Tryptic Soya Agar

M1968

Intended Use:

Recommended as a general purpose medium used for cultivation and maintenance of *Salmonella* Typhi.

Composition**

Ingredients	Gms / Litre
Tryptone	17.000
Soya peptone	3.000
Sodium chloride	5.000
Dextrose (Glucose)	2.500
Dipotassium hydrogen phosphate	2.500
Agar	15.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 45 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Tryptic Soya Agar supports the growth of wide variety of organisms including fastidious and non fastidious such as *Salmonella, Neisseria, Listeria, Brucella* etc (1). Tryptone Soya Broth with added dextrose (glucose), sodium chloride and agar is recommended for the cultivation of *Salmonella* Typhi (2).

Tryptone and Soya peptone provides nitrogen, carbon, long chain amino acids, vitamins and minerals. Glucose serves as the carbohydrate source. Phosphate buffers the media. Sodium chloride maintains the osmotic balance.

Type of specimen

Food and dairy samples; Water samples

Specimen Collection and Handling

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (3-5).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(6)

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

Warning and Precautions

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. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3. Further biochemical and serological test are necessary for confirmation.

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 1.5% Agar gel

Colour and Clarity of prepared medium
Light yellow coloured clear to slightly opalescent gel.

Reaction
pH of 4.5% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH
7.10-7.50

Cultural response
Cultural characteristics was observed after an incubation at 30-35°C for 18-24 hours

Organism	Inoculum (CFU)	Growth	Recovery
Salmonella Typhi *ATCC 6539*	50-100	luxuriant	>=70%
Salmonella Typhimurium *ATCC14028 (00031*)*	50-100	luxuriant	>=70%

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (6,7).

Reference

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