



GFL-1a



## Portable Liquid Fluorometer

Truly portable fluorometer for the environmental analysis of liquid samples



- Unparalleled portability (3.4kg)
- Unprecedented versatility
- Discrete or flow through samples
- High sensitivity
- Graphic touch screen display
- Integral data storage

### Environmental monitoring by fluorescence

Fluorometric assays are a proven, very reliable and accurate technique for determining and quantifying a compound or substance in liquid, including tracer dyes. It is therefore a powerful monitoring and research tool in fields such as hydrology, water management and environmental surveying.

ADC BioScientific Ltd. introduces the GFL-1a, the next generation of filter fluorometer for the field analysis of liquid samples.

### Truly field portable

The GFL-1a has been developed to enable scientists, consultants and civil engineers to analyse samples quicker and easier than ever before. Offering unprecedented portability, unparalleled versatility and uncompromised accuracy.

Weighing only 3kg the truly portable GFL-1a is less than half the weight of traditional transportable fluorometers. The GFL-1a is housed in a rugged water tight case enabling the GFL-1a to access even the most remote field sites.

The GFL-1a is powered by an internal, re-chargeable 12V high capacity, Ni-MH battery, enabling up to 36 hours of continuous field use between charges.

### Applications Include:

- Fluorescent tracer dyes
- Flow measurement analysis
- Leak detection
- Ground water mapping
- Mixing zone studies
- Contaminant tracking
- Time of travel and dispersion
- Chlorophyll concentrations
- Algal Biomass
- Monitoring water quality
- Waste water tank retention times



## Unparalleled versatility

The GFL-1a is suitable for a wide variety of field fluorescence monitoring applications. The unique interchangeable cuvette system allows both discrete and flow through samples to be quickly and easily analysed.

Easily interchangeable filter sets are available for a wide variety of wavelengths to accommodate most tracer dyes, including Rhodamine WT and Fluorescein, and for a host of other fluorescence applications.

## Reliability and accuracy

Utilising the latest in miniaturised electronics and fluorescence detection technology the GFL-1a is able to provide the performance and accuracy associated with a laboratory based system in a field portable device.

A low power consumption LED solid-state source provides fast excitation of a compound in liquid. A silicon photo diode detector is used to provide outstanding data stability. Whilst a novel compact dual beam optical path provides both a reference and measurement channel to compensate for temperature, source and detector variations.

Single or multipoint calibration curves can be generated using known standards allowing real-time concentrations to be displayed. The GFL-1a can monitor compounds down to PPT levels. For example 10 PPT for fluorocein and 30 PPT for Rhodamine WT.

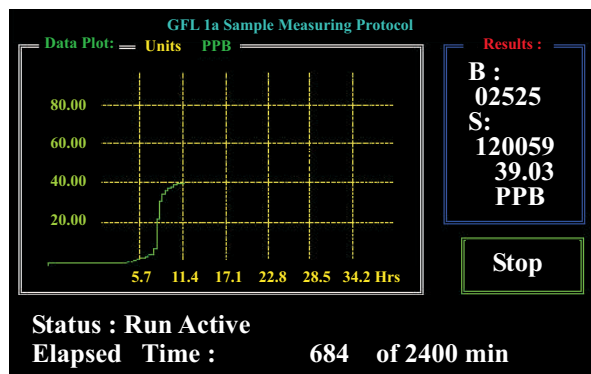


## Graphical display and data storage

All programming is via a large, colour, touch screen, graphical display.

Data storage may be initiated manually or automatically during unattended operation. The GFL-1a features a 1GB internal memory capable of storing many thousands of data sets. Data may also be stored on removable SD cards.

Data can be managed and reviewed directly onboard the GFL-1a. Data can be downloaded via USB, RS232 or directly from the SD cards.



## Specification

**Configuration:** 90 degree filter fluorometer with reference beam.

**Sample Cell:** Interchangeable holders for 20ml sample bottle, flow through cell and 1cm square cuvette.

**Detector:** Silicon photodiode and optics with user interchangeable filters.

**Source:** Solid-state excitation source with user interchangeable filters.

**Temperature compensation:** Sensor in flow through cell. Constant may be entered in test mode.

**Sampling rate:** Manual, automatic 15 s/pt - 5 min/pt.

**Units:** User selectable (ppt, ppb, ug/l, umols etc) or arbitrary units.

**Data logging:** Manual or automatic with real time clock.

**Data storage:** Internal 1GB non-volatile memory storing many thousands of data sets. Removable SD memory cards for unlimited storage.

**Output:** USB, RS232

**User interface:** 480 x 272 pixel, colour graphic TFT LCD with touch screen and on screen control keys.

**Power supply:** Internal 12V high capacity Ni-MH battery. 110/220VAC charger included.

**Battery life:** Up to 36 hours of continuous use.

**Operating temperature:** 0-50°C

**Enclosure:** Watertight ABS case:

**Dimensions:** 27 x 25 x 13cm

**Weight:** 3.4kg



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