



NQAC

Nestlé Quality Assurance Center  
Dublin

# Technical Datasheet

**Analysis Name:** Detection of *Listeria species* and *Listeria monocytogenes* by IQ-Check®

**Method Number:** LI-00.708 WI

**Scope of Application:** Raw materials, environmental samples, line and finished product samples.

**Description:** A qualitative Real-Time PCR (RTi-PCR) method, using the Bio-Rad iQ-Check® *Listeria* spp. assay to produce next-day screening results. Samples incubate in a selective broth, then are treated with a DNA removal enzyme. A robotic liquid handling platform extracts target DNA, and RTi-PCR is performed in a CFX 96 detection system. Positive sample enrichments undergo a secondary *L. monocytogenes* screen using the Bio-Rad iQ-Check® *Listeria monocytogenes* II assay. Positive enrichments are confirmed on selective agar. Sample enrichments are cultured to isolate and identify *Listeria* to the species level (i.e. *L. monocytogenes*, *L. innocua*, *L. ivanovii*, *L. seeligeri*, *L. welshimeri*, *L. grayi*).

**Sample Weight**

**Required:** 25 g, 100 g, 125 g, or swab

**Method Reference:** Bio-Rad iQ-Check® *Listeria monocytogenes* II (LMII) AFNOR Certificate No. BRD 07/10 – 04/05.  
Bio-Rad iQ-Check *Listeria* spp (LIS) AFNOR Certificate No. BRD 07/13-05/07.

Validated against EN ISO 11290-1:2017 Part 1 per EN ISO 16140-2:2016.

LMII- AOAC® Performance Tested Certificate No. 010802, January 28, 2021.

LIS- AOAC Performance Tested Certificate No. 090701, October 30, 2023.

**Analytical Platform:** Real-Time PCR

**Special Information:** Some matrices may not be appropriate for RTi-PCR, leading to a “Not Determinable” result. Matrices inhibitory to *Listeria* growth might require higher pre-enrichment dilutions.



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| Analyte Reported  | Alias | Unit of Measure            | Limit of Quantification                 | Reproducibility |
|---|-------|----------------------------|---|-----------------|
| <i>Listeria</i> spp. Final                              |       | Per gram<br>or Per<br>swab | Detected/Not Detected                   |                 |
| <i>Listeria monocytogenes</i><br>Final                  |       | Per gram<br>or Per<br>swab | Detected/Not Detected                   |                 |
| Listeria Species<br>Identified                          |       | N/A                        | Organism Name/No Typical<br>Growth      |                 |
| <i>Listeria monocytogenes</i><br>Confirmation<br>Result |       | N/A                        | Isolate Obtained/No Isolate<br>Obtained |                 |

\*Note: Absence of *typical Listeria* or *L. monocytogenes* growth does not automatically invalidate a positive PCR "Detected" result.

**Listeria species and monocytogenes by IQ-Check : LI-00.708 : 8021834**

|                              | <u>Result</u> | <u>Units</u> |
|------------------------------|---------------|--------------|
| Listeria spp. Final          | Detected      | /25 g        |
| L. spp Date Analyzed         | 10/30/2024    | -            |
| Listeria monocytogenes Final | Detected      | /25 g        |
| L. mono Date Analyzed        | 10/30/2024    | -            |

**Listeria species and monocytogenes Confirmation : LI-00.708-LM-B : 8021834**

**Comment:** When *Listeria monocytogenes* is not isolated from a sample, the confirmed presence of other *Listeria* species does not indicate the absence of *L. monocytogenes*.

|   | <u>Result</u>           | <u>Units</u> |
|---|-------------------------|--------------|
| Listeria Species Identified                   | <i>Listeria innocua</i> | -            |
| Listeria monocytogenes Confirmation<br>Result | No Isolate<br>Obtained  | -            |

**Listeria species and monocytogenes by IQ-Check : LI-00.708 : 8021837**

|                              | <u>Result</u> | <u>Units</u> |
|------------------------------|---------------|--------------|
| Listeria spp. Final          | Detected      | /25 g        |
| L. spp Date Analyzed         | 10/30/2024    | -            |
| Listeria monocytogenes Final | Not Detected  | /25 g        |
| L. mono Date Analyzed        | 10/30/2024    | -            |

**Listeria species and monocytogenes Confirmation : LI-00.708-LM-B : 8021837**

|                             | <u>Result</u>           | <u>Units</u> |
|-----------------------------|-------------------------|--------------|
| Listeria Species Identified | <i>Listeria innocua</i> | -            |