

**NUTRIENT GELATIN (as per BIS)****TM 1059**

for detection of gelatin liquefaction by proteolytic microorganisms

Composition

Ingredients	Gms/Ltr.
Peptic digest of animal tissue	5.000
Meat extract	3.000
Gelatin	120.000
Sodium chloride	30.000

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

Instructions for Use

Dissolve 158.00 gms in 1000ml of warm (50°C) water. Gently heat to 50°C and dissolve the medium completely. Dispense into test tubes and sterilize by autoclaving at 15 psi (121°C) for 12 minutes.

Appearance: Light amber coloured clear to slightly opalescent

PH (at 25°C): 7.0 ± 0.2

Principle

NUTRIENT GELATIN (as per BIS) is used for detection of gelatin liquefaction by proteolytic microorganisms. This medium is prepared as per recommended by BIS. Gelatin liquefaction is one of the essential test for the differentiation of enteric bacilli. This medium can also be used for the microbial plate counts of water.

Meat extract and peptic digest of animal tissue supply nutrients for the growth of nonfastidious organisms. Organisms produce gelatinase, a proteolytic enzyme active in the liquefaction of gelatin. For testing gelatinase liquification, the strains are stab inoculated in Nutrient Gelatin. Many species require prolonged incubation for gelatin liquefaction. Gelatin is solid at 20°C or less temperature and liquid at 35°C or higher temperature. Gelatin liquefies at about 28°C, so incubation is carried out at 35°C but kept in a refrigerator for about 2 hours before interpretation of the results. Liquefaction of gelatin occurs on the surface layer, so care should be taken not to shake the tubes. Control is run along with every testing as gelling ability of gelatin varies and also the gelatin concentration should not exceed 12% as it may inhibit growth.

Interpretation

Cultural characteristics observed after 1 to 7 days at 35 - 37°C.



PRODUCT DATA SHEET

Microorganisms	ATCC	Inoculum (CFU)	Growth	Gelatinase
<i>Clostridium perfringens</i>	12924	10 ³	Good-luxuriant	Positive reaction
<i>Bacillus cereus</i>	10876	10 ³	Good-luxuriant	Positive reaction
<i>Bacillus subtilis</i>	6633	10 ³	Good-luxuriant	Positive reaction
<i>Escherichia coli</i>	25922	10 ³	Good-luxuriant	Negative reaction
<i>Proteus vulgaris</i>	13315	10 ³	Good-luxuriant	Positive reaction
<i>Staphylococcus aureus</i>	25923	10 ³	Good-luxuriant	Positive reaction

References

1. Bureau of Indian Standards IS: 5887 (Part IV) 1976.
2. Ewing, 1986, Edwards and Ewings Identification of Enterobacteriaceae, 4th ed., Elsevier Science Publishing Co., Inc. New York.
3. Cawan S. and Steel K., 1966, Manual for the Identification of Medical Bacteria, Cambridge University Press, Pg. 19, 27-28, 116 and 156.
4. Lautrop H., 1956, Acta Pathol. Microbiol. Scand., 39:357.
5. Frobisher M., 1957, Fundamentals of Microbiology, 6th ed., W.B. Saunders Co., Philadelphia, and P: 239.
6. Branson D., 1972, Methods in Clinical Bacteriology, Springfield, III, pg 21.