

## Confocal 5 - SP5 system (August 2020)

### Technical Specifications

- Leica SP5-AOBS confocal laser scanning microscope attached to a Leica DMI 6000 inverted epifluorescence microscope.
- Spectrophometers allow customised detection of emitted light, spectral scanning etc.
- Equipped with 50 mW 405 nm diode laser, 100 mW Ar laser (458, 476, 488, 496, 514 nm lines), 10 mW solid state yellow laser (561 nm), 2mW Orange HeNe (594 nm), 10 mW Red He/Ne (633 nm).
- AOTFs for all laser lines allow rapid attenuation, ROI scanning and localised photo-bleaching.
- AOBS (Acousto-Optical Beam Splitter) automatically adjusts to selectively reflect each excitation line and allows optimisation of detection close to (and overlapping) excitation lines.
- Suitable for a wide range of blue, green, red and far-red fluorophores.
- Three PMT detection channels for fluorescence/reflectance.
- Transmitted light detector for phase contrast or DIC.
- Environmental chamber (Life Imaging Services) for temperature and CO<sub>2</sub> enrichment.
- Z-Galvo for faster and more accurate focusing and enables “galvo flow” acquisition.
- Märzhäuser scanning stage - enables multi-position image acquisition.

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### Filters for visual inspection

Cube	Excitation range	Fluorophore (examples)	Excitation filter	Dichroic mirror	Emission filter
A	UV	DAPI, Hoescht	BP 340-380	RKP 400	LP 425
I3	Blue	FITC GFP	BP 450-490	RKP 510	LP 515
N2.1	Green	Rhodamine, TRITC	BP 515-560	RKP 580	LP 590

### Lenses

Lens	Dry/Oil	Phase contrast	DIC	Working distance (mm)	Numerical aperture	Features	Serial number	Image size at 1x zoom in microns
10x HCX PL Fluotar	Dry	Yes	No	11	0.3		506507	1550
20x HCX PL APO lambda blue uv	Oil or glycerol	No	No	0.26	0.7	Coverglass thickness correction	506191	775
40x HCX PL APO	Oil	Yes	No	0.1	1.25		506252	387.5
63x HCX PL APO lambda blue uv	Oil	No	Yes	0.1	1.4	Iris diaphragm	506192	246
100x HCX PL APO	Oil	Yes	No	0.09	1.4		506042	155