

Zeiss LSM 700



Installed: July 2014. Inverse point scanning confocal microscope with 2 PMT channels. Variable dichroic crystal configuration also allowing (slow) spectral imaging), transmitted light PMT and motorized stage. Widefield illumination: halogen (transmitted) and CoolLED pE-2 LED (reflected). ZEN 2012 acquisition software including "tiling & stitching" macro for larger overview imaging. Environmental control (stage-based) possible upon request.

(Last update: Oct. 2021)

Stand

Zeiss Axio Observer.Z1, inverse, fully motorized

Objectives

- EC Plan-Neofluar 10x/0.3
- Plan-Apochromat 20x/0.8
- LD LCI Plan-Apochromat 25x/0.8 Imm Corr (oil, glycerol, water)
- Plan-Apochromat 40x/1.3 Oil DIC
- Plan-Apochromat 63x/1.4 Oil DIC
- LD C-Apochromat 40x/1.1 W Corr (working distance 0.62 mm)

Lasers

- 405 nm (5 mW)
- 488 nm (10 mW)
- 555 nm (10 mW)
- 639 nm (5 mW)

All lasers are solid state laser diodes

Widefield Illumination

- CoolLED, pE-2 (365/470/520-650 nm)
- Halogen lamp 100 W

Filters

Widefield illumination/viewing (excitation, beam splitter, emission):

- Zeiss Filter Set 96HE (DAPI BP, BP 390/40, FT 420, BP 450/40)
- Zeiss Filter Set 01 (DAPI LP, BP 365/12, FT 395, LP397)
- Zeiss Filter Set 09 (FITC LP, BP 470/40, FT 510, LP 515)
- Zeiss Filter Set 15 (TRITC LP, BP 546/12, FT 580, LP 590)
- Zeiss Filter Set 38HE (GFP, BP 470/40, FT 495, BP 525/50)

Confocal detection – emission filters

Channel 1

- SP 490
- SP 555
- SP 640
- BP 490-555
- BP 420-480

Channel 2

- LP 490
- LP 560
- LP 640
- BP 490-635

Detection Systems

- CH1/2: single-channel PMTs (scan resolution up to 2048 x 2048)
- CHD: T-PMT (transmitted light)

Stage/Inserts

- Märzhäuser Scanning Stage Step D130x100; hold slides, dishes and plates

Software

- Zeiss ZEN 2012 SP5 running on Windows 10 (64-bit)
- Tiles & positions package for stitching and multi-positioning options

Environmental Control

- Optional: PeCon heating insert P, T-controlled via T-37-2 controller