

Chromogenic *Listeria* Agar(OA)

Product No.	Product Category	Specification
CRM019B	Dehydrated Culture Medium	500g/bottle

Intended Use

For the enumeration, isolation, and confirmation of *Listeria monocytogenes*.

Principle and Interpretation

Peptone, soybean peptone, and yeast extract provide nitrogen sources and trace elements. Glucose serves as the carbon source. Sodium pyruvate, magnesium glycerophosphate, magnesium sulfate, and lithium chloride promote bacterial growth and regulate enzyme activity. Sodium chloride maintains osmotic balance. Disodium hydrogen phosphate acts as a buffer. Agar is the solidifying agent. The chromogenic substrate 5-bromo-4-chloro-3-indolyl- β -D-glucopyranoside reacts specifically with β -glucosidase produced by *Listeria spp.*, releasing a chromogenic group to form green colonies. The supplementary reagents (SR0750) contain lecithin and antibiotics to inhibit non-target bacteria. *Listeria monocytogenes*, which produces lecithinase, forms green colonies surrounded by a milky-white halo of precipitated lipids.

Formulation

Ingredients	/liter
Peptone	18.0g
Tryptone	6.0g
Yeast extract	10.0g
Sodium pyruvate	2.0g
Glucose	2.0g
Magnesium glycerophosphate	1.0g
Nalidixic acid	0.02g
Polymyxin B	76700IU
L- α -Phosphatidylinositol	2.0g
Magnesium sulfate (anhydrous)	0.5g
Sodium chloride	5.0g
Lithium chloride	10.0g
Disodium hydrogen phosphate (anhydrous)	2.5g
5-Bromo-4-chloro-3-indolyl- β -D-glucopyranoside	0.05g
Agar	15.0g

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Technical Data Sheet



Ceftazidime	0.02g
Cycloheximide	0.1g
pH 7.2±0.2 at 25°C	

Preparation

Weigh 72.1g of dry powder and add to 950mL purified water. Stir and heat until fully dissolved (adjust proportionally for larger or smaller batches). Autoclave at 121°C for 15 minutes. Cool to approximately 50°C. Add 10 mL sterile purified water to each tube of supplementary reagent (SR0750). Vortex for 3-5 minutes to dissolve. Mix the dissolved reagent into 190mL of the cooled base medium. Pour into sterile Petri dishes and allow to solidify.

Quality Control

Cultural characteristics observed after incubation at 35-37°C for 24±3 hours

Quality control strains	Approx. Inoculum(CFU)	Recovery	Characteristics
<i>Listeria monocytogenes</i> ATCC 19115	10-100	PR≥0.5	Smooth blue-green colonies with milky-white halos
<i>Listeria monocytogenes</i> CMCC(B)54007			
<i>Listeria innocua</i> ATCC33090	> 10 ⁴	-	Blue-green colonies without a halo
<i>Escherichia coli</i> ATCC25922			
<i>Enterococcus faecalis</i> ATCC29212			
<i>Candida albicans</i> ATCC 10231			

Storage and Shelf Life

2-8°C, Keep container tightly closed, avoid direct sunlight.

Use before expiry date on the label.

Precautions

1. When weighing the dehydrated medium, please wear masks to avoid causing respiratory system discomfort
2. Keep container tightly closed after using to prevent clumping.

Waste Disposal

Microbiological contamination was disposed by autoclaving at 121°C for 30 minutes.

Revision

On June 14, 2024

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Listeria monocytogenes: Smooth blue-green colonies with milky-white halos

Other *Listeria* species: Blue-green colonies without a halo

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