

Motic®

MORE THAN MICROSCOPY



**Modern Microscopy
Made Easy:
A Practical Guide with
Motic's PA53 BIO Series**



Why You Have to Choose the PA53 BIO

A Microscope Designed for Modern Demands

In today's fast-paced lab environments, flexibility, accuracy, and connectivity are essential. The Motic PA53 BIO is designed to support a wide range of biological microscopy applications, from clinical diagnostics to advanced academic research. Whether you're conducting routine observations or capturing publication-quality images, the PA53 BIO offers precision without compromise.

The PA53 BIO is Motic's most advanced upright biological microscope, tailored for high-end clinical, research, and teaching labs that demand precision, ergonomics, and modularity. It stands out from other upright microscopes due to:

◆ **Intelligent Illumination (IL)**

Automatically remembers your light intensity per objective and restores it—eliminating frequent manual adjustments and improving workflow efficiency.

◆ **Kohler Illumination Made Easy**

Perfect Köhler setup with built-in centering tools ensures uniform contrast and clarity at all magnifications.

◆ **Expandable Fluorescence System**

The PA53 BIO can be upgraded with fluorescence modules (e.g., FS6) using LUMOS LED light sources for multichannel imaging (DAPI, FITC, TRITC, etc.).

◆ **Research-Grade Optics**

Features Motic's Plan UC Achromat or optional Plan Fluor and Plan Apochromatic objectives—delivering superior image sharpness and flatness across the field.

◆ **Digital-Ready Trinocular Design**

Pair with high-resolution cameras and imaging software for digital analysis, documentation, and remote teaching.

Why You Have to Choose the PA53 BIO

Application Areas

Application	Recommended Feature
Histology & Cytology	Brightfield with Plan UC Achromats
Hematology	100× oil immersion with wide field-of-view
Pathology / IHC	Plan Fluor objectives for sharp immunostaining
FISH / Immunofluorescence	FS6 module with coded 6-position fluorescence turret
Teaching & Documentation	Trinocular head + Moticam camera + software
Digital Slide Scanning	Motorized stage and sCMOS camera (PA53 SCAN)

Configurations Overview

◆ PA53 BIO (Base Model)

- Best for: Routine brightfield in clinical or teaching labs
- Includes: Plan UC Achromat objectives (4×–100×), LED illumination, IL system
- Upgrade options: Phase contrast, darkfield, polarization



◆ PA53 BIO FS6 (Fluorescence Version)

- Best for: Multichannel fluorescence and advanced pathology
- Features: 6-position coded fluorescence turret, LUMOS LEDs, Plan Fluor or Plan APO optics



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Setup & Operation Tips

◆ Köhler Illumination

Always adjust field/aperture diaphragm for crisp contrast.

◆ Use IL Mode

Set light memory for each objective to streamline imaging.

◆ Clean Objectives Regularly

Use lens paper and proper immersion oil for 100×.

◆ Optimize Fluorescence Imaging

Align excitation filters and use anti-fade mounting media.

◆ Digital Imaging

Use Moticam S6 + Motic Images Plus or Image-Pro for capture, measurement, and analysis.

Compatible Add-Ons

- Moticam S6 or S12 Cameras
- C-mount adapters (0.35× to 0.65×)
- Image-Pro Software (for life science analysis)
- Phase Contrast Slider Kit
- FS6 Fluorescence Upgrade Kit



PA53 BIO Technical Specifications

Model	PA53 BIO (Basic configuration)	PA53 BIO (High-end configuration)	PA53 BIO FS6	PA53 BIO FS6 EDF
SKU	1100104600941	1100104600947	1100104600934	1100104601152
Optical system	Colour Corrected Infinity Optical System (CCIS®)			
Observation tube	30° Trinocular head, Siedentopf type (100:0/20:80/0:100)			
Eyepieces	WF10X/23mm with +/- 4 diopter adjustment	WF10X/25mm with +/- 4 diopter adjustment	WF10X/23mm with +/- 4 diopter adjustment	WF10X/23mm with +/- 4 diopter adjustment
Nosepiece	Reserved quintuple, coded			
Objective classification	CCIS® UC Plan Achromatic	CCIS® HPlan S-APO (High Fluorite Class)		
Objectives	4X/0.10 (WD 30.5mm), 10X/0.25 (WD 17.4mm), 40X/0.65/S (WD 0.6mm), 100X/1.25/S-Oil (WD 0.16mm)	4X/0.13 (WD 17.3mm), 10X/0.3 (WD 11.7mm), 40X/0.75/S (WD 0.7mm), 100X/1.3/S-Oil (WD 0.1mm)	4X/0.13 (WD 17.3mm), 10X/0.3 (WD 11.7mm), 20X/0.5 (WD 2.2mm), 40X/0.75/S (WD 0.7mm), 100X/1.3/S-Oil (WD 0.1mm)	
Stage	Mechanical stage with built-in low position rackless coaxial stage control and sample holder (220x170mm)			
Condenser	Focusable and centerable Abbe condenser N.A. 0.90/1.25 with slot for contrast sliders			
Diaphragm	Iris diaphragm			
Focus mechanism	Coaxial coarse and fine focusing system with tension adjustment			
Filter	ND6, ND25, LBD			
Filter holder	Integrated filters			
Transmitted Illumination	Kohler Quartz Halogen 12V/100W with intensity control			
Transformer	Internal			
Power supply	110-240V			
Accessories included	Dust cover, power cord, Allen key, immersion oil (5ml)		Dust cover, power cord, Allen key, immersion oil (5ml), 2 empty filter cubes, UV blocking tube, UV protective shield	
Dimensions (LxWxH)	576x247x457mm		648x247x513mm	
Net weight	19.2 kg	19.3 kg	24.2 kg	29.7 kg

Why are scientists switching to Motic's PA53 BIO?

◆ Tired of overpriced microscope systems?

Get affordable innovation without compromising performance.

◆ Need flexibility in your research setup?

PA53 BIO supports modular upgrades and multiple imaging techniques

◆ Frustrated by slow service from premium brands?

Motic offers fast, responsive global support.

◆ Still using outdated systems that can't keep up?

PA53 BIO is built for the cloud, smart imaging, and digital collaboration.

See the PA53 BIO in action

[Free Demo](#)[Request a Quote](#)[Contact Us](#)

San Antonio

6508 Tri-County Pkwy, Schertz,
TX 78154, United States

Vancouver

130-4611 Viking Way, Richmond,
B.C., V6V 2K9, Canada

Contact

Tel: 1-877-977-4717

Email: sales@motic-america.com

www.moticmicroscopes.com

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