

Low Cost Fluorescence System

StellarNet's low cost fluorescence systems offer a complete solution for any chemical analysis in the lab or the field. At the heart of each system is the **BLACK-Comet** research grade spectrometer which features the benefits of the holographic concave grating to produce superb spectral imaging, uniform resolution, enhanced UV sensitivity, and the lowest stray light values possible. **Higher Signal to Noise** can be achieved by using a detector which has an integrated Thermo Electric Cooler (TEC) maintained at -10°C from ambient and stabilized within $\pm 0.1^{\circ}\text{C}$, recommended when integrating longer than 3000ms for extremely weak emission.

RED-Wave NIR InGaAs spectrometers cover the 900-1700nm with optional 512 or 1024 pixel cooled photodiode arrays.

SpectraWiz software is included free with every spectrometer and offers advanced spectral analysis features such as time series analysis, peak ratio, and ChemWiz Concentration Analyzer.

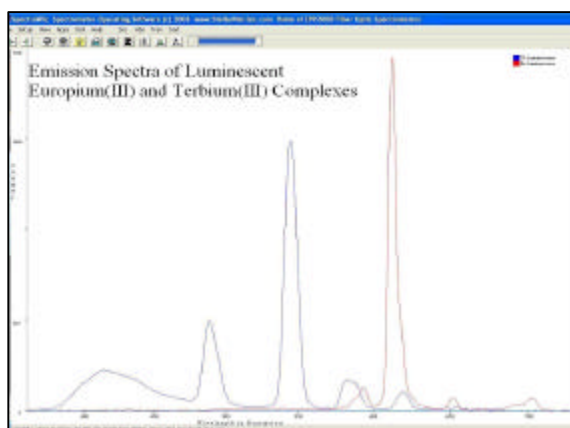


Fig 1 Lanthanide complex luminescence



Fiber Optic Sampling Accessories

- **Liquid Samples** are measured using the CUV-F liquid fluorescence fixture which includes a larger base to accommodate the SL1-LED excitation source. This also includes a 600 micron Y-fiber for dual-90° emission pick-up resulting in a 2x enhanced signal collection.
- **Solid and Powdered Sample Measurements** are also possible by use of an easy to use fluorescence probe which fiber optically couples to the LED excitation source and spectrometer.
- **LED excitation source** is ideal for low cost fluorescence measurements at any range. The SL1-LED light source includes an LED kit consisting of 6 standard LED's (410nm, 470nm, 502nm, 590nm, 660nm, and White). Additional LED's can be easily and quickly swapped without any wiring changes.

| Item | Description |
|-------------|---|
| SL1-LED | Miniature fiber optic light source with replaceable LED's. Includes LED-Kit with set of 6 LEDs for 390nm, 470nm, 502nm, 590nm, 660nm, white |
| CUV-F | Cuvette holder for SL1-LED, includes F600 Y-fiber |
| BLK-CXR | Concave grating spectrometer without TEC for range 190-850nm or 280-900nm |
| BLK-CXR-TEC | Concave grating spectrometer with TEC for >3000ms detector integration times |

Specifications

| | | | |
|----------------------------------|---------------------------|---------------|--------------------|
| LED Type | T-5 mm | Fiber Options | 600 micron Y-fiber |
| LED's included | 390, 470, 502, 590, 660nm | LED life | 10,000 hours |
| UV LED's available (prices vary) | 295, 345, 365, 385, 390nm | LED life | 10,000 hours |
| Spectral range | Depends on LED installed | Connectors | 2 x SMA 905 |