

Fact Sheet 302

“RapiScreen™ Celsis LuminASE™ Biologics reagent depletes non-microbial ATP in cell suspensions”

Many bioprocessing samples contain high levels of non-microbial ATP that need to be removed before microbial ATP can be detected. The Celsis RapiScreen™ Biologics assay has been developed with a proprietary ATP-depleting reagent to address the need for direct sample testing in the biopharmaceutical industry.

Celsis scientists developed the Celsis LuminASE™ Biologics reagent as a blend of surfactants and temperature-stable enzymes that are capable of isolating and removing both free ATP and somatic ATP commonly found in biologic-based sample types.

Direct sample testing using the Celsis LuminASE™ Biologics reagent has proven to be effective on a series of samples typically found in the biopharmaceutical processing environment. A 15 minute pre-treatment reduces sample background readings (expressed in Relative Light Units, or RLUs) to low levels for samples containing 10^4 cells/mL. Higher cell concentrations (>math>10^4</math> cells/mL) may require centrifugation prior to Celsis LuminASE™ treatment to reduce background readings to low levels.

Our data demonstrates the effectiveness of a clarification treatment for direct testing of high value late-fermentation products that may contain concentrations of up to 10^5 cells/mL. Concentrations greater than 10^5 cells/mL may require dilution in order to make the sample suitable for testing using the RapiScreen™ Biologics kit.

ATP depletion protocols for high cell concentrations

