ADP in an enzyme reaction. Z’-Factor values and Relative Standard Deviation were determined using the keeping the total adenine concentration constant in each well. The curve mimics the conversion of ATP to Transfer (TR-FRET), or Fluorescence Intensity for the measurement of ADP accumulation. A 10 μM ADP/ATP system. The assays utilize Fluorescence Polarization, Time-Resolved Fluorescence Resonance Energy provide the highest stray light rejection, and continuous wavelength selection. Deep blocking filters and here we show the utility of a hybrid multi-mode reader that combines the flexibility of monochromators with the sensitivity and speed of filter-based detection. The sensitivity of the instrument’s deep blocking filters and dichroic mirrors provide quality data using either detection system.

Figure 5 – FP assay experiment 2

Excellent Z’ values can be achieved using as little as 5 flashes. Therefore high data quality can be seen while maintaining high-throughput.

The Xenon lamp was used, along with variable flashes, to assess the affect of increasing read time on data quality. An excitation and emission spectral scan was performed using the Alexa594 Tracer from the Transcreener® TR-FRET Red Assay. The Synergy™ H4 monochromator system uses single double-grating monochromators with variable wavelength selection. The monochromator system of the Synergy™ H4 provides excellent spectral scanning capabilities, as well as the ability to test a variety of wavelength settings with different fluors.

By examining the graph of the data, it is evident that excellent spectral scanning results can be achieved using both the filter and monochromator systems.

Figure 10 – Transcreener® ADP TR-FRET Red Assay

The Synergy™ H4 monochromator system uses two double-grating monochromators with variable wavelength selection. The flexibility and sensitivity of the Synergy™ H4 make the instrument an excellent choice for use in today’s life science research laboratory.

Figure 12 – Spectral scanning experiment

The Synergy™ H4 provides excellent spectral scanning results, as well as the ability to test a variety of wavelength settings with different fluors. The Synergy™ H4 provides excellent spectral scanning results, as well as the ability to test a variety of wavelength settings with different fluors.

Figure 17 – TR-FRET assay experiment 1

The Xenon and Tungsten lamps were tested, along with variable flashes, to compare data quality. At each read speed (flash number), data quality from the filter system exceeds that of the monochromator system. The filter system provides excellent data quality with the most common fluorescent assay outputs, using narrow-band filters and deep blocking filters. Excellent results can be seen with the most common fluorescent assay outputs, using narrow-band filters and deep blocking filters.

Figure 8 – FI assay experiment 2

The Synergy™ H4 monochromator system uses two double-grating monochromators with variable wavelength selection. The flexibility and sensitivity of the Synergy™ H4 make the instrument an excellent choice for use in today’s life science research laboratory.