STARCH AGAR TM 430

for detection of starch hydrolysing microorganism

Composition

Ingredients	Gms/Ltr.
Peptic digest of animal tissue	5.000
Sodium chloride	5.000
Starch, soluble	2.000
Yeast extract	1.500
Beef extract	1.500
Agar	15.000

* Dehydrated powder, store in a dry place, in tightly-sealed containers at 24°C and protect from direct Sunlight.

Instructions for Use

Dissolve 30.00 gms in 1000ml of distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.

Appearance: Yellow coloured slightly opalescent
PH (at 25°C): 7.4 ± 0.2

Principle

STARCH AGAR is used for detection of starch hydrolysing microorganism. This medium was formulated by Vedder in 1915. Although the medium was originally formulated to perform the test for the identification of *Bacillus cereus*, it can be applied to any kind of microorganism where starch hydrolysis activity is required to be analyzed.

Yeast extract, Beef extract and peptic digest of animal tissue provide nitrogenous compounds, sulphur, carbon trace elements e.t.c. Sodium chloride maintains the osmotic balance. Flood the surface of 48 hours old culture on Starch Agar with Grams Iodine (TBL 034). Starch hydrolysis is seen as a colourless zone surrounding the colonies. A blue or purple zone indicates that starch is not hydrolyzed. Size of the clear zone is directly proportional to the starch hydrolyzing activity of the strain under study.

Interpretation

Cultural characteristics observed after incubation at 35 - 37°C for 18 - 48. (* - on addition of Iodine solution)

Microorganisms	ATCC	Inoculum (CFU)	Growth	Starch hydrolysis*
Bacillus subtilis	6633	10^3	Luxuriant	Positive reaction, clearing around the colony
Escherichia coli	25922	10^3	Luxuriant	Negative reaction
Staphylococcus aureus	25923	10^3	Luxuriant	Negative reaction
Streptococcus pyogenes	19615	10^3	Luxuriant	Negative reaction

References

1. Vedder E. B., 1915, J. Infect. Dis., 16:385.
2. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
3. Harrigan W. and McCance M., 1976, Laboratory Methods in Food and Dairy Microbiology, Academic Press Inc. (London) Ltd.