

Urea Agar

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

* Equally use with NIER (MB-U1107N).

• CONTENTS (Liter)

Pancreatic Digest of Gelatin	1.0 g
Dextrose	1.0 g
Sodium Chloride	5.0 g
Monopotassium Phosphate	2.0 g
Phenol Red	0.012 g
Agar	15.0 g
Final pH = 6.8 ± 0.2 at 25°C	

• PROCEDURE

Suspend 24.02 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. Aseptically add 10 vials of Urea 40% supplement (MB-U1866). Mix well. Pour into tubes. Arrange tubes in a slanted position.

Urea 40% supplement

1 vial contents (each vial is sufficient for 100 mL of medium)

Urea 2.0 g

• INTERPRETATION

Urea Agar is a medium used for the identification and determination of microorganisms on the basis of urease production. Pancreatic digest of gelatin is a source of carbon, nitrogen, vitamins and minerals. Dextrose is the carbohydrate. Sodium chloride maintains the osmotic balance. Monopotassium phosphate is the buffering agent. Phenol red is a pH indicator. Agar is the solidifying agent. Urea 40% supplement 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.

• 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, homogeneous

Color: light orange-red

Prepared medium

Appearance: slightly opalescent

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>Yersinia enterocolitica</i>	23715	good	+ (pink-red)
<i>Escherichia coli</i>	25922	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. Christensen, W.B. (1946). J. Bact. 52: 461-466.
2. Maslen, L.G.C. (1952). Brit. Med. J. 2: 545-546.
3. ISO 6785: 2001. IDF 93: 2001.
4. Refer to the NIER.

• PACKAGE

Cat. No : MB-U1107 Urea Agar	500 G
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• MICROBIAL CULTURE IMAGES



None

Y.ent
ATCC 23715

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