Bermuda Institute of Ocean Sciences | Julie Ann Wrigley Global Futures Laboratory, Arizona State University

Microscopy and Image Analysis Facility

Microscope: Olympus IX-83 Inverted Epifluorescent Microscope
Camera: Hamamatsu ORCA-Flash Digital CMOS camera
Software: CellSens Dimension imaging software.

Filter Cube	Cat No.	Wavelength	Excitation	Emission	Stains
ET-EGFP/ FITC/CY2	49002-BX3	Narrow Blue	470/40X	525/50M	AO, FITC, SYBR Green/ Alexa 488, Ca+, Immunoassays
ET-CY3/ TRITC	49004-BX3	Narrow Green	545/25X	605/70M	Autoflourescence; Lipofusion, FRET, Tyramide, Propidium Iodide
UV WIDE	U-FUW	Ultra Violet	340-390/ 420/420LP		DAPI; Oxidative Damage
Superwide Blue	U-MSWB2	Super Wide Blue	EX420-80	EM515	ELF; Plankton Pigments
ET-CY5	41008 HQ	Near Infrared	620/60	700/75	Alexa 647; Apoptosis; Immunoassays

Table 1: Filter Cubes associated with the Olympus IX-83 epifluorescent microscope including the Catalouge number, wavelength of light including excitation and emission in nm and the relevant stains.

Objective	Objective – Ful Name	Catalogue Number
10x	U PLAN FL 10X PHASE OBJECTIVE	UPLFLN10X2PH
20x	LWD U PLAN FL 20X PHI OBJECTIVE	LUCPLFLN20XPH
40x	LWD U PLAN FL 40X PH2 OBJECTIVE	LUCPLFLN40XPH
40x	U PLAN FLUORITE 40X PH2 OBJECTIVE	UPLFLN40XPH
60x Oil	U PLAN S-APO 60X OIL OBJECTIVE	UPLSAPO60XXO
100x Oil	U PLAN S-APO 100X OIL OBJECTIVE	UPLSAPO100XO

Table 2: Microscope objectives with the Olympus full name and Olympus catalogue numbers. The eyepiece and image areas are calculated through the software. No calibration required.