Analytical Development is seeking a summer intern to work in the Process Analytics and Control (PAC) group to develop analytical instrument performance indicators. The purpose of this work is to develop processes to monitor and to better characterize instrument performance throughout the instrument life cycle. Work will focus on both NIR and Raman systems, with the following outcomes:

* Perform a statistical review of historical instrument and qualification data to identify any trends that can be used as an indicator of system performance, or suggest new data that could be utilized to monitor performance.
* Perform a literature review of different types of reference standards, and identify standards that are relevant for our NIR and Raman systems.
* Test current sets of reference standards across multiple instruments to understand differences and impact of standard-to-standard variation.
* Based on results from historical data, literature review, and testing of current standards suggest new types of indicators, standards and/or tests that improve performance verification.

Responsibilities:

* Operation of PAC analytical instrumentation
* Design and execution of reproducible experiments
* Summarizing and communicating results and findings
* Data analysis, review, and documentation
* Assessment of historical instrumentation qualification data
* Prepare poster presentation summarizing work

Minimum Qualifications:

* At a minimum, currently must be enrolled as an undergraduate engineering or science student (chemistry, physics, biology) at the Junior level or above.
* Strong ability to analyze and interpret results
* Ability to work independently and within a cross functional team
* Excellent verbal and written communication skills.
* Be highly-motivated and have an excellent work ethic.

Preferred Qualifications:

* Data analysis experience using Matlab, JMP, or other statistical analysis based software
* Experience operating laboratory instrumentation, beyond that gained in course work, especially spectroscopic instrumentation.