



## Actinomyces Agar

M341

### Intended Use:

Recommended for cultivation and maintenance of the anaerobic *Actinomyces* species.

### Composition\*\*

Ingredients	Gms / Litre
HM infusion solids B#	10.000
Tryptose	10.000
Tryptone	4.000
Yeast extract	5.000
Dextrose (Glucose)	5.000
L-Cysteine hydrochloride	1.000
Starch, soluble	1.000
Sodium chloride	5.000
Potassium dihydrogen phosphate	15.000
Ammonium sulphate	1.000
Magnesium sulphate	0.200
Calcium chloride anhydrous	0.020
Agar	20.000
Final pH ( at 25°C)	6.9±0.2

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

# Equivalent to Beef heart infusion, solids

### Directions

Suspend 77.22 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Distribute into tubes or flasks. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

### Principle And Interpretation

*Actinomyces* are gram-positive bacteria, which show marked chemical and morphological diversity but form a distinct evolutionary line of organisms that range from coccoid and pleomorphic forms to branched filaments (1). *Actinomyces* form an integral part of soil, water and vegetation. *Actinomyces* development leads to the formation of volatile metabolites (2). Traces of these volatile metabolites are sufficient to impart disagreeable odour to water or a muddy flavour to fish (3). *Actinomyces* also cause disruptions in wastewater treatment by forming massive growths, which are capable of producing thick foam in the activated sludge process (4, 5) *Actinomyces* Agar/Broth is further modified and is recommended for the cultivation and maintenance of anaerobic *Actinomyces* species (6).

HM infusion solids B, tryptose, tryptone, yeast extract, starch and dextrose act as sources of carbon, nitrogen, sulphur, vitamins and other growth factors. The metallic salts provide essential electrolytes and minerals.

### Type of specimen

Water samples; Soil sample

### Specimen Collection and Handling:

For water samples, follow appropriate techniques for sample collection and processing as per guidelines (3).

For soil samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(11)

After use, contaminated materials must be sterilized by autoclaving before discarding.

### mhmf mc d tshnmr

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

## Limitations :

1.This medium is general purpose medium and may not support the growth of fastidious organisms.

## Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## Quality Control

### Appearance

Cream to yellow homogeneous free flowing powder

### Gelling

Firm, comparable with 2.0% agar gel.

### Colour and Clarity of prepared medium

Yellow to light amber coloured clear to slightly opalescent gel forms in Petri plates.

### Reaction

Reaction of 7.72% w/v aqueous solution at 25°C. pH : 6.9±0.2

### pH

6.70-7.10

### Cultural Response

Cultural characteristics observed after an incubation at 25-30°C for 40-72 hours (\*- incubated anaerobically)

### Organism

### Growth

\**Actinomyces israelii* ATCC luxuriant  
10049

*Streptomyces achromogenes* good  
ATCC 12767

*Streptomyces albus* subsp good  
*albus* ATCC 3004

*Streptomyces lavendulae* good  
ATCC 8664

\**Actinomyces bovis* ATCC good  
13683

## Reference

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