

Andor BC43 Spinning disk confocal

Location: HSC (Building 586) Room 59

The BC43 spinning-disk benchtop microscope enables high-speed, high-quality image acquisition and supports imaging of thick 3D specimens, as well as imaging in confocal and wide-field modes. The BC43 comes bundled with “Fusion Benchtop” software, which facilitates multimodal imaging, and “Imaris,” the market-leading image analysis software.

Main features of System:

- Excitation lines: 405 nm, 488 nm, 561 nm, 638 nm
- Equipped with brightfield and differential interference contrast (DIC) transmitted white light illumination
- 4.1-megapixel sCMOS camera with 2048 × 2000 pixel resolution (6.5 µm pixel size, 16-bit; max. quantum efficiency up to 82%; 18.4 mm field of view)
- Filter wheel for epifluorescence observation fitted with filter cube sets for blue (445/20 nm), green (529/24 nm), orange (595/31 nm), and red (708/75 nm)
- Quad-band emission filter for time-lapse imaging (445/521/594/698 nm)
- Motorized XYZ stage with multi-speed control (compatible with various stage inserts such as glass slides, dishes, and multi-well plates)
- Fusion Benchtop software: Z-stack, time-lapse, stitching/tiling, XYZ position
- High-speed, high-resolution scanner for fixed and live-cell imaging
- Equipped with a full incubation system (temperature, CO2 concentration, and humidity control).

Suggested Applications:

- Thick 3D Imaging.
- Fixed and live cell imaging.
- Large tissue imaging.
- Tiled mosaics.
- Time-lapse imaging

Light Sources:

The Andor BC43 is equipped with four solid-state laser lines (405 nm, 488 nm, 561 nm, and 638 nm) for fluorescence excitation and a broad-spectrum white light LED for transmitted brightfield/DIC imaging.

Cube	Excitation/Emission (nm)
Blue	445/20
Green	529/24
Orange	595/31
Red	708/75
Quad-band emission filters	445/521/594/698 Em
Transmitted light	

Objectives:

Objective type	Magnification Aperture	Numerical Aperture	Immersion	Correction ring	Phase contrast	Coverglass	Free working distance (mm)
Plan Achro	2x	0.06	DRY	-		-	7.5
Plan Apo LD	20x	0.8	DRY	-	DIC	0.17	0.8
Plan Apo LS	40x	1.25	Silicon	CORR	DIC	0.13–0.21	0.3
Plan Apo LD	60x	1.42	OIL	-	DIC	0.17	0.15
Plan Apo LD	100x	1.45	OIL	-	DIC	0.17	0.13