

Specification

PCR kit designed for the detection and quantification of *Listeria monocytogenes* in food samples according to standard microbiology procedures.

Presentation

	Packaging Details	Shelf Life	Storage
Kit for 100 reactions Microtubes with: ± 2 ml	5 microtubes per box.	12 months	-20-15 °C

Composition

Reagents	Identification	Content
5x Reagent Mix*	Green	1 x 440 µl
Primers-Probes qPCR [†]	Blue	1 x 100 reactions
Standard DNA (<i>L.monocytogenes</i> ATCC35152)	Yellow	1 x (1x10exp7 UG)
Water PCR grade	White	2 x 1.5 ml

* Reagent mix: **Solis Fast Probe[®] qPCR Mix with UNG (no Rox)** (contains HOT FIREPol[®] DNA Polymerase, UNG, qPCR buffer, dNTP mix - dATP, dCTP, dGTP, dUTP)

[†] Contains specific primers and probes (*Listeria monocytogenes* & Internal control) and DNA of Internal control.
Solis Fast Probe and Hot Firepol[®] are Solis Biodyne trademark, these reagents are manufactured under license.

Description /Technique

Description:
PCR kit designed for the detection and quantification of *Listeria monocytogenes* in food samples after enrichment steps according to standard microbiology procedures. It can also be used to confirm suspect colonies isolated in selective culture media.

Regarding the use of this kit as a detection system for *Salmonella* in food samples, it is based on the technical specifications of the method **FDA, BAM Protocol Simultaneous Confirmation of *Listeria* species and *L. monocytogenes* isolates by real-time PCR.**

This set of primers and probes is compatible with a viability PCR procedure.

Technique:

Follow the kit's instructions.

Each laboratory must evaluate the results according to specifications.

Proceed according to directives and regulations.

The use of the PCR Kit together with the nucleic acid extraction reagent (Quick DNA) is suitable for the categories of foods that may contain this microorganism when the enrichment is carried out following **ISO 11290-1**.

Regarding the use of this kit as a colony confirmation tool, this use is covered by the **ISO 7218: A1 2013** Microbiology of food and animal feeding stuffs – General requirements and guidance for microbiological examinations, in point 12.5

This kit is shipped at room temperature, the shipment at room temperature does not affect the performance of the kit.

Once received, store the kit at -20°C; under these conditions and with proper handling, the kit performance is guaranteed at the least until the expiration date.

Quality control

Control PCR

Initial activation: 3 min at 95°C

Denaturation: 15 s a 95°C

Annealing/Extension: 60 s a 60°C. Fluorescence detection

Total qPCR cycles: 45

Test

PCR Efficiency. Dilutions 10exp0-10exp3, triplicate.

Slope Calibration Curve ($y=ax+b$)

LD qPCR <10 UG (n=10)

Internal Control Signal (Ct)

Negative Control Signal (Ct)

Specification

75%-125%

$-4,115 < a < -2,839$

LD qPCR > 90%

28-32

No signal

Sterility control

Incubation 48 hours at 30-35 °C and 48 hours at 20-25 °C: NO GROWTH.

Check at 7 days after incubation in same conditions.

Bibliography

- BAM Protocol: Simultaneous Confirmation of *Listeria* species and *L. monocytogenes* isolates by real-time PCR.
- ISO 11290-1:2017 Standard. Microbiology of the food chain. Horizontal method for the detection and enumeration of *Listeria monocytogenes* and for *Listeria* spp.- Part 1: Detection Method
- Instructions *Listeria monocytogenes* qPCR Kit for 100 reactions.