

***E. coli* phage MS2**

Catalog No.: 6000

Expressed in: *E. coli*

Contents:

MS2 phage is provided at a concentration of either 1E7 (PN: 6000S) or 1E8 particles/μL (PN: 6000L)

Background:

MS2 is an *Escherichia coli* bacteriophage with a single-stranded RNA genome of 3569 nucleotides protected from nuclease degradation by a capsid of 180 coat protein monomers. This virus is a Biosafety Level 1 organism capable of replication in conjugative, F+, “male” *E. coli*. It is not pathogenic to humans and is easily purified from laboratory strains of *E. coli*. These properties make MS2 phage useful as a process control in any nucleic acid-based amplification techniques including reverse transcriptase-PCR and LAMP, particularly for those that involve viral RNA extraction.

Application Notes:

For use as a process control in standard RNA extraction and detection protocols such as viral RNA extraction and purification followed by detection by LAMP or RT-PCR.

*These products are intended for research use only, not for diagnostic use. The safety and efficacy of these products in diagnostic or other clinical uses has not been established.

Shipping and Storage:

MS2 phage is stored at 4 °C in 10 mM Tris-HCl, 0.1 mM EDTA, pH 8.0.

MS2 phage is shipped on dry or blue ice. On arrival store at 4 °C for optimum stability. Repeated freeze/thaw cycles should be avoided.

Quality Control:

- MS2 phage concentration: After purification, the RNA concentration was assessed by A_{260nm}. Based on this measurement, the samples are diluted and quantified using a TaqMan real-time qRT-PCR assay against a known standard before and after adjustment to the final concentration. Samples and standards have replicate variability <20%.
- MS2 phage is free of detectable RNase and DNase (exo- and endonuclease).
- <0.2 ng contaminating host DNA per 1E8 particles