



PCR-*Listeria monocytogenes* Detection Kit

(Catalog # K1449-96-96; 96 Rxns; Storage at -20°C)

I. Introduction:

Listeria monocytogenes are Gram-positive, rod-shaped ubiquitous bacteria that cause human listeriosis, a rare disease associated with high hospitalization and mortality rates—causing septicemia, meningitis, miscarriage, and stillbirth—that affects the elderly, pregnant women, newborns, and immunocompromised adults. The ingestion of contaminated food (such as meat, poultry, dairy, vegetables, and ready to eat products) is the main route of transmission to humans.

BioVision's PCR-*Listeria monocytogenes* Detection Kit is an ideal tool for simple, fast and reliable Amplification and Detection of specific DNA fragments from *Listeria monocytogenes* by the real-time PCR method. The Kit includes all reagents required in a comfortable ready-to-use Multiplex PCR MasterMix. The optimized MasterMix contains a Buffer, dNTPs, Hot-start DNA polymerase, DNA-free water, MgCl₂ and an Internal Amplification Control (IAC) whose detection indicates the absence of PCR inhibitors. Primers and Probes for the amplification of IAC as well as for the amplification of the target gene are included in the MasterMix. The Probe for the detection of target gene is labeled with the FAM, whereas the probe for the detection of IAC is labeled with the HEX fluorochrome.

Additionally, the kit includes both Positive Control and Negative Controls. The Positive control is supplied to demonstrate that the PCR amplification is working efficiently with the supplied components. To confirm absence of contamination, a Negative control reaction should be included every time the kit is used. The kit also includes DNAREady Lysis Buffer to extract the DNA from the sample prior to PCR detection.

II. Applications:

- Real-time PCR

III. Sample Type:

- Bacteria, *Listeria monocytogenes*
- Food samples

IV. Kit Contents:

Components	K1449-96	Part Number
PCR Master Mix	1 Vial	K1449-96-1
DNAREady Lysis Buffer	1 Bottle	K1449-96-2
PCR Positive Control	1 Vial	K1449-96-3
PCR Negative Control	1 Vial	K1449-96-4

V. User Supplied Reagents and Equipment:

- Centrifuge; Water bath
- Extracted DNA sample
- PCR tube
- Stomacher
- Real Time Thermal cycler

VI. Storage Conditions and Reagent Preparation:

All the reagents are shipped in dry ice and stored at -20°C upon receipt. Avoid prolonged exposure to light. If stored correctly the kit will retain full activity for 12 months.

VII. Assay Protocol:

The kit includes DNAREady Lysis Buffer to extract the DNA from the sample prior to PCR detection.

PCR cycling conditions:

Step	Time	Temperature
Initial Denaturation	10 min	95°C
40 Cycles	15 sec	95°C
	1 min	60°C
Melt Analysis	Refer to instrumental instructions	

Analysis of results:

Follow instrument software instructions to generate cycle threshold (Ct) values from the acquired data. The user may also, optionally, analyze the melt profile of each reaction. The quantity of DNA target in each sample can be calculated by referring to the positive control template Ct value.

VIII. Related Products:

- PCR Master Mixes and Kits (Cat# M1127- M1145)
- DNA Extraction (Cat# K1411-K1417); K309; K316
- Q-PCR (Cat# M1105-M1126)

FOR RESEARCH USE ONLY! Not to be used on humans.