

Organismal abundance/biomass based on epifluorescence counts

LEGEND:

Organism or taxonomic group	Size or size class (µm)	Typical shape	Applied BV shape	Pigmentation under blue excitations	DAPI stain appearance under UV excitations
Pico Phototrophic Eukaryotes (Pico Eukaryotes)	1-2	Circular or prolate	Sphere or prolate sphere	Red/dual red chloroplast green nucleus	
Nano Euks Phototrophic (Nano Eukaryotes)	2-5	Circular or prolate	Sphere or prolate sphere	Red/dual red chloroplast green nucleus	
Phototrophic Eukaryotes (Photo Eukaryotes)	>6	Circular	Sphere	dual red chloroplast central green nucleus	
Heterotrophic nanoflagellates (H nano)	1-2, 2-5,	Circular	Sphere	Green	
Heterotrophic dinoflagellates (H dinos)	5-10, 10-15, 15-20, >20	Circular or prolate	Prolate sphere	Green	Bright dinokaryon (dinoflagellates only)
Mixotrophic dinoflagellates (M dino)	5-10, 10-15, 15-20, >20	Prolate	Prolate sphere	Green with red chloroplast(s)	Bright dinokaryon (dinoflagellates only)
Autotrophic dinoflagellates	Varied	Prolate	Prolate sphere	Red	Bright dinokaryon (dinoflagellates only)
Ciliates	Varied	Circular or prolate, fringed by cilia	Sphere or prolate sphere	Green, occasionally some red	Multiple bright nuclei
Cryptophytes	Varied	Oval with pointed end	Sphere or prolate sphere	Orange, green edge	
Diatoms (centric)	Varied	Circular or rectangular	Cylinder	Green frustule and nucleus, red chloroplasts	
Diatoms (pennate)	Varied	Long and thin with tapered ends	Parallelepiped (rectangular box)	Green frustule and nucleus, red chloroplasts	

Literature:

Menden-Deuer, S., & Lessard, E. J. (2000). Carbon to volume relationships for dinoflagellates, diatoms, and other protist plankton. *Limnology and Oceanography*, 45(3), Hillebrand, H., Durselen, C. D., Kirschtel, D., Pollinger, U., & Zohary, T. (1999). Biovolume calculation for pelagic and benthic microalgae. *Journal of Phycology*, 35, The 95% Confidence Intervals were calculated according to Lund, J. W. G., Kipling, C., & Le Cren, E. D. (1958). The inverted microscope method of estimating algal numbers and the statistical basis of estimations by counting. *Freshwater Biological Association*.