

ISOLATION AND DNA EXTRACTION OF SOIL BACTERIOPHAGES OF *BACILLUS CEREUS*

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ABSTRACT

Bacillus cereus can be found widely in the environment especially in soil, it is also commonly known for causing foodborne disease. Bacteriophages of *B. cereus* can be found in various environments including soils as the replicate along with their host. The *Bacillus cereus* bacteriophages were isolated from INTI's nursery soil by using the agar overlay method. The plaques obtained from Nursery 1 plate and Nursery 1-2 plate were purified and the bacteriophage stock was obtained from (P) *B. cereus* 1 plate and (P) *B. cereus* 2-2 plate. The bacteriophage DNA was extracted by using phenol-chloroform method. The purity of the DNA were recorded at 1.71 and 1.31 for 4-hr bacteriophage stock [(P) *B. cereus* 2-2 plate] and 24-hr bacteriophage stock [(P) *B. cereus* 1 plate] respectively whichs determined by ratio of $OD_{260\text{ nm}}/OD_{280\text{ nm}}$. The extracted bacteriophage DNA was analyzed using agarose gel electrophoresis containing SYBR[®] Safe DNA gel stain. Faint pinkish smears 4000 bp to 10,000 bp were observed on the agarose gel. These smears are likely to be contaminants such as proteins, RNA or phenol due to the size of the smears. One way to rectify this in the future is by optimizing the extraction method.