

Signalyte™ - II



Ultra-Sensitive Spectrofluorometer/Luminometer

www.creatvmicrotech.com

Creatv MicroTech introduces **Signalyte™-II** an ultra-sensitive spectrofluorometer/luminometer for analysis of small samples (1 to 35 microliters).

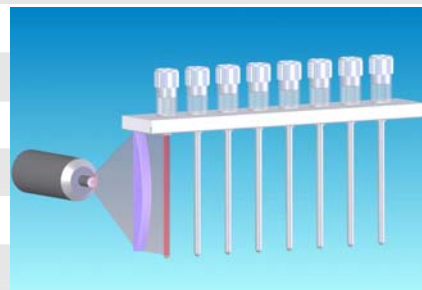
Signalyte™-II uses proprietary **integrating waveguide technology** to measure fluorescence signal in a low cost disposable cuvette. Eight samples, plus one control, are tested in about one minute.

Signalyte™-II can detect approximately 0.09 femtomole of CyTM5 dye in a 35 microliter sample. Illumination wavelengths are available from 405 to 635 nm to excite most organic dyes and quantum dots.



Applications

- Immunoassay
- ATP assay
- Cell proliferation
- Competitive assay
- Enzymatic assay
- Toxicity assay
- dsDNA and end point PCR reader



Features

Factor of 10 to 1000 times more sensitive than plate readers depending on the fluorescent dye

Ultra-sensitivity

Dyes	Particles
■ Cy TM 5: 2.5 pM (5×10^7 dyes)	■ Purple: 10 nanoparticles
■ FITC: 25 pM (5×10^8 dyes)	■ Sky Blue: 12 nanoparticles
■ ROX: 25 pM (5×10^8 dyes)	■ FluoSphere: 1.3×10^4 particles

Multiple Excitation Sources

Four excitation sources with wavelengths from 405 nm to 635 nm

Many Dye Choices

Detection spectra are from 350 nm to 750 nm.

Multiple Samples

Simultaneously tests up to 8 samples, plus a reference

Small Sample Size

Analyte volume up to 35 microliters

Multiplex detection

Up to four analytes per sample

Customization

Custom configurations available for UV and NIR

Ease of Use

Loads with a standard 8-channel pipetter

Sample Archive

Cuvettes can be sealed and stored for future reference

Biosafety Compliant

Cuvette is sealed for safety

Speed

Data is collected in about one minute

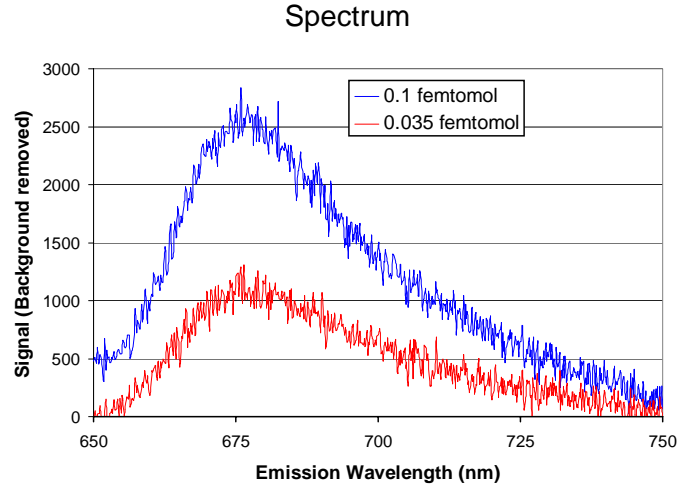
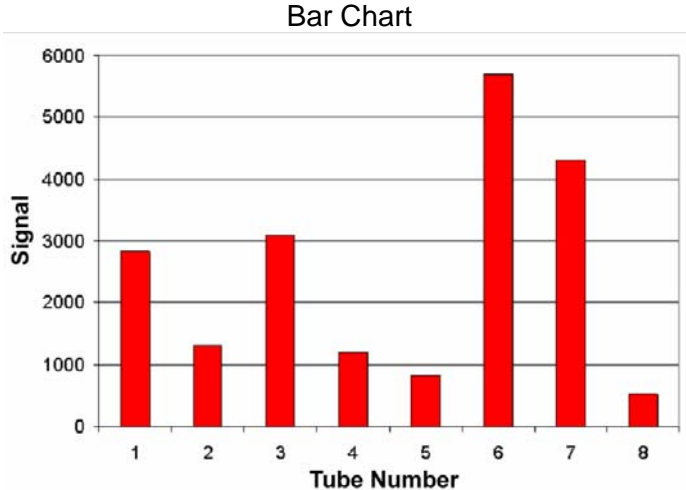
Convenience

Low-cost disposable cuvette
Computer Controlled user interface and data acquisition

Test Result Display Options

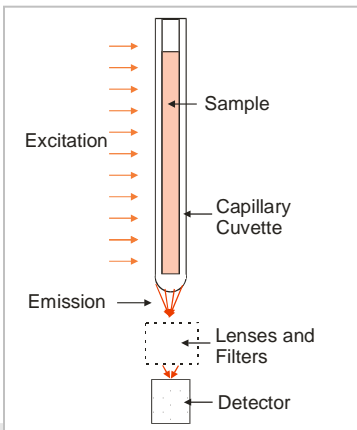
Positive/negative result, quantitative bar chart, spectrum, or excel file for custom analysis

Detection of Cy-5 fluorescent dye in a 35 μ l sample size. Signal is shown after subtracting the background.



Graphics obtained from Signalyte™'s Interface

Detection Principle



Integrating Waveguide Technology

The principle of detection consists of illuminating the cuvette at a 90° angle relative to the length of the waveguide and subsequent collection of the emitted fluorescence from the sealed end. The emitted light is efficiently gathered by the cuvette and guided by the cuvette/sample as waveguide.

The emission signal exits from the end of the waveguide, through lenses and filters to the optical detector. Emitted light from the entire waveguide is integrated, thus maximizing the detected signal. Background noise from the excitation light is minimized by the 90° excitation angle. Signal to noise ratio is higher than for other geometries, enabling more sensitive assays.

About Creatv MicroTech

Creatv MicroTech is a privately-held company founded in 1996. Our business is based on cutting-edge research and development, leveraging our expertise in the sciences and engineering related to high-aspect-ratio microfabrication and ultra-sensitive bio-detection. Creatv's microfabrication of micro metal and composite structures is unmatched in the world, and our bio-detection instruments are among the most sensitive, yet compact and easy to use.

Creatv MicroTech's microfabrication technology won a 2006 R&D 100 award presented by R&D Magazine. The R&D 100 Awards program honors significant commercial promise in products, materials, or processes developed by the international research and development community. Each year, R&D Magazine recognizes the world's top 100 scientific and technological advances with awards for innovations showing the most significant commercial potential.



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