



DEC 17, 2022

WORKS FOR ME

1

Protocol collection: Phage DNA isolation and chemical analysis

DOI

dx.doi.org/10.17504/protocols.io.e6nvwj6w2lmk/v1[Adair Borges](#)¹¹Arcadia Science

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COMMENTS 0

ABSTRACT

Bacteriophages (phages) are viruses that infect bacteria. Some phages chemically modify their genomes to protect them from degradation by bacterial immune systems. We can detect phage genome modifications with mass spectrometry (MS) and high-performance liquid chromatography (HPLC) of phage nucleosides. This collection contains protocols for the entire process: phage growth and concentration, DNA extraction, and chemical analysis of phage nucleosides. We optimized these protocols using *E. coli* phage T4 and *B. subtilis* phage SP01.

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dx.doi.org/10.17504/protocols.io.e6nvwj6w2lmk/v1

COLLECTION CITATION

Adair Borges 2022. Protocol collection: Phage DNA isolation and chemical analysis.
protocols.io
<https://dx.doi.org/10.17504/protocols.io.e6nvwj6w2lmk/v1>



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Sep 19, 2022

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70238

FILES

Protocol



NAME

Phage amplification and concentration

VERSION 1

CREATED BY



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OPEN →

Protocol



NAME

Phage DNA extraction with Monarch kit and digestion to single nucleosides

VERSION 1

CREATED BY



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Protocol



NAME

Phage DNA extraction with phenol-chloroform and digestion to single nucleosides

VERSION 1

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Protocol

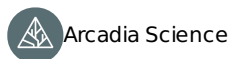


NAME

Nucleoside analysis with high performance liquid chromatography (HPLC)

VERSION 1

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Protocol

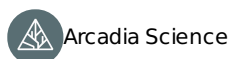


NAME

Nucleoside analysis with liquid chromatography-tandem mass spectrometry (LC-MS/MS)

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