

# TSYEB Broth (Tryptone Soy Yeast Extract Broth) ISO

Cat. 1339

 For the confirmation of *Listeria monocytogenes*.

## Practical information

Applications	Categories
Enrichment	Listeria

Industry: Food

Regulations: ISO 11133

## Principles and uses

TSYEB Broth (Tryptone Soy Yeast Extract Broth) is a general purpose medium that supports the growth of a wide variety of microorganisms. This medium is formulated according to ISO 11290:1999 and is used for the confirmation of *Listeria monocytogenes* colonies and for subcultivation of suspected *Listeria* colonies.

Casein peptone and soy peptone provide nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is a source of vitamins, particularly of the B-group essential for bacterial growth. Glucose is the fermentable carbohydrate providing carbon and energy. Dipotassium phosphate acts as a buffer system. Sodium chloride supplies essential electrolytes for transport and osmotic balance.

## Formula in g/L

Glucose	2,5	Dipotassium phosphate	2,5
Sodium chloride	5	Soy peptone	3
Tryptone	17	Yeast extract	6

## Preparation

Suspend 36 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize in autoclave at 121°C for 15 minutes.

## Instructions for use

Motility test for confirmation of *Listeria* spp:

- Take an isolated colony and suspend it in a tube containing TSYEB.
- Incubate at 25 ° C for 8 to 24 hours until the medium turns cloudy.
- Take a drop onto a clean glass slide for a microscope, place the cover slip on top and examine it under the microscope.
- *Listeria* spp. appears as slim, short rods with tumbling motility.
- Culture grown above 25 °C may not exhibit this motility. They should always be compared against a known culture.
- Cocci, large rods or rods with rapid swimming motility are not *Listeria* spp.

Carbohydrate test for the confirmation of *Listeria monocytogenes*:

- Inoculate each of the carbohydrate broths with a TSYEB broth culture.
- Incubate at 35 ± 2°C for 18-48 hours.
- Positive reaction is indicated by yellow color (aldehyde formation).

## Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Fine powder	Beige	Amber, slightly opalescent.	7,3 ± 0,2

## Microbiological test

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According to ISO 11133:

Incubation conditions: (25±1 °C / 21±3 h).

Inoculation conditions: Productivity qualitativa (10<sup>3</sup>-10<sup>4</sup> CFU).

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### Microrganisms

Listeria monocytogenes 4b ATCC 13932

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### Specification

Turbidity (1-2)

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## Storage

Temp. Min.:2 °C

Temp. Max.:25 °C

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## Bibliography

ISO 11290-1:1999 Microbiology of food and animal feeding stuff. Horizontal method for the detection and enumeration of Listeria monocytogenes. Part. 1: Detection method. Ammendment 1: Modification of the isolation media and the haemolysis test and inclusion of precision data.