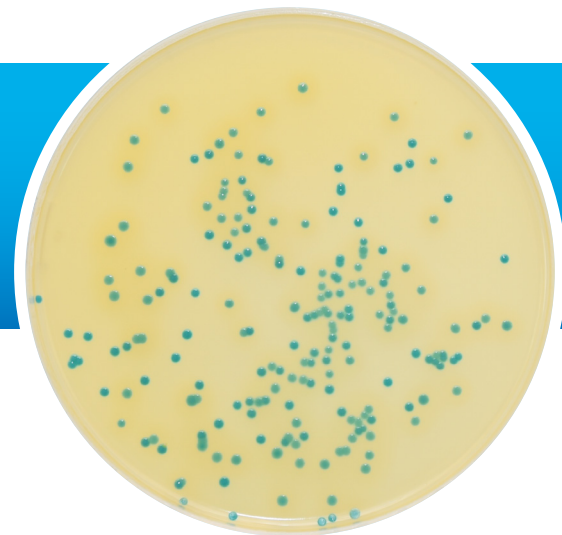


PP7021 COLOREX™ LISTERIA (ISO)



Listeria spp. are ubiquitous in the environment but only one species is routinely associated with human disease namely, *L.monocytogenes*. This bacterium can be present in numerous foodstuffs, especially dairy products, but it is rarely implicated in outbreaks of gastrointestinal disease. However, it is generally accepted that levels of >100cfu/g of *L.monocytogenes* in foodstuffs should be considered potentially hazardous. *Listeria* spp. possess very similar biochemical profiles and mixed cultures cannot be differentiated on traditional culture media such as Oxford and Palcam agars.

Colorex™ Listeria (ISO) negates this problem through the use of a mix of chromogenic technology and the detection of phospholipase-C enzyme activity.⁽¹⁾ After 18 - 24hrs incubation, *Listeria* spp. form blue colonies while *L.monocytogenes* forms blue colonies surrounded by an opaque, white halo allowing for the presumptive identification of this bacterium. This medium complies with ISO 11290-2:1998/Amd 1:2004.

Recent developments in culture media have given rise to the use of chromogenic substrates as a means of differentiating bacteria. This is one such medium and is a selective medium for the isolation and presumptive identification of *Listeria monocytogenes* from clinical and food samples. The medium is made selective by the inclusion of Lithium chloride, Ceftazidime, Polymyxin B, Nalidixic acid (to suppress other bacteria) and Amphotericin B (to suppress yeasts and fungi). With the combination of both the chromogenic substrate and phospholipase C enzyme reactions, it is possible to differentiate *L.monocytogenes* from other *Listeria* spp.

Users should be aware that some strains of *L.ivanovii* are capable of producing an opaque halo, highlighting the need to confirm presumptively identified colonies.

⁽¹⁾ El Marrackchi A., Boum'handi N., Hamama A. 2005. Letters in Applied Microbiology, 40: 87-91.

Formula	gm/litre	Additives	gm/litre
Peptone	18.0	Amphotericin B	0.01
Yeast extract	10.0	Nalidixic acid	0.02
Tryptone	6.0	Polymyxin B	76700 IU
Sodium Chloride	5.0	Ceftazidime	0.02
Lithium Chloride	10.0	Phosphatidylinositol	2.0
Sodium pyruvate	2.0		
Glucose	2.0		
Di-Sodium hydrogen phosphate	2.5	Properties	
Glycerophosphate	1.0	Appearance	Firm Gel
Magnesium sulphate	0.5	Colour	Pale Cream
X-β-D-glucopyranoside	0.05	pH	7.2 ± 0.2
Agar	15.0	Storage	2 - 8 °C
		Shelf Life	56 days

Quality Control Test Organisms	Ref. No.	Result
<i>Listeria innocua</i>	NCTC 11288	Blue Colonies with No Halo
<i>Listeria monocytogenes</i>	NCTC 11994	Blue Colonies with White Halo
<i>Escherichia coli</i>	NCTC 12241	Inhibited
<i>Enterococcus faecalis</i>	NCTC 12697	Inhibited
<i>Saccharomyces cerevisiae</i>	NCPF 3178	Inhibited

Recommended Incubation : Aerobically at 37°C ± 1 °C in O₂ for 18 - 24 hours