

## TRYPTONE (TRYPTIC) SOY AGAR (TSA) Tryptone (Tryptic) Soy Agar + 5 % Sheep Blood Tryptone (Tryptic) Soy Agar + 5 % Horse Blood

**(ISO 9308-1)**
**IVD in Class A, EU Reg. 2017/746**

 For in vitro diagnostic use **IVD**

Tryptone (Tryptic) Soy Agar is a general purpose medium which supports the growth of nonfastidious as well as moderately fastidious microorganisms.

### DESCRIPTION

Tryptone (Tryptic) Soy Agar (TSA) Agar is a non selective isolation medium used for the enumeration of bacteria and fungi from different materials, for environmental and personnel hygiene monitoring and for the preparation of reference strains with the aim of growth promotion tests of culture media.

This medium complies with the recommendations of the current United States (USP), European (EP) and Japanese Pharmacopoeia (JP) for the microbiological examination of non sterile products.

Tryptic Soy Agar is also used as a reference medium when carrying out microbiological testing of food, animal feed and water.

The unsupplemented medium is not used as a primary isolation medium for clinical applications. After the addition of blood (e.g., 5% sheep blood), it can be used for the isolation of bacteria from clinical specimens.

### PRINCIPLE

The combination of casein and soy peptones renders the medium nutritious by supplying organic nitrogen, particularly amino acids and longer-chained peptides. Sodium chloride maintains the osmotic equilibrium. Agar is the solidifying agent.

### Tryptone (Tryptic) Soy Agar:

COMPOSITION	g/L
Pancreatic Digest of Casein	15.0
Papaic Digest of Soya Bean	5.0
Sodium Chloride	5.0
Agar	15.0

Final pH 7,2 ± 0,2 at 25°C

### Supplement: Defibrinated Sheep Blood (Sterile) – REF. 5459:

COMPOSITION	
Defibrinated Sheep Blood (Sterile)	100 mL

### Supplement: Defibrinated Horse Blood (Sterile) – REF. 5475:

COMPOSITION	
Defibrinated Horse Blood (Sterile)	100 mL

### Prepared medium: Tryptone (Tryptic) Soy Agar + 5% Sheep Blood

COMPOSITION	
Tryptone (Tryptic) Soy Agar	1000 mL
Defibrinated Sheep Blood (Sterile)	50 mL

### Prepared medium: Tryptone (Tryptic) Soy Agar + 5% Horse Blood

COMPOSITION	
Tryptone (Tryptic) Soy Agar	1000 mL
Defibrinated Horse Blood (Sterile)	50 mL

### WARNING AND PRECAUTIONS

#### For in vitro diagnostic use.

Observe the precautions normally taken when handling laboratory reagents.

**Dehydrated medium: HIGHLY HYGROSCOPIC.** During the handling, wear dust protection mask. Avoid the eye contact. Do not use beyond the expiration date or if the product shows signs of deterioration, an altered color or has compacted.

**Prepared Medium:** The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous.

**Safety Data Sheet** is available on request for professional users.

All waste must be disposed of according to local directives.

### STORAGE AND STABILITY

<b>Tryptone (Tryptic) Soy Agar (Dehydrated medium):</b>	10-30°C
<b>Tryptone (Tryptic) Soy Agar (Prepared medium):</b>	10-25°C
<b>Tryptone (Tryptic) Soy Agar + 5% Sheep Blood (plates):</b>	2-8°C
<b>Tryptone (Tryptic) Soy Agar + 5% Horse Blood (plates):</b>	2-8°C

The product is stable until the expiration date indicated on the label under the recommended storage conditions.

### PREPARATION

**Dehydrated medium:** Suspend 40 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat to boil shaking frequently until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes.

**Prepared medium (bottles, tubes):** Melt the content of the bottle/tube in a water bath at 100°C until completely dissolved. Then screw the cap and check the homogeneity of the dissolved medium, if it is the case turning the bottle/tube upside down. Cool at 45-50°C, mix well avoiding foam formation and aseptically distribute into Petri dishes.

**Medium supplemented with 5% defibrinated sheep/horse blood:** Prepare Tryptone (Tryptic) Soy Agar and aseptically supplement with 5% sheep/horse blood after cooling to 48-50 °C (after sterilization). Mix well avoiding foam formation and aseptically distribute into Petri dishes.

### PROCEDURE

The unsupplemented medium, poured into Petri dishes is used in a variety of procedures, e.g., for pharmaceutical tests.

In clinical microbiology, it must not be used as an isolation medium for pathogens from clinical specimens, unless supplemented with blood (e.g., 5% sheep blood). If supplemented with 5% blood, the plated medium can be universally used for primary isolation of pathogens from all types of specimens. The tubed, slanted medium must not be used directly with clinical specimens but only for the growth and maintenance of bacterial cultures.

Before use, agar surfaces of the completed medium (in Petri dishes or in tubes) should be smooth and moist, but without excessive moisture because this could cause confluent growth.

Plates supplemented with blood: Streak the specimen as soon as possible after it is received in the laboratory. The streak plate is used primarily to isolate pure cultures from specimens containing mixed flora. Alternatively, if material is being cultured directly from a swab, roll the swab over a small area of the surface at the edge; then streak from this inoculated area. Incubate the plates or tubes under the conditions chosen.

If used for clinical specimens, incubate for 18 to 48 hours (or longer if necessary) at 35 ± 2 °C or as appropriate for the organisms.

If used for hygiene monitoring, incubate at 30-35 °C, for up to 5 days.

The slanted medium in tubes is used for the cultivation and maintenance of bacterial cultures. Streak the strain directly or after suspension in sterile water or saline onto the whole slanted surface. Incubate as appropriate for the isolate. During incubation, caps may be slightly loosened to allow venting. After incubation and during storage, close completely.

### RESULTS

The number and types of organisms growing on the completed media prepared from Tryptone (Tryptic) Soy Agar is very large. Therefore, no specific details on their appearance can be given here. Consult the references.

### QUALITY CONTROL

**Dehydrated medium (TSA):** free-flowing, homogeneous, light beige.

**Prepared medium (TSA):** slightly opalescent, light amber.

**Prepared medium (TSA+5% Sheep Blood):** cherry red.

**Prepared medium (TSA+5% Horse Blood):** cherry red.

**Incubation conditions: aerobic, 37°C for 48 hours:**

MICROORGANISM	GROWTH
Staphylococcus aureus ATCC 25923	Good-Luxuriant
Streptococcus pyogenes ATCC 19615	Good-Luxuriant

**REFERENCES**

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PRESENTATION	Packaging	REF.
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**Dehydrated medium:**
**TRYPTONE (TRYPTIC) SOY AGAR**

100 g (2.5 L)	11195
500 g (12.5 L)	10195
5 Kg (125 L)	13195

**Supplement:**

<b>Defibrinated Sheep Blood (Sterile)</b>	<b>1 x 100 mL bottle</b>	<b>5459</b>
<b>Defibrinated Horse Blood (Sterile)</b>	<b>1 x 100 mL bottle</b>	<b>5475</b>

**Prepared medium:**
**TRYPTONE (TRYPTIC) SOY AGAR**

6 x 100 mL bottles	63330
12 x 200 mL bottles	63703
20 x 22 mL Tubes	17220/20
20 pcs (60 mm ready-to-use plates)	2421210/20
20 pcs (90 mm ready-to-use plates)	2954369/20

<b>TRYPTONE (TRYPTIC) SOY AGAR +5% Sheep Blood</b>	
20 pcs (90 mm ready-to-use plates)	2982302/20

<b>TRYPTONE (TRYPTIC) SOY AGAR +5% Horse Blood</b>	
20 pcs (90 mm ready-to-use plates)	0411802/20

**SYMBOLS**

	Read the instructions		Biological hazard
	CE Mark (product complies with the requirements of Regulation (EU) 746/2017)		
	Temperature limitation		Use by
	For in vitro diagnostic use		Manufacturer