

Zeiss 700 Confocal Microscope

Location: HSC (Building 586) Room 56



The LSM 700 laser scanning confocal microscope is the seventh generation of confocal microscopes from Carl Zeiss. The LSM 700 system uses a Zeiss AXIO Observer Z1 inverted microscope with transmitted illumination (HAL 100) and a laser illumination source. The LSM 700 system features easy operation, excellent sensitivity, and a design that can handle complex tasks.

Main features of Zeiss 700 System:

- Two Photo Multipliers Tube (PMT1 and PMT2) detector unit enables simultaneous 12 bit (4096 intensity levels) acquisition of up to 4 fluorescent channels.
- Confocal scan head unit can provide high-resolution images up to 2048 x 2048 pixels in size.
- Fully automated Zeiss Observer Z1 inverted microscope.
- LED Epifluorescence and HAL100 Brightfield illumination lamps for rapid sample identification and focusing through the eyepiece.
- Filter wheel used for epifluorescence viewing of the sample is currently outfitted with DAPI , FITC (green), and Rhodamine (red) filter cube sets.
- Motorized XY stage with a variety of stage inserts available (slides, dishes, multiwall plates, etc..).
- Zeiss Zen Black multi-platform acquisition software.
- Measurements include: Z stack, Time lapse, Stitching/Tiling, XY positions, and Spectra unmixing

Suggested Applications:

- 3D Imaging.
- Multichannel fluorescence fixed slide imaging.
- Tiled mosaics.

Imaging lasers:

Wavelength (nm)	Type	Power	Manufacturer
405	diode	5 mW	Lasos Lasertechnik GmbH
488	diode	10 mW	Lasos Lasertechnik GmbH
555	diode	10 mW	Lasos Lasertechnik GmbH
639	diode	5 mW	Lasos Lasertechnik GmbH

Objectives:

Objective	Magnification	Immersion	Numerical Aperture	Correction Ring	Coverglass (mm)	Working Distance (mm)
EC Plan Neofluar M27	10X	Air	0.3		0.17	5.2
Pan Apo M27	20X	Air	0.8		0.17	0.55
LD C-Apo Korr M27	40X	Water	1.1	Corr	0.14-0.19	0.62
Pan Apo DIC M27	63X	Oil	1.4		0.17	0.19

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