

# Trilogy

## Laboratory Fluorometer



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The Trilogy Laboratory Fluorometer is a compact laboratory instrument for making fluorescence, absorbance and turbidity measurements using the appropriate snap-in Application Module. Trilogy provides you with excellent sensitivity and measurement range. The all solid-state design ensures you will make reliable and repeatable readings.

Fluorescence modules are available for chlorophyll *a*, (extractive acidification and non-acidification plus *in vivo*), rhodamine and fluorescein dye, cyanobacteria (phycocyanin and phycoerythrin pigments), CDOM/FDOM, optical brighteners and ammonium. For extracted chlorophyll measurements using EPA 445, Trilogy automatically calculates the concentration using the filtered and solvent volumes. The Turbidity Module uses an IR LED with a wavelength of 860 nm to meet ISO 7027 requirements for Turbidity water quality measurements.

### Snap-In Application Modules

Snap-in modules enable you to select the applications you need today while being able to easily add capabilities in the future

#### Available Modules

- Turbidity
  - Absorbance
    - Phosphate
    - Nitrate
    - Silicate
  - Chlorophyll *a*
  - Blue Green Algae - Phycocyanin (freshwater)
  - Blue Green Algae - Phycoerythrin (marine)
  - Rhodamine Dye
  - Fluorescein Dye
  - Ammonium
  - CDOM/FDOM
  - Histamine
  - Oil
  - Optical Brighteners for Wastewater Monitoring
- Custom Modules Also Available*

### Features of the Trilogy

- Multifunctional, Compact Design
- Sample Adaptor accommodates 10 x 10 mm square plastic cuvettes, 12 x 75 mm round tubes or 12 x35 mm round vials
- Snap-in Modules Provide Flexibility



### Touchscreen Highlights

- Intuitive Color Touch Screen User Interface
- Store Up to 18 Named One to Five Point Calibrations
- Blank Reads and Automatically Subtracts in Direct Concentration Mode

Reliable Instruments for an Unreliable World

### Module Performance

APPLICATION	MINIMUM DETECTION LIMIT	LINEAR RANGE
Ammonium	0.1 µM	0-100 µM
CDOM/FDOM	0.1 ppb*	0-1,000 ppb*
Chlorophyll <i>a</i> Extracted (Acidification)	0.025 µg/L	0-300 µg/L
Chlorophyll <i>a</i> Extracted (Non-Acidification)	0.025 µg/L	0-300 µg/L
Chlorophyll <i>in vivo</i>	0.025 µg/L	0-300 µg/L
Fluorescein	0.01 ppb	0-500 ppb
Histamine	0.001 ppm	0-100 ppm
	0.5 ppb***	0-2000 ppb***
Nitrate (Absorbance)	0.04 mg/L	0-14 mg/L
Oil - Crude	0.2 ppb*	0-2,000 ppb*
Oil - Refined	0.25 ppb**	0-6,000 ppb**
Optical Brighteners	1 ppb*	0-10,000 ppb*
Phosphate (Absorbance)	1 µg/L	0-930 µg/L
Phycocyanin (freshwater)	150 cells/ml	0-150,000 cells/ml
Phycocerythrin (marine)	150 cells/ml	0-150,000 cells/ml
PTSA	0.1 ppb***	>10,000 ppb***
Rhodamine WT	0.01 ppb	0-500 ppb
Silicate (Absorbance)	3 µg/L	0-3,000 µg/L
Turbidity	0.05 NTU	0-1,000 NTU

\*Quinine Sulfate

\*\* 1,5-Naphthalene Disulfonic Disodium Salt

\*\*\*Pyrene tetra sulfonic acid (PTSA)

### Trilogy Physical Specifications

Readout	Direct Concentration (µg/l, ppb, etc.) or Raw Fluorescence
Dimensions (D x W x H)	12.92" x 10.44" x 8.42" (32.82 cm x 26.52 cm x 21.39 cm)
Weight	8.1 lbs (3.65 kg)
Operating Temperature	60 - 105° F (15 - 40°C)

### Trilogy Electrical Specifications

Light Source & Detector	Light Emitting Diode and Photodiode
Data Output	100% ASCII format through a 9 pin RS-232 serial cable at 9600 baud
PC Operating System (optional if connected to PC)	Window 98 or later
Power	100 to 240VAC Universal Power Supply included, Output 12 VDC 0.84A Max

### Ordering Information

INSTRUMENT	PART NUMBER
Trilogy Laboratory Fluorometer	7200-000
FLUORESCENCE MODULES	PART NUMBER
Chlorophyll <i>a</i> Acidification	7200-040
Chlorophyll <i>a</i> Non-Acidification	7200-046
Chlorophyll <i>in vivo</i>	7200-043
Rhodamine/Phycocerythrin (marine)	7200-042
Phycocyanin (freshwater)	7200-044
Fluorescein	7200-048
CDOM/FDOM	7200-041
Ammonium	7200-041
Histamine	7200-049
PTSA	7200-064
Refined Fuels	7200-062
Crude Oil	7200-063
Optical Brighteners for Wastewater Monitoring	7200-047

TURBIDITY MODULE	PART NUMBER
Turbidity	7200-060

ABSORBANCE MODULES	PART NUMBER
Phosphate Kit	7200-070
Silicate Kit	7200-072
Nitrate Kit	7200-074
Absorbance (requires filter paddle)	7200-050
560/10 nm Filter Paddle	7200-051
600/10 nm Filter Paddle	7200-052
750/10 nm Filter Paddle	7200-053

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