CONSIDER FOR TALK

2024 SEA Symposium Abstract

Neumann University

Aston PA

Corresponding Faculty Member: Matthew Mastropaolo (mastropm@neumann.edu)



Keyshla G Valentin Caban

Optimizing the Adsorption of Known Bacteriophage; JaimeB: A Comparative Study of Divalent and Monovalent Salts

Keyshla G Valentin Caban, Matthew D Mastropaolo

Calcium (a divalent cation) has been associated with successful adsorption properties of bacteriophage, which allows for a successful infection and replication within a bacterial cell. Divalent salts such as calcium can stabilize bacterial cell surfaces to facilitate the adsorption of bacteriophages. For this reason, calcium chloride is the most common additive in media to isolate, purify, and magnify bacteriophages which allows for phage reproduction. EE Cluster *Microbacterium* phage JaimeB was used as the basis to investigate the efficacy of CaCl2 in comparison to BaCl2, MgCl2, KCl, and NaCl. In a comparative study the efficacy was based on the number and size of plaques evaluated at a dilution of 10^-4. Calcium displayed the greatest number of plaques while the least number of plaques were seen in the samples with monovalent salts. Although calcium displayed the highest number of plaques all the salts tested showed plaque formation using both serial dilutions plaque assays along with pick a plaque procedure.