

## PR1MA™ MS2 Phage

### *Single-stranded RNA control*

#### Contents

PR1MA™ MS2 phage is provided at a concentration of either 1E10 (PN: PR-MS2-SM-100) or 1E11 particles/uL (PN: PRMS2-LG-500)

#### 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 & 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

- PR1MA™ MS2 phage concentration: After purification, the RNA concentration was assessed by A260 nm. 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