TURNER DESIGNS

TRILOGY®

Laboratory Fluorometer

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Trilogy is a powerful yet easy to use instrument that offers many benefits for benchtop analysis of samples. Its all solid-state design (no moving parts) utilizes light emitting diodes, sensitive photodiodes, solid glass filters, and electronics to ensure reliable and repeatable readings with no instrument drift. Sensitivity is maximized and pre-set providing a broad measurement range from minimum detection levels to maximum linear concentrations without instrument adjustments. Up to 18 different calibrations can be stored, each calibration performed with up to five concentration standards. Data can be output directly into an Excel spreadsheet during measurements via USB or serial connection.

Trilogy can be used for fluorescence, absorbance, or turbidity measurements by simply snapping in the appropriate module. Standard modules are pre-configured for select applications; custom modules can be built for user-specific applications. The Trilogy's small, compact design makes it a great addition to any laboratory analyzing fluorescence, absorbance, or turbidity properties of natural water samples.

Snap-In Application Modules

Snap-in modules are configured with the optical components necessary for the application of choice; changing applications is as easy as snapping in a different module.

PRODUCT HIGHLIGHTS

- Configurable for numerous applications
- Quickly change applications by snapping in a different module
- Store up to 18 user-defined multipoint calibrations
- Measure both raw fluorescence and direct concentration for a sample
- Easily export data to an Excel spreadsheet while measuring samples

AVAILABLE SNAP-IN MODULES

- Ammonium

- Absorbance
  - Phosphate
  - Nitrate
  - Silicate

- Blue Green Algae
  - Phycoerythrin (marine)
  - Phycocyanin (freshwater)

- CDOM/FDOM

- Chlorophyll *a*
  - Acidification (Chlorophyll & Pheophytin *a*)
  - Non-Acidification (Chlorophyll a only)
  - *In Vivo*

- DNA Quantitation (Hoechst 33258)

- Dye Applications
  - Fluorescein
  - PTSA
  - Rhodamine

- Histamine

- Hydrocarbons
  - Crude Oil
  - Refined Fuels

- Turbidity (meets ISO 7027 requirements)

- Wastewater Monitoring
  - Optical Brighteners

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MODULE PERFORMANCE

	Minimum Detection Limit	Linear Range
Ammonium	0.05 µM	0-50 µM
CDOM/FDOM*	0.1 ppb	0-1,000 ppb
Chlorophyll a Extracted (Acidification)	0.025 µg/L	0-300 µg/L
Chlorophyll a Extracted (Non-Acidification)	0.025 µg/L	0-300 µg/L
Chlorophyll *in vivo*	0.025 µg/L	0-300 µg/L
DNA Quantitation (Hoechst 33258)*****	0.005 µg/mL	0-2µg/mL
Fluorescein Dye Standard Range	0.01 ppb	0-200 ppb
Fluorescein Dye Extended Range****	0.75 ppb	0-8,000 ppb
Histamine	0.001 ppm	0-100 ppm
Nitrate (Absorbance)	0.04 mg/L	0-14 mg/L
Oil - Crude*	0.2 ppb	0-2,000 ppb
Oil - Refined**	0.4 ppm	20 ppm
Optical Brighteners*	1 ppb	0-10,000 ppb
Phosphate (Absorbance)	1 µg/L	0-930 µg/L
Phycocyanin (freshwater)	2ppb PC	0-10,000 ppb PC
Phycoerythrin (marine)	0.3 ppb PE	0-20,000 ppb PE
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
** BTEX
***Pyrene tetra sulfonic acid (PTSA)
****Minicell Adapter P/N 8000-936 and Minicell P/N 7000-950 required
*****Limits were determined using Calf Thymus DNA Standard
PE Phycoerythrin pigment from Prozyme diluted in Deionized water
PC Phycocyanin pigment from Prozyme diluted in Deionized water

PHYSICAL SPECIFICATIONS

Readout: Direct Concentration (µg/l, ppb, etc.) or Raw Fluorescence (RFU)

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

ELECTRICAL SPECIFICATIONS

Light Source & Detector: Light Emitting Diode and Photodiode

Data Output (S/N: 720XXXXXX):
ASCII format through a 9 pin RS-232 serial cable at 9600 baud

Data Output (S/N: 721XXXXXX):
ASCII format via USB

PC Operating System (optional if connected to PC): Windows® 98 or later

Power: 100 to 240VAC Universal Power Supply included, Output 12 VDC 0.84A Max

WHO WE ARE

Since 1972 Turner Designs has provided over 75,000 sensitive, reliable and easy-to-use fluorometers for environmental and industrial uses. We specialize in sensitive detection of materials with fluorescence properties. With distributors around the world, we provide free technical support for the life of our instruments.

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