

CHARACTERIZATION OF CELLULAR VIABILITY DROP DURING MEDIA AND PLATFORM DEVELOPMENT

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Due to increasing demand for higher titer and product quality, companies have consistently been focused on optimizing the production cell line, culture media, and processing conditions. During platform media optimization work for a production cell line, a drop in cellular viability – sometimes as low as 80% - was sporadically observed on the second day in culture. The viability would recover following the drop; however, secondary effects would be incurred such as high osmolality, lower titer and depressed product quality. Efforts were initiated to determine the cause(s) of the viability drop and to put mitigations in place to ensure robust process performance upon scale-up to manufacturing sites. The investigation identified media components as key contributors to the viability drop. This poster will discuss the methods and techniques used to characterize the viability drop and propose a mechanism for the observed drop in cellular viability.