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Tryptic Soya Agar (TSA)

A general-purpose media that supports the growth of gram-positive and gram-negative

REF: BS.1/TA01.100.0100	100 Gram	REF: BS.1/TA01.250.0250	250 Gram
REF: BS.1/TA01.500.0500	500 Gram		

CLINICAL SIGNIFICANCE

Tryptic Soya Agar (TSA) can be used to support the growth of fastidious and non-fastidious microorganisms such as *Neisseria*, *Listeria*, *Brucella* etc. Tryptone Soya Broth with added dextrose, sodium chloride and agar are recommended for the cultivation of *Salmonella Typhi*. TSA can also be used in a variety of applications like enumeration, isolation, culture storage (subculturing bacterial strains of *Enterobacteriaceae* and *Staphylococci*) or even as a general culture. TSA (base medium) may be used as a primary isolation medium in clinical microbiology, after supplementation with 5% sheep blood (blood agar plates and chocolate agar by additional cooking of blood agar plates). TSA can used in determining the X, V, and XV factors requirements of *Haemophilus* species by using strips or discs containing X, V, and XV factors in the inoculated plates. It can also be used in detecting the halotolerance levels in microorganisms.

METHOD PRINCIPLE

Tryptone and soya peptone provide nitrogen, vitamins, and minerals. This makes it suitable for the growth of a wide variety of fastidious and non-fastidious microorganisms. Glucose serves as the carbohydrate source. Phosphate buffers the media. Sodium chloride maintains the osmotic balance. Agar is the solidifying agent. The medium may be supplemented with blood to facilitate the growth of more fastidious bacteria or antimicrobial agents to permit the selection of various microbial groups from pure microbiota.

MEDIA COMPOSITION

Item	Formula per liter of medium
Soya Peptone	3 gm
Tryptone	17 gm
Sodium Chloride	5 gm
Glucose	2.5 gm
Dipotassium Hydrogen phosphate	2.5 gm
Agar	15 gm

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.
  S56: dispose of this material and its container at hazardous or special waste collection point.
  S57: use appropriate container to avoid environmental contamination.
  S61: avoid release in environment.

For further information, refer to the Tryptic Soya Agar material safety data sheet.

STORAGE AND STABILITY

BioScien Tryptic Soya Agar should be stored between 10-30°C in a firmly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a 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.

Final pH 7.3±0.2 at 25°C

PREPARATION

Suspend 45 grams in 1000 ml 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.

Deterioration

The color of ***BioScien*** Tryptic Soya Agar is cream to yellow homogeneous free flowing powder. Prepared Media is light yellow in color. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

SPECIMEN

Food and dairy samples; Water samples

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile Petri dishes
- Incubator
- Autoclave

PERFORMANCE CHARACTERISTICS

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

Microorganisms	Growth
Salmonella Typhi ATCC 6539	luxuriant
Salmonella Typhimurium ATCC14028	luxuriant

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact ***BioScien*** technical support.

REFERENCES

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4. U.S. Pharmacopeial Convention, Inc. 1994. The U.S. Pharmacopeia 24/The national formulary 19-1999. U.S. Pharmacopeial Convention, Inc., Rockville, Md.
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SYMBOLS IN PRODUCT LABELLING			
IVD	For in-vitro diagnostic use	Σ	Number of <n> test in the pack
LOT	Batch Code/Lot number		Caution
REF	Catalogue Number		Do not use if package is damaged
	Temperature Limitation		Consult Instruction for use
	Expiration Date		
	Manufactured by		

EC REP

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