

## All-in-One Fluorescence Microscope



The BZ-9000 (BIOREVO) represents a revolutionary approach to conventional fluorescence microscopy. This fully-integrated system is capable of performing fluorescence, bright field and phase-contrast imaging on a variety of specimen holders (slides, dishes, well-plates, etc.) – without the need for a darkroom. By integrating a fully motorized, six-objective lens revolver, motorized stage, electronically-controlled filter turret and built-in sample enclosure, the BZ-9000 is able to reduce the amount of tabletop space required for a conventional fluorescence microscope by over 40%.

Conventional fluorescence microscopes can generally be difficult and tedious to operate, requiring multiple steps when trying to switch between fluorescent channels when overlaying images from several fluorescent filters. The BIOREVO is able to switch between up to four different fluorescent channels with just a click of the mouse, automatically adjusting the filter, exposure time, etc. This simplified process is able to dramatically reduce the amount of time needed to perform research and analysis, while preserving the longevity of the specimen.

While conventional systems require a user to manually switch between monochrome and color imaging modes (usually with two separate cameras), the BZ-9000 incorporates a single high-resolution, high-sensitivity 12-bit monochrome camera that can easily switch to color imaging with the click of a mouse. A unique navigation system allows users to easily locate areas of interest on a specimen when at high-magnification by using a low-magnification image for reference.

The BZ-9000 is also able to overcome limitations associated with traditional fluorescence microscopes by incorporating a Z-stack and image stitching function. Users can stitch up to 1,200 images in XY directions to capture a large field-of-view, even when at high-magnification. A Quick Full Focus and Z-stack function captures fully-focused images in a matter of seconds.

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The BIOREVO also provides options for quantitative analysis, including standard two-dimensional measurements, cell counting and brightness analysis. A Real-Time 3D Module is able to generate a three-dimensional image of a fluorescent specimen, eliminating some of the reliance on laser confocal systems.

Since the unit has a built-in sample enclosure, an option is also available for conducting live-cell and time-lapse imaging with the use of an incubation chamber.

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