Nikon Eclipse Ti-2

Objective Properties

Objective	NA	WD (mm)	*Resolution (µm) Episcopic	*Resolution (µm) Diascopic	Depth of Field (mm)	Brightness	Pixel Size (µm/pixel) DS-Ri2	Pixel Size (µm/pixel) Hamamatsu
4x PlanApo	0.20		1.53	1.53	25.0	1.0	1.833	1.625
10x PlanFluor (DIC/Phase)	0.30	15.20	1.02	1.02	11.1	0.8	0.733	0.650
20x PlanApo (DIC)	0.75	1.00	0.41	0.47	1.8	7.9	0.368	0.324
40x PlanFluor, oil (DIC)	1.30	0.2	0.23	0.33	0.9	17.9	0.183	0.163
60x PlanApo, oil (DIC)	1.40	0.13	0.22	0.31	0.8	10.7	0.123	0.108
100x PlanApo, oil (DIC)	1.45	0.13	0.21	0.30	0.7	4.4	0.073	0.065
60x PlanApo IR, water (DIC)	1.27	0.18-0.16	0.24	0.34	0.8	7.2	0.123	0.108

NA (numerical aperture): affects nearly everything about your image; report this along with the magnification when you publish
WD (working distance): how deep you can image; e.g. to image all the way through a 0.2 mm object, you need a WD > 0.2
Resolution*: sizes smaller than this cannot be measured; objects closer than this distance cannot be distinguished
Episcopic = for fluorescence; **Diascopic** = for transmitted light (brightfield, DIC, phase contrast)
Depth of Field: the thickness of the sample that appears in focus at the same time
Brightness: relative measure of how much light is collected by the objective (for fluorescence only)
Pixel size: the size of each pixel in microns; assumes no camera binning; divide by 1.5 if the 1.5x insert is engaged

Fluorescence Filter Properties

Fluor. Filter Set/Cube	"color"	Ex. (nm)	Em. (nm)	Example Fluorophores
#2 "DAPI"	blue	381-403	417-477	DAPI, Hoechst
#3 "GFP"	green	446-486	500-550	Fluorescein, GFP, Alexa Fluor 488
#4 "TRITC"	red	542-566	582-636	Rhodamine, propidium iodide, Alexa Fluor 546, Cy3
#5 "mCherry"	red LP	542-582	604-678	mCherry (don't use if sample has a far red dye)
#6 "Cy5"	far red	593-643	663-733	Alexa 647, Cy5 (infrared emission; not visible to eyes - only camera)

(Filter position #1 contains the DIC analyzer.)