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Product Specification Sheet

Brilliance™ Listeria Agar

Intended Usage: A medium for the isolation, enumeration and presumptive identification of *Listeria* species and *Listeria monocytogenes* from foodstuffs.

For professional use only.

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Thermo Scientific™ *Brilliance*™ Listeria Agar

Form of Product	Poured plate
Storage	2 – 12°C, dark
Filling weight	17 g ± 5 %
Packaging	10 plates wrapped in film
pH	7.2 ± 0.2
Appearance	Honey yellow, translucent
Shelf life	10 weeks
Intended Usage	A medium for isolation, enumeration and presumptive identification of *Listeria* species and *L. monocytogenes* from food samples. For professional use only.
Technique	Depends on the different methods. For information see product information.

Typical formulation*	g/l
Peptone	18.5
Yeast extract	4.0
Sodium chloride	9.5
Sodium pyruvate	2.0
Lithium chloride	15.0
Maltose	4.0
Chromogenic mix	0.2
Lecithin	40.0 ml
Nalidixic acid	0.026
Polymixin B	0.01
Ceftazidime	0.006
Amphotericin B	0.01
Agar	14.0

*Adjusted as required to meet performance standards.

Quality Control

1. Control for general characteristics, labelling and printing.

2. Contamination check
   ≥ 72 h @ 20 – 25 °C, aerobic
   ≥ 72 h @ 30 – 35 °C, aerobic

3. Microbiological control

Positive Controls	Growth
Inoculum 50 – 120 colony forming units (cfu), quantitative **Incubation conditions: 40 – 48 h @ 36 ± 1°C, aerobic**	
Listeria monocytogenes ATCC®13932™	2 mm, light blue colonies with opaque zone.
Listeria innocua ATCC®33090™	2 mm, light blue colonies
Colony counts shall be ≥ 50% of the control medium TSA.	

Negative Controls	Growth
Inoculum ≥ 10^4 cfu, quantitative, control medium TSA. **Incubation conditions: 40 – 48 h @ 36 ± 1°C, aerobic**	
Escherichia coli ATCC®25922™	Complete inhibition (≤ 10 cfu).
Enterococcus faecalis ATCC®29212™	Complete inhibition (≤ 10 cfu).

Description

The *Brilliance* Listeria Agar from Oxoid is a modification of the agar as per Ottaviani and Agosti[1] and serves for selective isolation and presumptive identification of Listeria species via the chromogenic substrate X-glucoside. Pathogenic Listeria such as *L. monocytogenes* can be differentiated based on the occurrence of cloudy halos around the colonies that can be attributed to lecithinase activity. The lecithin contained in the agar is hereby split by a phospholipase and the resulting, insoluble diacylglycerol causes the halo formation. Some *L. ivanovii* strains also exhibit lecithinase activity, and although these are primarily animal pathogens, infections among humans have been described[2]. The addition of selective agents such as lithium chloride and various antibiotics suppresses the growth of the accompanying flora. This is particularly important for *Enterococcus* species because these also exhibit a ß-glucosidase and would therefore otherwise be difficult to differentiate from *Listeria*.

Technique

1. According to the detection method, inoculate the agar from the enrichment broth. According to the enumeration method, dilute the sample 1:10 in non-supplemented Fraser Broth (OXOID CM0895), incubate for 1 hour at 20°C, then inoculate the agar.

2. Incubate at 36 ± 1°C for 24 hours and investigate with regard to the occurrence of typical blue-green-coloured colonies with or without halo formation. If negative, incubate for an additional 24 hours.

Literature

1. Ottaviani, F., Ottaviani, M. and Agosti, M. (1997) Quinper Froid Symposium Proceedings, P6 A.D.R.I.A. Quinper (F) 16-18 June.
2. Cummins, A. J., Fielding, A. K. and McLauchlin, J. (1994) Listeria ivanovii infection in a patient with AIDS. Journal of Infection 28, 89-91.