

# **DESCRIPTION**

ACUCAL Advance Research Biological Microscope is professional for biomedicine, pathological diagnosis and other science research. Excellent optical performance, Stable and compact mechanical structure, ergonomic design & layout, comfortable to use, can operate the microscope in a natural posture.

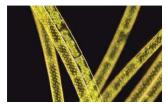
Building Blocks Design for combining multiple functions, fluorescence, phase contrast, polarizing, dark field attachments can be assembled on the basis of bright field observation.



## **CONTRAST TECHNIQUES**



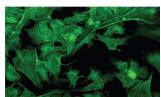
**Phase Contrast** 



Dark Field



**Polarisation** 



Fluorescent

Infinity color corrected optical system, Koehler illumination system presents a clear & bright micro image under each magnification. Widely apply to clinical diagnosis, teaching experiment, pathological test and other mico fields.

It is the perfect laboratory microscope for life sciences, histology, microbiology etc.



# TECHNICAL SPECIFICATION

# Main Body & Optical System

- INFINITY color 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, Vibration free Aluminium alloy casting, Anti rust heavy metal stand, Anti-Microbial treated optics, Ergonomics shaped Sturdy Design & Stable.
- 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.
- Contrast Method Bright Field and upgradeable to Fluorescence, Phase Contrast, DIC, Polarization & Dark Field.

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## **Observation Head-Binocular or Trinocular**

- Sidentopf Binocular Head, Inclined at 25°/30°.
- Sidentopf Trinocular Head, Inclined at 25°/30°, Light Splitting ratio 50%:50% or 0:100%.
- Elevation adjustable Binocular Head, Inclination 30°~60°, (**Optional**)
- Inter-pupillary distance adjustment from 54mm to 75mm.

**Evepiece** 

- Compensating High Eyepoint Wide field 10X (paired) F.O.V. Or F.N. 22.
- Inbuilt pointer facility (Optional)
- Eyepiece outer mounting barrel diameter or Inner diameter of Eyetube 30mm.
- Anti-fungal & Anti-reflection hard coated conforming to IS: 8275/1976 ( latest)
- Harmonic corrected focusable & Diopter adjustment Facility on Both Eyepieces.
- 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.

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## **Nose Piece**

- Low position Inward Facing reverse Quintuple or Sextuple Revolving nosepiece, 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.

Objectives: Hi/L (High/Long)- N-Plan Infinity Achromatic or Semi Plan Apochromatic or Apochromatic , High Resolution & High Contrast, Anti-fungal & Anti-reflection, Uniformly Centred, Interchangeable & Parfocal.

•  $\infty$  4x/0.10, W.D.11.9mm

 $\infty$  10x/0.25, W.D.12.1mm

- $\infty 40x/0.65$ , W.D.0.36mm, Spring  $\infty 100x/1.25$ (Oil), W.D.0.18mm, Spring,
- Objectives have Suitable prominent marking for easy identification : Color coded ring, magnification, NA and nature of objective mentioned
- Provided with Immersion oil.
- $\infty$  2x/0.06, W.D.5.0mm, (Optional)

 $\propto 20x/0.40$ , W.D.1.5mm, (Optional)



### Condenser

- Bright field swing out achromat Condenser NA 0.9/1.25 (2X-100X) with focusable with rack & pinion movement having Aspheric Lens.
- Color coded Turret condenser for Bright field, Phase contrast & Dark Field NA 0.9/1.25 (2X-100X) with focusable with rack & pinion movement having Aspheric Lens. (Optional)

# **Mechanical Stage**

- Hard core anodized surface / Ergo stage ceramic surface Manual right hand & Scratch less Double Plate Stage with 2-Slide holder with Vernier reading.
- Ultrahard ceramic surface Double Layer Mechanical Stage Table Size 175x145mm, Moving Range 76x50mm,
- Right hand control and equipped with Double specimen holder on left side for two slides. Slide holder with one hand operation
- Wear, scratch resistant & Spill resistant, Coaxial stage with right hand low XY drive control with rotating mechanism.

**Focusing Control** 

- Co axial Graduated Coarse and Fine focusing knob on gear systems for smooth operations.
- Coarse Stroke: 30mm, Fine Division 0.002, mm per rotation. 25mm Z travel range.
- Torque adjustment focus knob with adjustable focus stop.

Illumination

- Transmit Kohler Illumination, Brightness Adjustable, V6V30W Halogen, External Lamp House OR Transmit Kohler Illumination, Constant Color Brightness Adjustable, 5W LED, Built-in Main Body
- Brightness control knob.
- Life time more than 50,000 hours.

**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, spare bulb.

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**Optional Accessories :** Polarizer, Analyzer & λ Wave Plate, Dark Field,

Phase Contrast Unit – Centered Telescope Eyepiece, Green Filter & PLAN PHASE Objectives:

- $\infty$  10x/0.25, W.D.10.8mm PHASE
- $\infty$  20x/0.40, W.D.1.5mm, PHASE
- ∞ 40x/0.65, W.D.0.80mm, Spring Loaded, PHASE
- $\infty$  100x/1.25, W.D.0.21mm, Spring Loaded, PHASE

## **Epi Fluorescent Attachment:**

ACSU6LED6FP	3W LED Epi-Fluorescence Attachment, Fly-Eye Lens Illumination,
	With 6 Filter Position, With Attachable UV Shield, B, G, UV excitation Filters
ACSU6MER6FP	100W Mercury Epi-Fluorescence Attachment, Fly-Eye Lens Illumination,
	With 6 Filter Position With Attachable UV Shield, B, G, UV excitation Filters



Fluorescence Filters (Standard)

- B (EX460-490nm, DM500, EM520LP)
- G (EX510-550nm,DM570,EM590LP)
- V (EX400-410nm,DM455,EM460LP)
- UV (EX330-385nm,DM400,EM420LP)

Fluorescence Attachment-Halogen/LED & PLAN FLUOR SEMI APO Objectives:

- $\infty$  4x/0.13, W.D.16.43mm FLUOR
- $\infty$  10x/0.30, W.D.8.13mm FLUOR
- $\infty$  20x/0.50, W.D.2.03mm, FLUOR
- $\infty$  40x/0.75, W.D.0.73mm, Spring Loaded, FLUOR
- $\infty$  100x/1.28, W.D.0.18mm, Spring Loaded, FLUOR

# **PRODUCT FEATURES:**

Easy to adjust, comfortable to use

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### 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.





# Slicing up/down with one hand

The platform bump guide mechanism is convenient for one-handed up sectioning and one-handed down sectioning, freeing hands during microscopic observation and operation, and improving working speed.

# Safe Carrying Design:

The Hole on the back of the body make it safe and easy when carry the whole microscope.



Email: acucalservices@gmail.com

(4)

Phone: +91-9034125607

### **CONTACT US:**

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