

**STARCH AGAR**

TM 867

for detection of starch hydrolyzing microorganism

Composition

Ingredients	Gms/Ltr.
Malt extract	3.00
Peptic digest of animal tissue	5.00
Starch, soluble	2.000
Agar	15.00

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

Instructions for Use

Dissolve 25.00 gms in 1000 ml 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. Mix well and dispense as desired.

Appearance: Yellow coloured slightly opalescent

pH (at 25°C): 7.2 ± 0.1

Principle

STARCH AGAR is used for detection of starch hydrolyzing microorganism. Starch Agar was formulated by Vedder for the cultivation of *Neisseria*. It is recommended for the detection of starch hydrolysing microorganisms from foods and clinical samples. Present formulation is accepted by BIS for detection of starch hydrolysis by *Bacillus cereus*.

Peptic digest of animal tissue and meat extract provide nitrogenous compounds, carbon, sulphur, trace elements etc. to the microorganisms.

Flood the surface of 24 - 48 hour old culture on Starch Agar with Gram's 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.

Interpretation

Cultural characteristics observed after inoculation (10^3 CFU/ml) and incubation at 35 - 37°C for 18 - 48 hours.

Microorganisms	ATCC	Inoculum (CFU)	Growth	Recovery	Starch hydrolysis
<i>Bacillus cereus</i>	10876	10^3	Luxuriant	≥70%	Positive reaction, clearing around the colony



PRODUCT DATA SHEET

<i>Bacillus subtilis</i>	6633	10 ³	Luxuriant	>=70%	Positive reaction, clearing around the colony
<i>Escherichia coli</i>	25922	10 ³	Luxuriant	>=70%	Negative reaction, no clearing
<i>Staphylococcus aureus</i>	25923	10 ³	Luxuriant	>=70%	Negative reaction, no clearing
<i>Streptococcus pyogenes</i>	19615	10 ³	Luxuriant	>=70%	Negative reaction, no clearing

References

1. Vedder, 1915, J. Infect. Dis., 16:385.
2. Lennette and others (Eds.), 1985, Manual of Clinical Microbiology, 4th ed., ASM, Washington, D.C.
3. Harrigan W. and McCance M., 1976, Laboratory Methods in Food and Dairy Microbiology, Academic Press Inc. (London) Ltd.
4. Bureau of Indian Standards, IS : 5887 (Part IV) 1976.