

GFP-Meter - Measure Fluorescent Dyes, Proteins, & Markers



Applications

- **Measure Green Fluorescent Protein**
- **Detect Fluorescent Markers, Dyes, Fluorescein and Rhodamine**
- **Distinguish Between GMO and Non-GMO (Genetically Modified Organisms)**
- **Gene Expression Studies**
- **Parts Inspection and Contamination Detection**

Features

- **Non-Destructive Measurement**
- **Lightweight, Hand-Held Design Optimized for Field Work**
- **Accurate, Reliable, and Easily Repeatable Measurements**
- **Internal Data-Logging**
- **Stand Alone Operation- No P.C. Required**

The GFP-Meter is a General Purpose hand-held fiber-optic fluorometer supporting a wide variety of solid state source and detector combinations from UV to IR. Detection of Green Fluorescent Protein, Rhodamine, and Fluroescien are some of the most requested configurations. The unit is designed to perform sensitive measurements with minimal excitation energy. A solid state source and detector pair with thin film interference filters is used for better signal separation and is optically monitored for drift. The provided flexible fiber-optic probe can be used with gaseous, liquid, or solid samples and a selection of sample clips are available. Custom sample chamber/clips are also available.

The GFP-Meter set for Green Fluorescent Protein facilitates transgenic plant studies, allowing thousands of measurements under field & laboratory conditions. When set for Dyes such as Rhodamine or Fluorescein, the GFP-Meter can detect extremely low concentrations for better detection of organic material and contaminants.

The GFP-Meter is lightweight (1kg) and battery powered with a rugged weather resistant plastic case for field and industrial use. Data logging is built in recording of up to 2730 sample points grouped into up to 60 different "Files" for easy classification. Each data point is stored with time and a calibration status stamp. Stored data can be reviewed on its 16 x 4 line LCD display without the use of an external PC. The data can also be transferred from the unit via a standard RS-232 port and supplied windows compatible software.

GFP-Meter Measure Fluorescent products in minute concentrations

Protein

GMO

Dyes

Contaminants

The GFP-Meter is a self-contained, hand-held fluorometer that utilizes a modulated detection system to compensate for stray light and temperature drift. The probe-based design allows the user to measure both intact samples and surfaces. Furthermore, the small probe makes it possible to use the instrument on a variety of plants such as Arabidopsis and Maise as well as access hard to reach locations for inspection and detection.

The GFP-Meter combines advanced measurement performance with user-friendly features making it a practical, research grade instrument that is easy to use and understand. On-board data-logging, an RS-232 port, PC software and a long-life rechargeable battery are included convenient features found in the GFP-Meter.

The GFP-Meter ships with a user selected Source/Detector filter pair, 4 - AA Batteries, Fiber-probe, sample cuvette, RS-232 cable, PC software, and a users manual.

Suggested Reading:

Haseloff J. and K.R. Siemering. 1998. The uses of GFP in plants. In: Chalfie M. and S.R. Kain, eds. Green Fluorescent Protein: Properties, Applications, and Protocols. Chichester, England, Wiley and Sons. 191-220.

Leffell S.M., S.A. Mabon and C.N. Stewart, Jr. 1997. Applications of green fluorescent protein in plants. BioTechniques 23:912-918.

Niedz R.P., M.R. Sussman and J.S. Satterlee. 1995. Green fluorescent protein: an in vivo reporter of plant gene expression. Plant Cell Rep. 14:403-406.

Stewart C.N., Jr. 2001. The utility of green fluorescent protein in transgenic plants. Plant Cell Rep. 20:376-382.

The GFP-Meter is vital to Transgenic Crop Research



Technical Specifications

Source: Solid State LED with Band Limiting Filter. Output Compensated for Battery Voltage & Temp drift.

Detector: Solid State, High Sensitivity Detector. Band Limiting Filter Sets Detection Range.

Detection System: Digitally Controlled, Modulated Detection System for Optimal Rejection of Background Light and Maximal Drift Reduction.

Sample Interface: Bifurcated Fiber-Optic Probe, 4mm bundle diameter. (sample end available in multiple custom configurations)

Controller: 16MHz RISC Processor

User Interface: 4x3 Key Pad 16x4 Line LC Display

Memory: 8KB Non-Volatile EEPROM. Storage for 2730 Data Sets.

Output: RS-232 Level Serial Port. Data Format- ASCII Plain Text Compatible with most Terminal Programs.

Power Source: 4 "AA" Batteries. Provides 20 to 30 hrs of run time.

Size: 21cm x 8cm x 5cm

Weight (with battery): 1Kg

Operating Temperature Range: 0-70 Deg C

Items Included: GFP-Meter with user selected Source/Detector Filters, Battery, Fiber-probe, RS-232 cable, Instruction Manual.



8 Winn Avenue - Hudson, NH 03051, USA
Tel: (603)883-4400 - Fax: (603)883-4410
email: sales@optisci.com - web site: www.optisci.com

Opti-Sciences, Inc. is continuously updating its products and reserves the right to amend its specifications as necessary.

© 2005, Opti-Sciences, Inc.