INHIBITION OF PHAGE DEVELOPMENT IN LIQUID CULTURES OF E. COLI

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Bacteriophages are a major threat during biofermentation. The infection of one bioreactor can cause infection to spread to the whole facility. The creation of an early warning system to detect infection and induction connected with the ability to stop phage development would minimalize losses in biofermentation facilities.

We checked the possibility to stop phage development in liquid cultures, using the bacterial strain of Escherichia coli MG1655 (λ papa). Inducing MG1655 (λ papa) with mitomycin C, we attempted to stop phage development.

It is possible to stop phage development using methods like metabolic poisons, but we were able to obtain a similar effect using only starvation techniques in cultures growing in minimal media with different carbon sources.