co axial Graduated Coarse and Fine focusing Integrated design, on both sides having roller guides on gear systems for smooth operations.
- Coarse Stroke: 37.7mm per rotation, Moving Range 25mm, Fine Focus full turn 0.1mm/0.2mm, fine adjustment 1 μ m/Div
- with an adjustable tightness device or tension/torque adjustment to prevent slipping and Includes stage vertical movement stopper or mechanical upper limit device.

Koehler Illumination

- High luminescent 3W/5W LED, 3000K-6500K or 6V 30W Halogen illumination matrix lens for uniform field illumination to the periphery of the field of view, color temperature or Lumens Change facility and brightness adjustable with field diaphragm.
- Control Knob for adjustment of illumination intensity.
- The brightness of the entire field of view is uniform & Homogeneous, field illumination 22mm
- LED Life time more than 50,000 hours/20 years.
- Li-on rechargeable battery back up (Optional)

Electronics:

- 100-240VAC 0.48A, 50/60Hz external power supply, output :5.0 VDC,3.0A Max.
- The ECO function is able to avoid unnecessary loss of energy. The illumination of the microscope automatically switches off shortly after user step away from their position for some time (the time can be pre-set as user need).

Upright Research Biological Microscope Type: ACUBL-U7(B)

Standard Accessories : Operating & Service Manual, Dust Cover, Guarantee Card, spare fuse, 45mm diameter blue & green filters and Thermocole Molded packing & outer corrugated box.

Optional Accessories : Object marker, Eyepiece pointer , 45mm diameter filter, Objective micrometer.

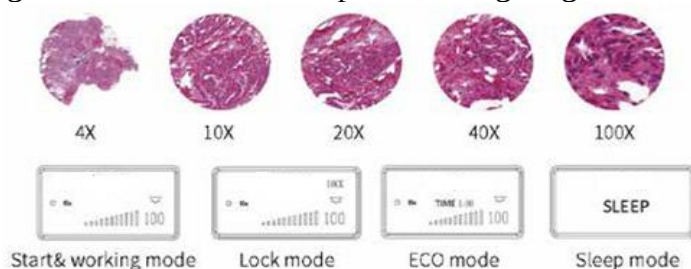
FEATURES :

Carrying Handle and Power :

- Microscope have sturdy carrying handle that is completely integrated into stand for shifting of the microscope with one hand only With power unit integrated into stand by way of a parking position.
- Built-in cord wrap: Stand rear wall is designed with a hub device, which effectively accommodates excessive long power cord and improves cleanliness of workplace.
- Ergonomic shape for convenient, safe carrying.



Microscope use status Display : The LCD screen at the front of the microscope can display the usage status of the microscope, including magnification, light intensity, standby status, etc.



INTELLIGENT OPERATING SYSTEM :

CODED NOSEPIECE

ACUBL-U7 can memorize the illumination brightness for each objective and automatically adjust the light intensity. This improves work efficiency and reduces visual fatigue.

The Liquid Crystal Display (LCD)

The LCD shows the usage status of the microscope, including magnification, light intensity, sleep mode and more.

Low hand operating handle & Low hand focus mechanism

The Platform is ergonomically designed for maximum comfort., and the tension can be adjusted, so that the hand can be placed in a comfortable position and the stage can be moved easily.

Window In the Arm Section : Window in the arm section to observe the specimen with naked eye not only allows the slide to be observed from the back but also see the objective which is currently engaged. The presence of window in the microscope frame play an important role for observation of the specimen with the naked eye from the back as in this observation the microscope frame would need to be rotation by 180 degree. The presence of window can also be used as a carrying handle.