

# FluoroVette Micro-volume Cells

## Fluorescence Cells for Nano-molar Detection

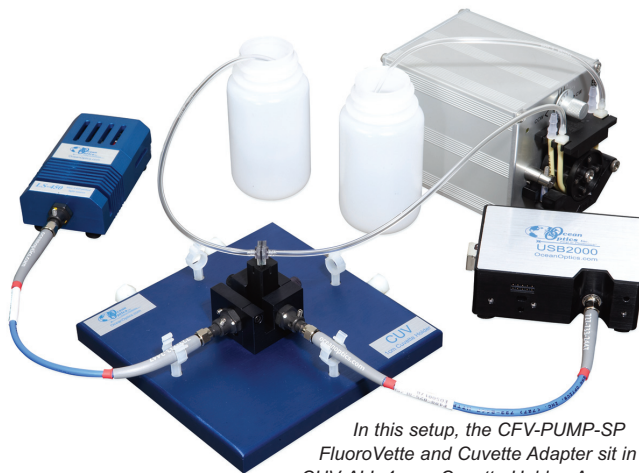
The FluoroVettes are ultra low-volume, disposable cells for nano-molar range fluorescence detection. Only 50  $\mu\text{L}$  of fluid fills the microfluidic channel of a FluoroVette, which then slides into a 1-cm cuvette adapter for use in a fluorescence setup with a spectrometer and cuvette holder.

## Advantages Versus Cuvettes

For only \$125, you receive 10 disposable FluoroVettes with a Cuvette Adapter, making these cells a great alternative to expensive quartz cuvettes. For the price of one micro-volume quartz cuvette, you could use over 30 disposable FluoroVettes with no risk of sample contamination.

## Two Types of Disposable 50 $\mu\text{L}$ FluoroVettes

There are two types of FluoroVettes. The CFV-PIP-SP has an inlet port for loading the sample into the FluoroVette with a standard 20-200  $\mu\text{L}$  pipetter and ordinary tips, making it a snap to fill and perform measurements. The CFV-PUMP-SP has tubing bars at the inlet and outlet ports so the FluoroVette can be used in continuous or flow injected measurements using a syringe or peristaltic pump. Each type of FluoroVette slips easily into the Cuvette Adapter for using with a standard 1-cm cuvette holder, such as our CUV-ALL-UV 4-way Cuvette Holder. The Cuvette Adapter's two ports are positioned at 90° for fluorescence measurements. (See complete setup below.)



In this setup, the CFV-PUMP-SP FluoroVette and Cuvette Adapter sit in a CUV-ALL 4-way Cuvette Holder. A pump circulates the sample through the FluoroVette.

## High-sensitivity Applications of Precious Samples

FluoroVettes are easy to fill and empty, making it possible to perform a dilution series to optimize data from scarce samples. The FluoroVettes are ideal for a variety of real-time high-sensitivity fluorescence applications, such as

- Assay development with quantum dots
- GFP-based assays
- Protein conformation analysis
- DNA quantification via Pico-Green assay reagent
- Cell marker identification
- Enzyme inhibitors using FRET Assays

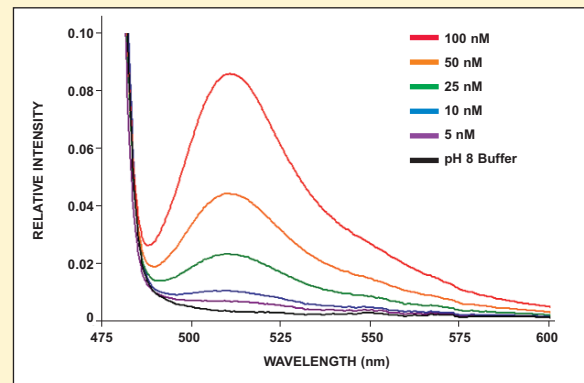


A pipetter is used to inject fluid into the CFV-PIP-SP FluoroVette.

A FluoroVette slides into the top of the Cuvette Adapter, which then inserts into a cuvette holder.

A pump and tubing are used to circulate the fluid through the CFV-PUMP-SP FluoroVette.

## Fluorescein Spectra in pH 8 Buffer



Detection of fluorescein in the nanomolar range (nM) is typical with FluoroVettes. These spectra were made with a CFV-PIP-SP, USB2000-FLG Spectrometer, LS-450 Blue LED, CUV-ALL-UV Cuvette Holder, 1000  $\mu\text{m}$  illumination fiber and 600  $\mu\text{m}$  read fiber. The integration time was 1000 msec; a longer integration time provides even lower detection limits.

## Specifications

Size:	50 mm tall, 9 mm wide, and 1 mm thick
Volume:	50 $\mu\text{L}$
Pathlength:	0.75 mm
Detection limit:	5 nM detection limit of fluorescein with pH 8 buffer and 1000 msec integration time
Dead volume:	1 $\mu\text{L}$ for pipette interface; for tubing interface, dead volume depends on tubing length
Wavelength range:	220-2500 nm
Accuracy:	FluoroVettes are linear over the concentration range, typical error is less than 5%

Item	Description
CFV-PIP-SP	Pack of 10 FluoroVettes with pipetter interface (for use with a pipetter) and one FluoroVette Cuvette Adapter Assembly for 1-cm standard cuvette holders
CFV-PUMP-SP	Pack of 10 FluoroVette Flow Cells with tubing interface (for use with pump and tubing, neither included) and one FluoroVette Cuvette Adapter Assembly for 1-cm standard cuvette holders