



## Soyabean Casein Digest Agar w/ Yeast Extract and Hemin (Tryptone Soya Agar w/Yeast Extract and Hemin)

M109

Soyabean Casein Digest Agar w/ Yeast Extract and Hemin is recommended for cultivation of fastidious microorganisms like *Bordetella pertussis* and *Neisseria meningitidis*.

### Composition\*\*

Ingredients	Gms / Litre
Tomato juice (400 ml)	17.000
Papaic digest of soyabean meal	3.000
Sodium chloride	5.000
Yeast extract	5.000
Dipotassium phosphate	2.500
Hemin	0.020
Agar	13.000
Final pH ( at 25°C)	7.3±0.2

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

### Directions

Suspend 45.52 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

### Principle And Interpretation

Soyabean Casein Digest Agar is recommended by various pharmacopoeias as sterility testing medium (1, 2). Tryptone Soya Agar w/ Yeast Extract and Hemin is a modification of Soyabean Casein Agar with the additional ingredients tomato juice, yeast extract and hemin.

Tomato juice serves as a source of carbon, protein and nutrients. Yeast extract and papaic digest of soyabean meal provides essential nutrients like amino acids and vitamins. Dipotassium phosphate provides buffering action to the medium. Hemin provides essential growth for fastidious microorganisms like *Bordetella pertussis* (3) and *Neisseria meningitidis*.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.3% Agar gel.

#### Colour and Clarity of prepared medium

Light yellow to medium amber coloured clear to slightly opalescent gel forms in Petri plates

#### Reaction

Reaction of 4.55% w/v aqueous solution at 25°C. pH : 7.3±0.2

#### pH

7.10-7.50

#### Cultural Response

M109: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery
<i>Neisseria meningitidis</i> ATCC 50-100 13090		good-luxuriant	≥70%
<i>Staphylococcus aureus</i> ATCC 25923	50-100	good-luxuriant	≥70%
<i>Enterococcus faecalis</i> ATCC 50-100 29212		good-luxuriant	≥70%

*Streptococcus pneumoniae* 50-100 good-luxuriant  $\geq 70\%$   
ATCC 6303

### Storage and Shelf Life

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

### Reference

1. The United States Pharmacopoeia / National Formulary, 2008, USP31, The United States Pharmacopoeial Convention Inc., Rockville, MD.
2. Indian Pharmacopoeia, 2007, Govt. of India, Ministry of Health and Family Welfare, New Delhi, India.
3. Quinto G. and Sebald M., (1964), Am. J. Med. Technol. 30:381-384.

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