

The *ECO Triplet* custom optical instrument is now available with active anti-biofouling. It features an evolutionary design that builds off the bio-wiper and faceplate available on the current *ECO* line. The optics of the *ECO Triplet-w* are arranged on a circumference on the face of the instrument. A copper faceplate covers all but the optics, and a central pivot three-armed copper and neoprene wiper clears the optics prior to sampling. The wiper and shaft assembly is oil filled, reducing the need for returning the instrument for shaft seal replacement.

The *ECO Triplet-w* is configured for—

- ✓ **Biogeochemical Measurements:** chlorophyll and CDOM fluorescence and red backscattering
- ✓ **Remote Sensing and Particle Dynamics Measurements:** blue, green and red backscattering

Triplet-w:

- Addresses the need for multiple simultaneous scattering and fluorescence sensors for autonomous and unattended measurement platforms.
- Performs a free space measurement and requires no pump. It accommodates a variety of deployment options.
- Provides excellent precision, reliability, and overall performance at a fraction of the cost and size of similar instruments.
- Ships with WET Labs' ECOView host software for communication and configuration.
- Provides multiple measurements in a compact design, making the *ECO Triplet* unique among *in-situ* fluorometers.



Specifications

ECO Triplet w—Ships with wiper for long term operation.

ECO Triplet wB—Ships with wiper and internal batteries for long term autonomous operation.

	Triplet-w	Triplet-wB
Mechanical		
Diameter	8.08 cm	
Length	22.1 cm	33.34 cm
Weight in air	1.28 kg	2.1 kg
Weight in water	0.29 kg	0.43 kg
Material	Acetal co-polymer	
Environmental		
Temperature range	0–30 deg C	
Depth rating	600 m	
Electrical		
Digital output resolution	12 bit	
Internal data logging	Yes	
Internal batteries	No	Yes
Connector	MCBH6MP	MCBH6MP and MCBH3FS
Input	7–15 VDC	
Current, non-wiping	60 mA	
Current, wiper active	200 mA	
Current, sleep	140 μ A	
Data memory	67,000 samples	
Sample rate	User selectable to 4 Hz	
RS-232 output	19200 baud	
Optical		
Scattering wavelengths ¹	470, 532, 650, or 700 nm	
Range, typical	0–5 m^{-1}	
Sensitivity, all	0.003 m^{-1}	
Chlorophyll EX/EM	470/695 nm	
Sensitivity	0.025 μ g/l	
Range, typical	0–50 μ g/l	
CDOM EX/EM	370/460 nm	
Sensitivity	0.28 ppb	
Range, typical	0–375 ppb	
Uranine EX/EM	470/530 nm	
Sensitivity	0.15 ppb	
Range, typical	0–300 ppb	
Rhodamine EX/EM	540/570 nm	
Phycocyanin EX/EM ²	630/680 nm	
Phycocerythrin EX/EM ³	540/570 nm	
Sensitivity	0.09 ppb	
Range	0–175 ppb	
Linearity	99% R2	

Specifications subject to change without notice.

¹Backscattering specifications are given in beam c_p (m^{-1}) based on the regression of the response of the instrument relative to the beam c_p measured at the coincident wavelength using an ac-s spectrophotometer. Scale factors for backscattering incorporate the target weighting function and the solid angle subtended.

²Measurement made with BB 3 dye.

³Measurement made with Rhodamine WT dye.