



Technical Data Sheet

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Listeria Chromogenic Agar Base

RDM-LCAB-01

Principle

Listeria Chromogenic Agar Base is composed of peptone, meat extract, yeast extract, D-xylose, lithium chloride, phenol red, chromogenic mixture and agar. Peptone, meat extract and yeast extract provide nitrogen, vitamins and other essential nutrients. D-xylose is a fermentable carbohydrate. Lithium chloride and listeria selective supplements inhibit yeasts and molds, gram positive bacteria and gram-negative bacteria. Phenol red is a pH indicator. β -glucosidase activity is detected by using a specific chromogen. The *Listeria* species hydrolyse the specific chromogenic substrate and show blue-colored colonies, whereas other microflora does not show β -glucosidase activity and appear white. D-xylose utilized *Listeria* species (*L. ivanovii*) show a blue colony with yellow halo and D-xylose-not-utilized *Listeria* species (*L. monocytogenes* and *L. innocua*) show a blue colony without yellow halo. Agar is a solidifying agent.

Use: Recommended for rapid identification of *Listeria* species from clinical, non-clinical and food samples.

Contents*

Ingredients

	Gram/Liter
Peptone	30.000
Meat Extract	5.000
Yeast Extract	1.000
D-Xylose	10.000
Lithium Chloride	9.000
Phenol Red	0.120
Chromogenic Mixture	5.130
Agar	13.000
pH at 25°C	7.3 $\pm$ 0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 73.25 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs. pressure (121 °C) for 15 min, cool it to 42-45 °C, aseptically add rehydrated content of 1 vial of Listeria Chromogenic Selective Supplement (2 mg Ceftazidime and 2.5 mg Amphotericin B) mix well and distribute in sterile petri plates and inoculate test sample aseptically.

Specimens types analyzed

Clinical, non-clinical and food samples etc.

Precautions to be taken

All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige to pink colored, free flowing, homogeneous, hygroscopic powder.
Reaction of 7.32% solution with pH	7.3 $\pm$ 0.2 at 25 °C
Gelling strength	1.3 %
Color and clarity of ready medium	Red colored, slightly opalescent gel
Growth Promotion properties	Best at $\leq$ 100 CFU at 32-37 °C for 18-72 h.
Indicative properties	Optimum at $\leq$ 100 CFU at 32-37 °C for 18-48 h.
Negative control	Performed using sterile distilled water.

Different Microbial Response: Cultural characteristics observed after incubation at 33-37°C for 24-48 hours.

Organism	ATCC	Inoculum (CFU)	Growth	Colony color
<i>Listeria monocytogenes</i>	13932	50-100	Luxuriant	Bluish green
<i>Listeria innocua</i>	33090	50-100	Luxuriant	Bluish green with yellow halo
<i>Escherichia coli</i>	8739	50-100	Inhibited	--
<i>Bacillus subtilis</i>	6633	50-100	Inhibited	--
<i>Pseudomonas aeruginosa</i>	27853	50-100	Inhibited	--
<i>Candida albicans</i>	10231	50-100	Inhibited	--

***Note:** Microbial response may alter after addition of antibiotics and carbohydrates.

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), (2015), Standard Methods for the Examination of Water and Wastewater, 23rd Ed., APHA, Washington, D.C.
2. Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015). Manual of Clinical Microbiology, 11th Ed. Vol. 1.

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