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Regulatory News 2017

Revised EN ISO 11290:2017 standards for detection and enumeration of *Listeria monocytogenes* and *Listeria* spp. in the food chain

The International Organization for Standardization (ISO), published revised EN ISO 11290-1 and EN ISO 11290-2 standards in 2017. In Part 1, a horizontal method for the detection of *Listeria monocytogenes* and *Listeria* spp. is specified, and in Part 2, the enumeration of these organisms in food, animal feed and environmental samples is described. The revised Part 1 edition cancels and replaces the first edition EN ISO 11290-1:1996 and incorporates the amendment 1 from 2004. Part 2 cancels and replaces the first edition of EN ISO 11290-2:1998 and incorporates the amendment 1 from 2004. Compared to the previous edition, the main changes are considered as major. In the revised EN ISO 11290:2017, the scope in both Parts 1 and 2 has been extended to enable also the detection and enumeration of *Listeria* spp.

Revised EN ISO 11290-1:2017 at a glance...

- Scope extended to include Listeria spp. detection. The title has changed accordingly.
- Primary enrichment in half-Fraser broth: incubation changed to 25 h ± 1 h.
- Secondary enrichment in Fraser broth updated to 24 h ± 2 h.
- Enriched half-Fraser and Fraser broths may be refrigerated before transfer or isolation on selective agar for max. 72 h.
- Incubated isolation plates can be refrigerated for a maximum of two days before reading.
- Microscopic confirmation aspect is optional in the case of use of agar specific for pathogenic *Listeria* spp.
- CAMP and catalase tests are optional.
- New performance characteristics included.

Procedure steps for *Listeria monocytogenes* and *Listeria* spp. detection according to the revised EN ISO 11290-1:2017 standard

Day	Procedure Step	
1	**Pre-enrichment**	**Prepare the test portion sample (25 g or 25 mL) in half-Fraser broth (225 mL)** 24-26 h • 30 °C ± 1 °C
2	**Selective enrichment**	**0.1 mL of culture + 10 mL Fraser broth** 24 h ± 2 h • 37 °C ± 1 °C
3	**Plating-out**	**Streak from both primary AND secondary enrichments onto:** **1. Listeria selective agar acc. Ottaviani and Agosti** 24 h ± 2 h • 37 °C ± 1 °C **and additionally** 24 h ± 2 h • 37 °C ± 1 °C **2. 2nd selective agar of choice (e.g. PALCAM agar, Oxford agar), Incubate as specified by the manufacturer**
4	**Confirmation**	Test 1 typical colony. If negative, test 4 additional marked colonies.
5		Streak onto non-selective agar (e.g. Nutrient agar) 24 h ± 3 h • 37 °C – 1 °C
6	**Expression of result**	Follow confirmation procedures for *L. monocytogenes* Follow confirmation procedures for *Listeria* spp. Expression of results

New EN ISO 22964 at a glance...

- Primary suspension with buffered peptone water, half-Fraser with or without supplements, and all appropriate dilutions are referred to in ISO 6887.
- Resuscitation step (incubation of initial suspension of sample 1 h ± 5 min at 20 °C ± 2 °C) deleted.
- Microscopic aspect, CAMP and catalase tests are optional.
- Enumeration of *Listeria* spp. is included in the scope. Title is changed accordingly.

Procedure steps for *Listeria monocytogenes* and *Listeria* spp. enumeration according to the revised EN ISO 11290-2:2017 standard

Day	Procedure Step	
1	**Sample preparation**	**Test portion (x g or x mL) + Diluent (e.g. buffered peptone water) for initial suspension (9x g or 9x mL)**
2	**Plating-out**	**Surface inoculate onto Listeria selective agar acc. Ottaviani and Agosti. Incubate** 24 h ± 2 h **and additional** 24 h ± 2 h at 37 °C ± 1 °C. **Enumerate presumptive *L. monocytogenes* and / or *Listeria* spp.**
3	**Plating-out**	**Test 1 colony from each dilution. Streak onto non-selective agar (e.g. Nutrient agar)** 24 h ± 3 h • 37 °C ± 1 °C
4	**Expression of result**	Follow confirmation procedures for *L. monocytogenes*
5		Follow confirmation procedures for *Listeria* spp. Calculate and report the results for *L. monocytogenes* and/or *Listeria* spp.

As a worldwide leading provider of a broad range of dehydrated granulated and ready-to-use culture media for food, beverages and water microbiology, we closely track and support the development of relevant standards to ensure consumer confidence and safety.

Our GranuCult® granulated media, Readybag® pre-weighed granulated media in ready-to-use bags, ReadyPlate™, and ReadyTube® ready-to-use media are all compliant with EN ISO 11133:2014. All information regarding compliance with additional reference standards are displayed on the product label and in the technical information available on our website.

Compliance to revised ISO 11290:2017

We have implemented all the requirements described in both part 1 and part 2 of the revised EN ISO 11290:2017. For more information, please visit SigmaAldrich.com/Food-Microbiology. The following culture media and accessories described in the revised EN ISO 11290:2017 are available:

Ordering Information

Product	Pack size	Cat. No.
GranuCult® Half FRASER (Demi FRASER) Broth (Base) with Antibiotics acc. ISO 11290	500 g	**1.00025.0500**
FRASER Listeria Selective Supplement	10 x 1 vial	**1.00093.0010**
Readybag® Half FRASER (Demi FRASER) Broth with Supplements acc. ISO 11290, 12,5 g, irradiated	60 bags each 12,5 g	**1.02449.0060**
Readybag® Half FRASER (Demi FRASER) Broth with Supplements acc. ISO 11290, 62 g, irradiated	35 bags each 62 g	**1.01865.0001**
ReadyTube® 225 Half Fraser ISO 11290	6x 225 mL	**1.46476.0006**
GranuCult® FRASER Broth (Base) acc. ISO 11290	500 g	**1.10398.0500**
ReadyTube® 10 Fraser Broth ISO 11290	20x 10 mL	**1.46208.0020**
Chromocult® Listeria Agar (Base) acc. OTTAVIANI and AGOSTI acc. ISO 11290	500 g	**1.00427.0500**
Chromocult® Listeria Agar Enrichment Supplement	10 x 1 vial	**1.00439.0010**
Chromocult® Listeria Agar Selective Supplement Chromocult® Listeria Agar Selective Supplement	10 x 1 vial	**1.00432.0010**
ReadyPlate™ CHROM Listeria Agar ISO 11290	20 plates	**1.46186.0020**

Product	Pack size	Cat. No.
PALCAM Listeria-Selective Agar (Base) acc. to VAN NETTEN et al.	500 g	**1.11755.0500**
PALCAM Listeria Selective-Supplement acc to van Netten et al	10 x 1 vial	**1.12122.0010**
Oxford Listeria-Selective Agar (Base)	500 g	**1.07004.0500**
Oxford Listeria-Selective Supplement	10 x 1 vial	**1.07006.0010**
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GranuCult® Nutrient agar acc. ISO 6579, ISO 10273 and ISO 21528	500 g	**1.05450.0500**
GranuCult® Tryptic Soy Agar EP, USP, JP, ISO, FDA-BAM**	500 g	**1.05458.0500**
Maximum Recovery Diluent (Peptone salt solution)	500 g	**1.12535.0500**
Blood agar base No.2	500 g	**1.10328.0500**
ReadyTube® 1000 BPW ISO 6579, 6887, 21528, 11290	6 x 1000 mL	**1.46403.0006**

Other pack sizes available
* 5 kg, 25 kg
** 5 kg

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