



ORNITHINE DECARBOXYLASE BROTH

Dehydrated medium used for differentiation of gram-negative enteric bacilli based on ornithine decarboxylation

TYPICAL FORMULA (g/L)

Peptone.....	5.0
Meat Extract.....	5.0
Pyridoxal.....	0.005
Dextrose.....	0.5
L-Ornithine.....	10.0
Bromocresol Purple.....	0.010
Cresol Red.....	0.005
Final pH	6.0 ± 0.2

DESCRIPTION

ORNITHINE DECARBOXYLASE BROTH is a dehydrated medium used in the biochemical differentiation of gram-negative enteric bacilli based on the production of ornithine decarboxylase.

PRINCIPLE

Peptone and meat extract supply the nitrogenous and other nutrients necessary to support bacterial growth. Pyridoxal is an enzyme co-factor for the ornithine decarboxylase. Dextrose is a fermentable carbohydrate. Bromocresol purple and cresol red are pH indicators. The ornithine is the amino acid to detect the production of ornithine decarboxylase.

When the medium is inoculated with a bacterium that is able to ferment dextrose, acids are produced that lower the pH of the medium and change the colour of the indicator from purple to yellow. The acidic condition also stimulates decarboxylase activity. If the organism produces the ornithine decarboxylase, ornithine in the medium is degraded to putrescine. The production of this amine elevate the pH of the medium, changing the color of the indicator from yellow to purple. If the organism does not produce ornithine decarboxylase, the medium remains acid (yellow).

PREPARATION

Suspend 21,0 g in 1 litre of distilled water. Heat until completely dissolved. Dispense into final containers. Autoclave at 121°C for 15 minutes.

TECHNIQUE

Inoculate the broth media by transferring one or two colonies from the surface of a fresh culture with an inoculating loop and mix to distribute the culture throughout the medium.

Overlay the medium in each tube with 1mL Vasellin Oil.

Incubate at 36+/-1°C up to 96 hours.

INTERPRETATION OF RESULTS

A positive reaction is indicated by a purple color of the medium; a yellow color indicates a negative test.

STORAGE

The powder is very hygroscopic: store the powder at 10-30°C, 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 media at 2-8°C.

WARNING and PRECAUTIONS

The product is not classified as hazardous by current legislation. It is nevertheless recommended that the Safety Data Sheet be consulted on its correct use. The product is designed for *In vitro* diagnostic use and must be used only by properly trained operators.

DISPOSAL of WASTE

Disposal of waste must be carried out according to national and local regulations in force.

REFERENCES

1. Moeller.1954. Acta Pathol. Microbiol. Scand. 34:102.
2. Forbes, Sahm and Weissfeld. 1998. Bailey & Scott's Diagnostic Microbiology, 10th ed. Mosby, Inc., St.Louis, Mo.
3. Murray, Baron, Pfaller, Tenorev and Tenover (ed), Manual of Clinical Microbiology, 7th ed. American Society for Microbiology, D.C.



LIOFILCHEM Bacteriology Products

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PRODUCT SPECIFICATIONS

NAME

ORNITHINE DECARBOXYLASE BROTH

PRESENTATION

Dehydrated culture medium

STORAGE

10-30°C

PACKAGING

Code	Content	Packaging
610305	500 gr	500 gr of powder in plastic bottle
620305	100 gr	100 gr of powder in plastic bottle

pH OF THE MEDIUM

6.0 ± 0.2

USE

ORNITHINE DECARBOXYLASE BROTH is a dehydrated medium used in the biochemical differentiation of gram-negative enteric bacilli based on the production of ornithine decarboxylase.

TECHNIQUE

Refer to technical sheet of the product.

APPEARANCE of the MEDIUM

Dehydrated medium

Appearance: homogeneous.

Colour: beige

Prepared medium

Appearance: clear

Colour: purple

SHELF LIFE










4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Sterility control
7 days at 25 ± 1°C, in aerobiosis
7 days at 36 ± 1°C, in aerobiosis
- Microbiological control
Inoculum for productivity: 1000 UFC/ml
Incubation conditions: 24 up to 96 hours at 36 +/- 1°C overlaying with sterile vaselin oil

Microorganisms		Color of the medium	Ornithine Decarboxylase
<i>Escherichia coli</i>	ATCC 25922	Purple	+
<i>Salmonella typhimurium</i>	ATCC 14028	Purple	+
<i>Klebsiella pneumoniae</i>	ATCC 13883	Yellow	-
<i>Pseudomonas aeruginosa</i>	ATCC 27853	Purple	+
<i>Enterobacter aerogenes</i>	ATCC 13048	Purple	+
<i>Proteus mirabilis</i>	ATCC 25933	Purple	+

TABLE of SYMBOLS

Symbol	Meanings
	Catalogue number
	<i>In vitro</i> Diagnostic Medical Device
	Manufacturer
	Temperature limitation
	Contains sufficient for <n> tests
	Use by
	Batch code
	Keep away from heat
	Consult accompanying documents



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