

TSYEA Agar (Tryptone Soy Yeast Extract Agar) ISO

Cat. 1398

 For the confirmation of *Listeria* spp.

Practical information

Applications	Categories
Confirmation	Listeria

Industry: Food

Regulations: ISO 11133 / ISO 11290

Principles and uses

TSYE Agar (Tryptone Soy Yeast Extract) is a general purpose medium which supports the growth of a wide variety of microorganisms.

The formula conforms to ISO 11290 and is used for the confirmation of *Listeria monocytogenes* colonies and to subculture suspected *Listeria* colonies.

Enzymatic digest of casein, yeast extract and papaic digest of soyabean meal provide nitrogen, vitamins, minerals and amino acids essential for growth. Glucose is the fermentable carbohydrate providing carbon and energy. Dipotassium hydrogen phosphate acts as a buffer system. Bacteriological agar is the solidifying agent.

Formula in g/L

Enzymatic digest of casein	17	Glucose	2,5
Bacteriological agar	15	Papainic digest of soy bean	3
Sodium chloride	5	Yeast extract	6
Dipotassium hydrogen phosphate	2,5		

Preparation

Suspend 51 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. Sterilize in autoclave at 121 °C for 15 minutes. Cool to 45-50 °C, mix well and dispense into plates.

Instructions for use

Confirmation of *Listeria* spp. according to ISO 11290:

- Select a presumptive colony of *Listeria* spp.
- Streak it onto the surface plate of non-selective agar TSYEA in a manner which allows the development of well-isolated colonies.
- Incubate the plates at 37 °C for 18-24 hours.
- Typical colonies of *Listeria* spp. are 1 to 2 mm in diameter, convex, colorless and opaque with entire edge. When the light impacts (45°) a colony, exhibits a blue-grey color and granular surface.

Quality control

Solubility	Appareance	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

Incubation conditions: (37 °C / 24 h)

Inoculation conditions: Productivity qualitative (10³-10⁴ CFU).

Storage

Temp. Min.:2 °C
Temp. Max.:25 °C

Bibliography

ISO 11290. Horizontal method for the detection and enumeration of Listeria monocytogenes