151203

Time-lapse 2

Room: E1037

Inverted motorized microscope (Leica DM IRE 2) dedicated to bright field, phase contrast (from 10x to 63x), LMC and fluorescence imaging of living or fixed samples. Equipped with a Photometrics CoolSnap FX Monochrome camera.

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 :	See : LeicaCubes_oldModel(small).docx			
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 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

Microscope built-in additional magnifier - reducer	1.5x

Default additional magnifier - reducer	1x
On demand :	0.5x (0.33x, 0.63x, … disparus)

Zoom	None

Default Camera	CoolSNAP FX (Photometrics)
Digitizer	12-bit
Resolution	1300 x 1030 pixels
Pixel size	6.7 x 6.7 µm
Wavelength-range with Quantum Efficiency > 40%	350-540 nm
Wavelength-range with Quantum Efficiency > 15%	300-730 nm
Image type	16-bit Gray-level

Sample holders	6, 12 and 24-well Costar ™ or compatible culture plates

Environmental control	Humidity	Temperature	CO^2
Range	H^2O saturated atmosphere (at Room T°C)	ambient to 60°C	0 to 10%

Acquisition Software	Controlled hardware	Binning
Metamorph 7.7.10	Photometrics camera, Filter-cube wheel, Leica shutter, Detection-port switcher, Transmitted-light lamp voltage, Z-motor, XY-stage (Merzhaeuser).	2, 3, 4, 8

Visualization, analysis and processing softwares	Metamorph, ImageJ, Fiji, IrfanView

Operating system	Windows 7 (32 bit) SP1
CPU	Intel ® Core ™ 2 CPU 6700 @ 2.66 GHz
RAM	4 GB
Graphic Card	NVIDIA Quadro FX 3500