

Objectives on the Nikon - Properties

Magnification	N.A.	Resolution (μm)	Z depth (μm)	Brightness
4	0.2	1.5	25	1
10	0.45	0.7	4.9	4.1
20	0.75	0.4	1.8	7.9
40	0.95	0.3	1.1	5.1
60	1.4	0.2	0.8	10.7
100	1.4	0.2	0.8	3.8

Resolution: Closest distance between two objects that can be separated

Z depth: How thick each z-slice is (changes slightly for different wavelengths)
(calculated for 500nm light)

Brightness: For fluorescence, 60x is best, followed by 20x

Zeiss Objectives - Properties

Magnification	N.A.	Resolution (μm)	depth of field (μm)	Brightness
4 x	0.1	3.1	100.0	0.1
10 x	0.3	1.0	11.1	0.8
20 x	0.5	0.6	4.0	1.6
40 x	0.85	0.4	1.4	3.3
100 x	1.3	0.2	0.9	2.9

Resolution: Closest distance between two objects that can be separated

Depth of field: What thickness of the specimen is in focus at a given point

Brightness: For fluorescence, 40x is best, followed by 100x