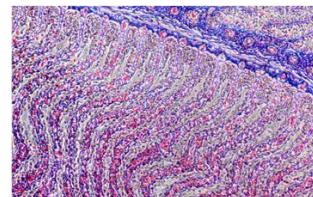


DESCRIPTION

ACUCAL Upright Research Biological Microscope 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.

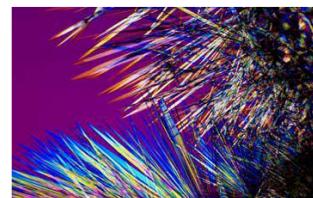
UPGRADABLE OBSERVATION METHODS



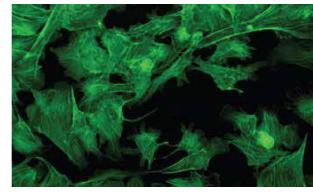
Phase Contrast



Dark Field



Polarisation



Fluorescent

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. It is an ideal tool for experimental teaching, scientific research, and medical inspection.

The microscope offers excellent optical performance and ease of use, and is ideal for scientific tasks. Macro & Micro viewing capabilities: slides, material & dishes. It is the perfect laboratory microscope for life sciences, histology & microbiology .

TECHNICAL SPECIFICATION**Main Body & Optical System**

- NIS60 INFINITY CORRECTED 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, ergonomic design, Vibration free Aluminium alloy casting, Anti rust heavy metal stand, Anti-Microbial treated optics, Ergonomics shaped single mold Sturdy Design & Stable with kohler illumination. Extremely stable stand to broad base and low center of gravity.
- Low-hand focus mechanism, low-hand stage and other ergonomic designs to ensure the user can perform microscope operation in the most comfortable situation.
- All metallic parts are corrosion proof, acid proof, and stain proof.
- Conforming to Pathological IS: 4381 latest, Research IS: 5204 latest Indian Standards.
- Eyepiece , Objectives & Observation Head Tube secured against unauthorized removal.

Observation Head : Binocular or Trinocular

- Sidentopf Ergonomics Binocular Observation tube Inclined at 25°/30°, 360° rotation. Anti Fungal.
- Trinocular Tube & Port for imaging facility Inclined at 25°/30°, C mount adapter with camera module.(Optional)
- Beam Splitting ratio 50%/50% for simultaneous image viewing on eyepiece and computer (Eyepiece: trinocular 100/0 or 0/100 is optional).
- Inter-pupillary distance adjustment from 47mm to 78mm.
- Tube is secured against dropping by special dovetail.

Display

- 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.
- This intensity display is well readable from several meters distance. Controls marked with easy-to-understand illustrations for intuitive operation

Eyepiece

- Compensating Infinity Corrected High Eyepoint Wide field 10X (paired) Field of View & Field number 22 or 23 suitable for spectacle wearers with rubber eyecups.
- Retrofittable eyepiece pointer & Micrometer reticule. (Optional)
- Eyepiece outer mounting barrel diameter or Inner diameter of ocular sleeve (eyetube)30mm.
- 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 The entire field of view produces an wide-angle image for a more comprehensive observation content and faster sample observation.
- Diopter adjustment Facility on both Eyepieces.
- Eyepieces secured with setscrews against unauthorized removal

Nose Piece

- Coded Inward reverse Facing 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(Infinity I Plan Achromatic or Apochromatic) : NIS60 Infinity Objectives for Bright field applications, Flat Field High Resolution & High Contrast, Anti-fungal & Anti-reflection, Uniformly Centred, Interchangeable & Parfocal, Covered with standard cover glass thickness.

- ∞ PL 4x/0.10, W.D.30.7mm ∞ PL 10x /0.25, W.D.18mm
- ∞ PL 40x/0.65, SL W.D.1.5mm ∞ PL 100x/1.25(Oil), SL W.D.0.2mm
- Provided with Immersion oil & unbreakable containers for storing the objective lenses.
- Objectives have Suitable prominent marking for easy identification : Color coded ring, magnification, NA and nature of objective mentioned.
- ∞ PL 2x/0.06, W.D.7.5mm (Optional) ∞ PL 5x/0.12, W.D.30.7mm
- ∞ PL 20x/0.40, W.D.4.8mm (Optional) ∞ PL 100x/1.10(Water), W.D.0.2mm (Optional)
- ∞ PL 100x/1.25(Dry), SL W.D.0.2mm (Optional)
- ∞ PL Semi Apochromatic 40x/0.65, SL W.D.1.5mm (Optional)
- ∞ PL Semi Apochromatic 100x/1.25(Oil), SL W.D.0.2mm (Optional)

Standard Magnification : 40X-1000X

Universal Abbe Condenser :

- Centerable condenser holder for vertical adjustment with iris diaphragm & dove-tail mount.
- Inserted/ Sliding Abbe Condenser NA 0.90/1.25 (4X-100X, 05 Positions) with focusable with rack & pinion movement having Aspheric Lens .
- 5 turret positions BF (4 - 100X), DF, Ph1, Ph2, Ph3 & Slot For Phase Contrast Slide and Dark Field Slide.

Mechanical Stage

- Hard core anodized surface / Ergo stage ceramic surface Manual right hand with anti-fungal treatment, Rackless, wire movement & Scratch less Round edge Double Plate Stage, Uniformly horizontal having Dual slide holder for one-hand operation.
- Double Layer Mechanical Stage Full Size 230x160mm, x-y Moving Range 78x54mm with vernier readings accuracy of 0.1 mm.
- The stage is having ball-bearing arrangement to allow smooth travel in transverse directions
- Wear, scratch resistant & Spill resistant, Coaxial stage with right hand low drive control with rotating mechanism and torque adjustment.
- The stage is provided with spring loaded slide holder for exact positioning of specimen/ slide. With convenient sub-stage vertical coaxial adjustment for slide manipulation.

Focusing Control

- Co axial (Single-axis) Graduated Coarse and Fine focusing having gear systems for smooth operations on both sides for Stage height movement. Vertical movement uses cross roller guide for high accuracy and rigidity.
- Coarse Rotation 37 mm per stroke & fine Rotation 0.2mm per stroke, Moving Range : 28mm, Fine division 0.002mm.
- With Safety Anti Collision Mechanism (Upper Limit Stop) to prevent contact between objectives and specimen , Tension/Torque Adjustable ring on coarse focusing knob.

Illumination

- Transmitted Kohler Illumination Fly-Eye Lens Design, Brightness Adjustable, 3W/5W or 10W S-LED, 3200K/6000Kcolor temperature, Built-in Main Body. Auto LED Off feature with adjustable time delay.

- Halogen Illumination 30W/ 35W (Optional).
- Brightness control with homogenous illumination & provide constant color temperature in all magnification & optimum illumination with change in objective.
- Life time more than 60,000 hours with slow and gradual glow of LED to prevent instant strain in eyes. Light Intensity Management with automatic recording of light intensity level for each objective. Light manager for both Transmitted and reflected light paths.
- Independent and memorized intensity control of LED for each objective.
- Battery Backup : Li-ion Battery, Up to 8 hours (Optional)
- Modular slide-in concept & easy change of illuminators from LED to halogen.
- Specially designed optical system for uniform illumination to the periphery of the field of view

Electronics

- Kohler Universal Input 100-240 V AC, 50/60 Hz.
- Illumination controller has sleep timer that turns the LED illumination off after a set period.
- With Wide-range power pack with country-specific power cable.
- Wide IEC adapter for conversion into a bench top power pack.
- With external unit that is easy to change in case of defect.

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

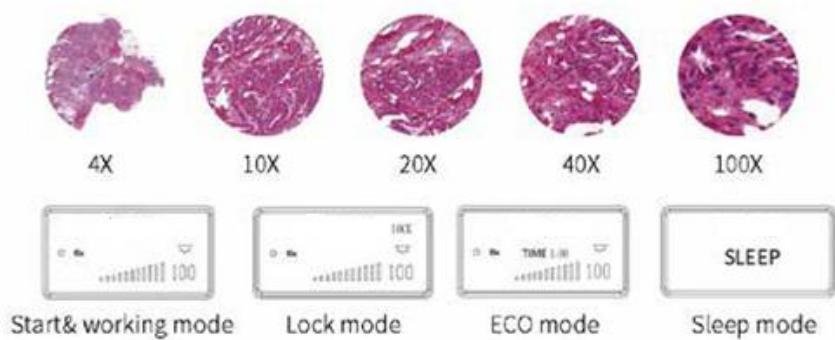
Optional Accessories : LED Fluorescence Attachment with 4 filters, Polarizer & Analyzer, Dark Field, Phase Contrast Unit with Objectives PLAN PH 10X/0.25, W.D.10.2 mm , PLAN PH 20X/0.40, W.D.4.8 mm, PLAN PH 40X/0.65, W.D. 1.5mm, PLAN PH 100X/1.25 Oil, W.D. 0.2mm & centering Telescope , Green Filter

FEATURES :

- **40X long-distance objective lens :** The working distance can be up to 1.5mm. When switching with the 100X objective lens, it can avoid the erosion of the residual cedar oil and water on the 40X objective lens.
- **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.
- With power unit integrated into stand by way of a parking position with cable storage in the stand rear wall .Ergonomic shape for convenient, safe carrying.
- ECO Mode & auto cut off facility.
- All optical parts including objectives, eyepieces and prisms have anti-reflective coating with AG treat – Touch points treated to inhibit the growth of bacteria 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. Precise and ergonomic mechanics.
- **Fly-Eye Lens Design illumination** i.e. 2D array of tiny lenses to spatially transform light from a non uniform to uniform irradiance distribution at an illumination plane.
- Outstanding expandability for all common contrasting techniques, as well as fluorescence.

- **100X Water Immersion Objective (Optional) :** Ordinary 100X oil immersion objective needs to use cedar oil as the observation medium, and needs to be cleaned with ether alcohol or xylene after use, which can easily cause air pollution and improper cleaning. The water immersion objective lens uses water as the medium, which perfectly solves the above problems and reduces the damage to the body and environmental pollution.

PRODUCT FEATURES :



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.

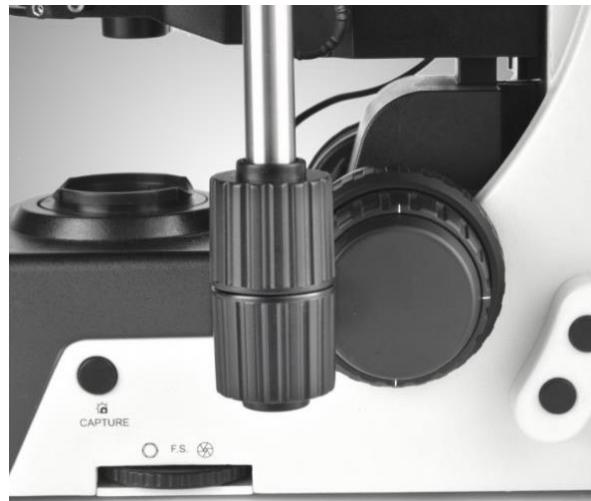
ECO Mode : Automatic switch-off of Illumination if the microscope is not in use for more than 15 minutes – Energy savings

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 on focus knob and the stage can be moved easily.



Automatic Brightness Switching

When the operator changes objectives, the intelligent controller switches the brightness to the last used setting.

MULTIFUNCTIONAL UNIVERSAL CONDENSER

Universal condenser for bright field, dark field and phase contrast:

The observation methods could be quickly switched by switching the slider. There are two phase contrast sliders universal for 10/20/40/100 objectives also, simple and fast to use.



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