



## Semisolid Nutrient Agar

M1191S

Semisolid Nutrient Agar is used for the detection of Salmonellae on the basis of motility and hydrogen sulphide production.

### Composition\*\*

Ingredients	Gms / Litre
Meat extract	3.000
Peptic digest of animal tissue	5.000
Agar	4.000
Final pH ( at 25°C)	7.0±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 12 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense in tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Allow the tubes to cool in an upright position.

### Principle And Interpretation

Semisolid Nutrient Agar is recommended for detection of Salmonellae on the basis of motility and hydrogen sulphide (H<sub>2</sub>S) production(2,3). Nutrient Agar is a basic culture medium used in water and food studies. It is generally used for maintenance purpose or to check the purity of subcultures(1). It is recommended for isolation of *Salmonella* (2,3). Peptic digest of animal tissue and meat extract provide essential growth nutrients. The motile cultures grow away from the stab line while non-motile grow along the stabline. Lead acetate strip incorporation helps to detect H<sub>2</sub>S production.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Gelling

Semisolid, comparable with 0.4% Agar gel.

#### Colour and Clarity of prepared medium

Light yellow coloured clear gel forms in tube as butts.

#### Reaction

Reaction of 1.2% w/v aqueous solution at 25°C. pH : 7.0±0.2

#### pH

6.80-7.20

#### Cultural Response

M1191S: Cultural characteristics observed after an incubation at 35-37°C for 18 -24 hours

Organism	Growth	Motility	H <sub>2</sub> S(with lead acetate strip)
<b>Cultural Response</b> <i>Escherichia coli</i> ATCC 25922	luxuriant	Positive, growth away from stabline causing turbidity	Negative reaction, no blackening
<i>Salmonella Typhi</i> ATCC 6539	luxuriant	Positive, growth away from stabline causing turbidity	Positive reaction , blackening of the lower portion of the strip
<i>Salmonella Enteritidis</i> ATCC 13076	luxuriant	Positive, growth away	Positive reaction ,

from stable blackening  
causing of the lower  
turbidity portion of the  
strip

## Storage and Shelf Life

Store below 30°C in tightly closed container and prepared medium at 2-8 °C. Use before expiry on the label.

## Reference

1. Lappage S.P Shelton J.E. and Mitchell T.G., 1970, Methods in Microbiology, Norris J.R. and Ribbons D.W. (Eds). Vol. 3A, Academic Press, London.
2. International Organization for Standardization(ISO), 1993, Draft ISO/DIS 6579.
3. Bureau of Indian Standards, IS:5887, (Part 3) 1999.

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