

Ornithine Decarboxylase Broth

Medium used for the differentiation of gram-negative enteric bacilli based on ornithine decarboxylation.

• CONTENTS (Liter)

Peptic Digest of Animal Tissue	5.0 g
Beef Extract	5.0 g
Pyridoxal	0.005 g
Dextrose	0.5 g
L-Ornithine	10.0 g
Bromocresol Purple	0.010 g
Cresol Red	0.005 g
Final pH = 6.0 ± 0.2 at 25°C.	

• PROCEDURE

Suspend 20.52 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45-50°C in water bath. Mix well. Dispense in tubes.

• INTERPRETATION

Ornithine Decarboxylase Broth is a medium used for the differentiation of gram-negative enteric bacilli based on the production of ornithine decarboxylation. Peptic digest of animal tissue and beef extract provide nitrogenous nutrients for the growth of bacteria. Pyridoxal is the co-factor for the decarboxylase enzyme. Dextrose is a carbohydrate. Bromocresol purple and cresol red are the pH indicators in this medium. The amino acid ornithine is added to detect the production of the enzyme specific for this substrate.

• TECHNIC

Inoculate the specimen with stab using a sterile needle to the medium. Shake gently for spreading microorganism. Overlay the medium in each tube with 1mL vaseline oil (MB-80278). Incubate at 36 ± 1°C for 24 - 96 hours. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: beige

Prepared medium

Appearance: clear

Color: purple

Incubation conditions: 36 ± 1°C / 24 - 96 hours overlaying with sterile vaseline oil

Microorganism	ATCC	Inoculum CFU	Color of the Medium	Ornithine Decarboxylase
<i>Escherichia coli</i>	25922	50-100	purple	+
<i>Salmonella typhimurium</i>	14028	50-100	purple	+
<i>Pseudomonas aeruginosa</i>	27853	50-100	purple	+
<i>Enterobacter aerogenes</i>	13048	50-100	purple	+
<i>Proteus mirabilis</i>	25933	50-100	purple	+
<i>Citrobacter freundii</i>	8090	50-100	yellow	-
<i>Proteus vulgaris</i>	6059	50-100	yellow	-

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared medium at 2-8°C.

• REFERENCES

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5. Kelly, Justice and Nagy. 1983. Abstr. Q122, p. 280. Abstr. 83rd Annu. Meet. Am. Soc. Microbiol. 1983.
6. Eaton, Rice and Baird (ed.). 2005. Standard methods for the examination of water and wastewater, 21st ed., online. American Public Health Association, Washington, D.C.
7. Kim and Feng. 2001. In Downes and Ito (ed.), Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
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• PACKAGE

Cat. No : MB-O1305 Ornithine Decarboxylase Broth	500 G
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