UREA AGAR (5 ML)

INTENDED USE:
Urea Agar is a differential medium for members of the Enterobacteriaceae on the basis of their ability to produce urease.

PRINCIPLE AND INTERPRETATION:
When organisms utilize urea, ammonia is formed during incubation which makes the reaction of these media alkaline, producing a pink-red color. Consequently, urease production may be detected by the change in the phenol red indicator.

COMPOSITION:

Ingredients	Gr/Liter
Peptone	1 gr
Glucose	1 gr
Sodium chloride	5 gr
Disodium phosphate	1,2 gr
Potassium dihydrogen phosphate	0,8 gr
Phenol red	0,012 gr
Urea	20 gr
Agar	15 gr

***Formula adjusted, standardized to suit performance parameters
pH: 6,8 ± 0,2

PRECAUTIONS:
For professional use only. Do not use tubes if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

TEST PROCEDURE:
Heavily inoculate the surface of a Urea Agar slope with a pure culture of the organism to be tested. When inoculated with urease-positive Proteae the reaction is usually complete after 3-5 hours at 35°C: urease-producing organisms hydrolyse the urea to form ammonia, and the medium changes from orange to pink.

QUALITY CONTROL:
1.Sterility Control:
Incubation 48 hours at 30-35°C and 72 hours at 20-25°C: NO GROWTH

2.Phsical/Chemical Control
pH: 6,8 ± 0,2
Apperance: Orange-yellow

3.Microbiological Control: Incubation at a temperature of 35±2°C and observed after 18-24 hours.

Microorganism	Inoculum (CFU)	Results		
		Growth	Ureaz Reactıon	Colour
Escherichia coli ATCC 25922	10-100	Good	-	Yellow
Proteus mirabilis ATCC 43071	10-100	Good	+	Pink

LIMITATIONS OF THE PROCEDURE:
1. These urea test media rely on the demonstration of alkalinity; hence, they are not specific for urease. The utilization of peptones, especially in slant agar (e.g., by Pseudomonas aeruginosa), or other proteins in the medium may raise the pH to alkalinity due to protein hydrolysis and release of excessive amino acid residues, resulting in false-positive reactions.

2. On Urea Agar, urease-positive Proteeae cause the medium to turn alkaline soon after inoculation. For the results to be valid for the detection of Proteeae, the results must be read within the first 6 h of incubation. Citrobacter freundii and Klebsiella pneumoniae subsp. pneumoniae may produce positive reactions within 24–48 h.

3. For identification, organisms must be in pure culture. Morphological, biochemical, and/or serological tests should be performed for final identification. Consult appropriate texts for detailed information and recommended procedures.

STORAGE CONDITIONS AND SHELF LIFE:

Store the prepared medium at 2- 12°C. Use before expiry date on the label. Do not use beyond stated expiry date.

DISPOSAL:

Incubated medium may contain active bacteria and micro-organisms. Do not open infected medium. Infected tube should be autoclaved, incinerated or opened and soaked in a chlorine-based disinfectant (liquid bleach) for 20 minutes prior to disposal.

PACKAGING:

Katalog Number: 01021
Content/Packaging:50 Tubes/Box

REFERENCES:

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