

Specification

Liquid medium for determination of urease and indole test.

Presentation

	Packaging Details	Shelf Life	Storage
20 Tubes Tube 16 x 113 mm with: 2 ± 0,1 ml	16x113 mm glass tubes, ink labelled, metal-Non injectable cap. 20 tubes per box .	12 months	8-14°C

Composition

Composición (g/l):

Peptone.....	1.000
D(+) Glucose.....	1.000
Sodium chloride.....	5.000
Potassium dihydrogen phosphate...	0.800
Dipotassium hydrogen phosphate...	1.200
Phenol red.....	0.012
Tryptophan.....	1.000
Urea.....	20.000

Description /Technique

Inoculate with a swab or a loop with the isolated colonie using one tube per isolate.

Incubate 21± 3 h. at 37 ± 1° C before reading.

Microorganisms urease positive, turn medium from clear yellowish to clear pink due to pH indicator Phenol red change because of the production of alkaline metabolites.

The addition of Kovaks reagent to show indole production due to Tryptophane hydrolysis, must be done only after having read the urease reaction. Formation of a red ring indicates indol presence.

E.coli ATCC 25922 Urease (-) Indole (+)

P.mirabilis ATCC 14253 Urease + (6 hours) indole (-)

P.hauseri ATCC 13315 Urease (+) indole (+)

Quality control

Physical/Chemical control

Color : Yellow- orangey pH: 6.8 ± 0.2 at 25°C

Microbiological control

Impregnate the swab with a pure culture recently isolated

Inoculate with loop/swab with pure isolates to get a thick suspension

Aerobiosis. Incubation at 37 ± 1°C, reading after 24 ± 3 h

Microorganism

Escherichia coli ATCC® 25922, WDCM 00013

Proteus hauseri ATCC® 13315

Proteus mirabilis ATCC® 43071

Salmonella typhimurium ATCC® 14028, WDCM 00031

Enterobacter aerogenes ATCC® 13048, WDCM 00175

Growth

Good - Negative urease - Positive indol

Good - Positive urease- Indol positive

Good - Positive urease - Negative indol

Good - Negative urease - negative indol

Good - Negative urease - negative indol

Sterility Control

Incubation 48 hours at 30-35°C and 48 hours at 20-25°C: NO GROWTH

Check at 7 days after incubation in same conditions

Bibliography

- ATLAS, R.M. & L.C. PARK (1993) Handbook of Microbiological Media. CRC Press Inc. London.
- DOWNES, F.P. & K. ITO (2001) Compendium of Methods for the Microbiological Examination of Foods. 4th ed. APHA. Washington.
- COWAN & STEEL, S (1993) Manual for identification of medical bacteria. 3rd. Edition edited and revised by G.I. Barrow and R.K.A. Feltham. Cambridge University Press, Cambridge USA.
- FDA (Food and Drug Administrations) (1998) Bacteriological Analytical Manual. 8th ed. Rev. A. AOAC International. Gaithersburg. MD. USA.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- IN BALOWS, A., et al.(1991) Chapter 122. Manual of Clinical Microbiology. 6th Edition. American Society for Microbiology, Washington, D.C.
- PASCUAL ANDERSON. M^a.R^o. (1992) Microbiología Alimentaria. Díaz de Santos. S.A. Madrid.
- RUSTIGIAN, R. & C.A. STUART (1941) Decomposition of urea by *Proteus*. Proc. Soc. Exp. Biol. Med. 47:108.