

FLUORIMETERS CLF-1 & CLF-2

1-2 CHANNEL 'COLD LIGHT' FLOURESCENCE DETECTORS



Introduction

The Burkard "cold light" fluorimeter is a recent and important addition to the range of analytical instruments for continuous flow analysis, flow injection and process control analysis.

The introduction of the new detector compliments and extends the capabilities of Burkard continuous flow technology where levels of sensitivity can now be significantly improved. Its application in areas of pharmaceutical quality assurance, routine environmental analysis, beverage testing procedures, medical science and others has demonstrated improved performance by up to a factor of 10.

Applications

Standard flow cells of various volumes are available for fluorescence applications or when the instrument is used as a nephelometer for measuring turbidity in water samples. With some electronic change the instrument can be configured for luminometry measuring low light levels from bioluminescence. The setup for nephelometry is identical to that for fluorimetry. A heated flowcell assembly is provided for enzymatic determinations.

32 Fluorescence methods for automatic analysis have been developed and one particularly for low level Aluminium in clinical determination. New manual methods can be adapted. The following list is just a few of the compounds that have been analysed by using fluorescence, either in flow analysis systems or by chromatography. For compounds not on this list please enquire.

DNA	Histidine	Histamine
Aluminium	Phenylalanine	Glycine
Albumin	Gallium	Glucose
Lactate	IgG	Terbium
Boron	Copper	Cyanide
Bile acids	Pyridoxal	Pyridoxal-5-phosphate
Mercury	Manganese	Iron
Hydrogen Peroxide	Ochratoxin A	Cerium(III)
Cerium(IV)	Vitamin B1	Cyclophosphamide
Urea	Quinine	Phosphate
Galactosidase	Rhodamine G	

Operation

The fluorimeter has been constructed as a fixed wavelength instrument using twin high brightness light sources for excitation. Solid state ultraviolet (UV) excitation offers increased energy, lower cost and longer life compared to traditional bulky (UV) light sources.

The absence of heat avoids drift during operation and as the bandwidth of these devices (15-20 nm) is similar to interference filters an excitation filter is not required.

A lower cost cut-off filter is supplied for the emission light output, which is detected by silicon photo-diode. Wavelength change involves the replacement of the fixed pre-positioned light source and cut-off filter of the appropriate wavelength.

Specification

Fluorimeter Type	CLF1 & CLF2 'Cold light'
Cell Size	10 x 10mm, 100ml & 450ml UV
Excitation Wavelength	Typically 356 - 420nm and higher Bandwidth 15 - 20nm
Light Intensity	Up to 1mW variable
Gain Control Adjust	X1 to X11 amplification
Emission Filters	Full range of cut off filters available
Analogue Output	Standard: 0-200Mv Alternative ranges: 0-1mV & 0-5V Connection via 3 pin din plug and socket. Compatible with recorder and MicroStream data-processor
Detection Limit	Down to 1ppb Quinine Sulphate standard
Case size	400 x 190 x 160mm
Supply voltage	110V 50-60Hz T 5A240V 50-60Hz T 2.5A
Weight	3.8 Kg

Ordering Information

Product Code	Description
BS02005	1 Channel Fluorimeter, CLF-1
BS02006	2 Channel Fluorimeter, CLF-2

For details on flow injection systems, continuous flow analysers, data handling systems and specialised process control equipment please contact Burkard Scientific. The company reserves the right to make changes to the specification without notice.

