

GFPIII General Fluorescence Probe



The **GFPIII** is a general purpose modulated fiber optic probe fluorometer designed for a variety of measurement applications. It is available with a choice of excitation and detection modules to meet most fluorescence measurement requirements including popular selections such as; Chlorophyll, Rhodamine, Fluorescein, GFP, and most other Fluorescent protein compounds. Custom modules can also be created for special applications, with filters available from the UV to the near infrared range.

As a hand-held, field portable instrument, the light weight and easy to carry GFPIII incorporates on-board data logging and a bright TFT color graphics touch sensitive display screen for system parameters and data display. Up to two gigabytes of data, traces, calibration tables, and user settings can be stored on the instrument. Rechargeable AA batteries will commonly allow the instrument to run for up to eight hours before recharging. A second set of batteries are included with the instrument. A metal leaf clip is provided for those doing transgenic and GFP detection studies as well.

Opti-Sciences has designed this instrument to provide the most reliable results available by including temperature compensation and multi-point calibration capabilities over the measuring range selected.

Applications

- Detection of GFP, green fluorescent protein
- Detection of most other fluorescent proteins
- Detection of specialized fluorescent compounds down to the ppb range
- Transgenic crop research & development
- Detect genetically modified organisms
- Gene expression studies
- Detection & measurement of contaminants
- Pesticide / Chemical spray analysis
- Parts inspection

Features

- **Lightweight, Hand-Held Design Optimized for Field Work**
- **Discrete sample measurement - solid, plant, animal tissue or liquid**
- **Single sampling or continuous monitoring rates from 1 per second to 1 per minute.**
- **User Changeable source & detect filter modules**
- **Bright Color Graphic data display**
- **USB output for data transfer**
- **8 Hrs use on two AA rechargeable batteries**
- **Data logging up for up to 2 gigabytes of data**
- **Stand Alone Operation- No P.C. Required**

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The GFPIII is sensitive to very small concentrations of fluorescent compounds. For example, It will detect Fluorescein down to at least 10 ppb in pure water and Rhodamine to less than 30 ppb in pure water.

User selectable single measuring and continuous measuring modes.

The user selects a mode for single measurement mode, or a continuous measurement mode that allows sampling from one per second to one per minute. The continuous mode allows unattended measuring for up to four hours. The results are recorded in a measuring file and they are graphically displayed on the measuring screen.

References for GFP Meter (all versions).

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Technical Specifications

Measured Parameters: User programable, can calibrated to known chemical concentrations, or ratios. The number of calibration tables and measurement parameter descriptors are only limited by the memory capacity.

Resolution: User defined down to 1 ppb.

Sensitivity: Fluoroprobe dependant. For example; 10ppb for Fluorescein in pure water and 30ppb for Rhodamine in pure water.

Source: (1) LED (selected for application) LEDs range from 375nm to 660nm. User changeable.

Detector: Solid state, high sensitivity detector. Band limiting filter sets provided. Filters set the detection range. Wavelengths available from 400nm to 750nm. User changeable.

Detection: Modulated light digitally controlled to minimize background detection. Temperature compensation included for light source and detector.

Storage Capacity: 2 gigabytes internal non-volatile flash memory.

Modes: single point measurement, or continuous measurement with a sampling range of 1 per second to 1 per minute.

Measurement interface: Bifurcated fiberoptic probe (4mm dia)

Measurement Area: 3 mm diameter circle at probe tip

User Interface: 240 x 320 pixel Color touch screen with stylus

Data Output: USB 1.1

Temperature Range: 5-45 Deg C

Power Source: 2 Rechargeable AA batteries (2 additional spare batteries included)

Auto Off Interval: User programmable (no key or download activity)

Size: 12cm x 9cm x 3 cm

Weigh: 0.6 lbs 275gm

Components included: GFPIII Fluorometer, fiberoptic probe, sample holder clip, stylus, battery charger, 4 AA NiMH rechargeable batteries, USB cable, and users guide CD.

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