

# Urea Broth



Medium used for the identification and determination of microorganisms on the basis of urease production.

## • CONTENTS (Liter)

Yeast Extract	0.1 g
Monopotassium Phosphate	9.1 g
Disodium Phosphate	9.5 g
Urea	20.0 g
Phenol Red	0.01 g
Final pH = 6.8 ± 0.2 at 25°C	

## • PROCEDURE

Suspend 38.71 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. DO NOT AUTOCLAVE. Cool to 45 - 50°C in water bath. Mix well. Pour into tubes.

## • INTERPRETATION

Urea Broth is a medium used for the identification and determination of microorganisms on the basis of urease production. Yeast extract is a source of carbon, nitrogen, vitamins and minerals. Monopotassium phosphate and disodium phosphate are the buffering agents. Urea is added to detect urease production. Urease positive organisms hydrolyze urea to ammonia and carbon dioxide. Ammonia causes an increase in pH of the medium and changes the color of the medium to pink-red. Phenol red is a pH indicator.

## • TECHNIC

Inoculate the fresh pure cultured colonies using a sterile needle to the medium (required heavy inoculation). Incubate at 35 ± 2°C for 18 - 24 hours up to 6 days. Slightly loosen the caps. Observe reactions daily. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

### Dehydrated medium

Appearance: free-flowing, inherently lumpy

Color: very light pink

### Prepared medium

Appearance: clear

Color: orange-yellow

Incubation conditions: 35 ± 2°C / 18 - 24 hours up to 6 days / loosen the caps

Microorganism	ATCC	Growth	Urease production
<i>Proteus vulgaris</i>	13315	good	+ (pink-red)
<i>Klebsiella pneumoniae</i>	27736	good	+ (pink-red)
<i>Escherichia coli</i>	25922	good	-
<i>Salmonella typhimurium</i>	14028	good	-

## • 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. Store prepared medium at 2 - 8°C.

## • REFERENCES

1. Cowan & Steel's Manual for the identification of medical bacteria 2nd edition, revised by S.T. Cowan. Cambridge: University Press.(1974).
2. Edwards, P.R. & Ewing, W.H. (1972). Identification of Enterobacteriaceae. 3rd edition. Minneapolis: Burgess Publishing Company.

## • PACKAGE

Cat. No : MB-U1311 Urea Broth	500 G
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