

Microscope 5

Room: E1035

Inverted manual microscope (Leica DM IRB) dedicated to bright field, phase contrast (from 10x to 63x), LMC and fluorescence imaging of living or fixed samples. Equipped with a Photometrics CoolSnap CF Color camera. **NOT suitable for near infrared emitting fluorochromes.**

Illumination	Wavelength range (nm)	Contrast methods
Arc lamp 120W	UV - IR	Fluorescence
Halogen lamp 100W	White	Bright field, Phase contrast, Dark field

Fluorescence cubes : small	Excitation (nm)	Beam-splitter(nm)	Emission (nm)	Application
A4	BP 360/40	400	BP 470/40	DAPI, Hoechst
L5	BP 480/40	505	BP 527/30	FITC, Alexa488, GFP
Y3	BP 545/40	565	BP 610/75	Cy3, Alexa555
On demand :				
A	BP 360/20	400	LP 425	DAPI, Hoechst
B/G/R	BP 420/30 BP 495/15 BP 570/20	415 510 590	BP 465/20 BP 530/30 BP 640/40	DAPI or AMCA FITC and Texas Red
BFP/GFP	BP 385/15 BP 485/20	420 510	BP 460/20 BP 437/45	BFP and GFP
CFP	BP 436/20	455	BP 480/40	CFP
CFP/YFP	BP 436/12 BP 500/20	445 515	BP 467/37 BP 545/45	CFP and YFP
CFP/YFP/DsRed Not found in Leica data base	BP 436/12 BP 500/20	445 515	BP 467/37 BP 545/45	CFP YFP and DsRed
GFP	BP 470/40	500	BP 525/50	GFP
YFP	BP 500/20	515	BP 535/30	YFP
Red GFP	Not available	Not available	Not available	RFP, DsRed
Ds Red (ET)	BP 546/11	560	BP 605/75	DsRed, Ethidium bromide, Propidium iodide
N2.1	BP 515 - 560	580	LP 590	Alexa594, TRITC, Rhodamin B
TX2	BP 560/40	595	BP 645/75	Alexa 568, Alexa 894, Texas Red
Y5	BP 620/60	660	BP 700/75	Cy5
I3	BP 450 - 490	510	LP 515	FITC, GFP, Alexa 488, ...

Default objectives	Magnification	Numerical Aperture	Working Distance (mm)	Immersion Medium	Coverslip
N PLAN 2.5x/0.07	2.5x	0.07	11.2	Air	-
HC PL FLUOTAR 5x/0.15	5x	0.15	12.0	Air	-

N PLAN 10x/0.25 PH1	10x	0.25	17.6	Air	-
N PLAN L 20x/0.40 CORR PH1	20x	0.40	3.2-1.9	Air	0-2
N PLAN L 40x/0.55 CORR PH2	40x	0.55	3.3-1.9	Air	0-2
On demand :					
PL FLUOTAR L 63x/0.70 CORR PH2	63x	0.70	2.6-1.8	Air	0.1-1.3
C PLAN 10x/0.22 LMC	10x	0.25	7.8	Air	-
N PLAN L 20x/0.40 CORR LMC	20x	0.40	3.2-1.9	Air	0-2
N PLAN L 40x/0.55 CORR LMC	40x	0.55	3.3-1.9	Air	0-2
PL FLUOTAR L 63x/0.70 COOR LMC	63x	0.70	2.6-1.8	Air	0.1-1.3

Default additional magnifier - reducer	0.5x
On demand :	0.33x, 0.63x, ... disparus

Zoom	None
Range	-

Default Camera	CoolSNAP CF Color (Photometrics)
Digitizer	12-bit
Resolution	1392 x 1040 pixels
Pixel size	4.65 x 4.65 μ m
Particularity	IR blocking window (700 nm cutoff)
Wavelength-range with Quantum Efficiency > 15%	350-700 nm
Image type	RGB

Acquisition Softwares	Hardware control	Suitable cameras	Particularities	Binning
CoolSnap	No	Photometrics Color-mosaic cameras	24-bit or 48-bit RGB Tiff	No
RSImage	No	Photometrics Monochrome and Color-mosaic cameras (bugs)		Yes
Micro-Manager Needs a monochrome camera for multi-channel fluorescence acquisition.	Yes (no hardware to be controlled)	Wide choice of monochrome cameras	Multi Dimensional Acquisition (here limited to manual multi-channel acquisition)	2, 4, 8

Visualization, analyzis and processing softwares	
IrfanView	
ImageJ	
Fiji	

Operating system	Windows 7 32-bit
CPU	2x AMD Athlon 64x2 Dual Core Processor 3800+
RAM	2 GB
Graphic Card	128MB ATI Radeon X3100 + 128MB ATI Radeon X3100 Secondary

