

# Zeiss Inverted Microscope

**Zeiss Axio Observer 7**



**Tool Type:** "Inverted Microscope"

**Location:** "Elings Hall 2411"

Supervisor	Tool Lead
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**Description:** "Inverted Microscope"

**Manufacturer:** "Zeiss"

## About

Inverted microscope Axio Observer 7 ACR for transmitted-light brightfield LED, phase contrast, differential interference contrast, fluorescence with Colibri 7; equipped with ACR function, Scanning Stage STEP and Docking station

## Detailed Specifications

### Objectives

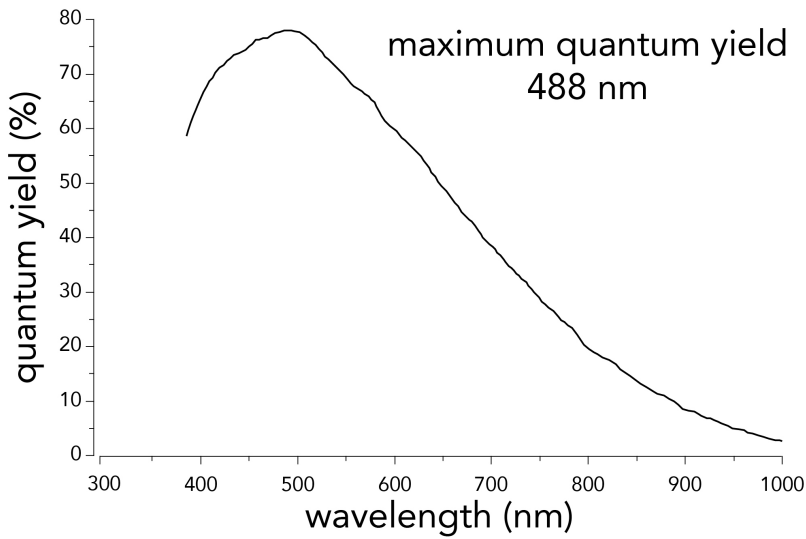
Objective	Magnification	Imm	NA	Ph	FWD	Resolution (µm/px)	Field of View (µm)
10X EC Plan-Neofluar Ph1-Air	10	AIR	0.3	1	5.2	0.586	1,125 x 713
20X Plan-Apochromat M27	20X	AIR	0.8	1	0.55	0.293	563 x 356
20X LD-Neofluar Korr Ph2 M27 Air	20X	AIR	0.4	2	7.4 – 8.4	0.293	562 x 356
40X LD Plan-Neofluar Korr Ph2 M27-Air	40X	AIR	0.6	2	3.3 – 2.5	0.1465	281 x 178
40X LD LCI Plan-Apochromat Imm Korr DIC M27 Water	40X	WATER	1.2	2	0.41	0.1465	281 x 178
63X Plan-Apochromat Oil DIC M27 Oil	63X	OIL	1.4	2	0.19	0.093	178 x 113

FWD: Free Working Distance  
 NA: Numerical Aperature  
 Imm: Immersion media  
 Ph: Phase contrast

### Filter Sets

Position	Filter Set	Exitation (nm)	Emmision (nm)	Beamsplitter
1	38 HE GFP	BP 470/40	BP 525/50	FT 495
2	43 HE DsRED	BP 550/25	BP 605/70	FT 570
3	50 CY5	BP 640/30	BP 690/50	FT 660
4	90 HE D/G/C3	BP 385/30 BP 469/38 BP 555/30 BP 631/33	QBP 425/30 QBP 514/30 QBP 592/25 QBP 709/100	QBS 405 QBS 493 QBS 575 QBS 653
5	96 HE BFP	BP 390	BP 450	FT 420
6	POL TL			

### Camera Sensitivity to different wavelengths



### Filter Set Specs

[Position 1 GFP pos-1-38hegfp.jpg](#)

Position 2 DsRed

pos-2-43hedsred.jpg

Position 3 CY5

pos-3-50cy5.jpg

Position 4 DAPI FITC TRITC

pos-4-90he\_d\_g\_c3.jpg

Position 5 96 HE

pos-5-96hebf.jpg

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## Plate Layout Template

[96 well plate experiment layout](#)

96\_well\_plate\_layout.pdf

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## Safety Concerns

Read the manufactures manual before first use. If the Zeiss inverted microscope acts in a way that is not described by the manual, turn off the printer and contact Zeiss.

- Never place your finger near the machine until all parts have stopped moving. Moving parts can cause serious injury
  - Never clean or service the microscope while it is on
  - The microscope uses UV light to excite some dyes. Never look directly at LED light nor expose skin. Serious injury may result from exposure
  - Disassembling the microscope may cause an electric shock or damage to the instrument. Do not disassemble any parts of the microscope not mentioned in the instruction manual. In case of a problem with the microscope
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## Operating Procedures

[Well Plate Calibration](#)

multiwellplatecalibration.pdf

[96 well plate experiment](#)

96-wellexperiment.pdf

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## Reference Documentation

zen\_2\_blue\_edition\_-\_software\_guide.pdf

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## Training Documentation

From:  
<https://bpm-wiki.cnsi.ucsb.edu/dokuwiki/> - NSF BioPACIFIC MIP Wiki

Permanent link:  
[https://bpm-wiki.cnsi.ucsb.edu/dokuwiki/doku.php?id=inverted\\_microscope&rev=1629830541](https://bpm-wiki.cnsi.ucsb.edu/dokuwiki/doku.php?id=inverted_microscope&rev=1629830541)

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