

Zeiss Axioscope.A1 Specs

Objective Properties

Objective	NA	WD (mm)	Resolution (μm)	Depth of Field (mm)	Brightness	Pixel Size ($\mu\text{m}/\text{pixel}$)
5x A-Plan	0.12	10.1	2.54	69.4	0.1	2.040
10x A-Plan	0.25	4.5	1.22	16.0	0.4	1.020
20x ECPlan-Neofluar	0.50	2.0	0.60	4.0	1.6	0.510
40x ECPlan-Neofluar	0.75	0.7	0.41	1.8	2.0	0.255
63x ECPlan-Neofluar	1.25	0.1	0.24	1.0	6.2	0.163

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: the smallest distance or size that can be measured; e.g. you can't measure the size of objects < 200 nm

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

Pixel size: the size of each pixel in microns; assumes no camera binning or additional magnifying lenses

Fluorescence Filter Properties

Fluor. Filter Set	"color"	Ex. (nm)	Em. (nm)	Example Fluorophores
DAPI	blue	340-370	420-470	DAPI, Hoechst
GFP	green	450-490	500-550	Fluorescein, GFP
Cy3	red	530-555	575-645	Rhodamine, propidium iodide, DsRed