93395 Tryptone Soya Yeast Extract Agar (TSYEA)

Tryptone Soya Yeast Extract Agar is recommended for conformation of *Listeria* in Henry`s light (1). It is also recommended by ISO Committee under the specification ISO 10560:1993.

Composition:

Ingredients	Grams/Litre
Casein enzymic hydrolysate	17.0
Papaic digest of soyabean meal	3.0
Sodium chloride	5.0
Dipotassium hydrogen phosphate	2.5
Dextrose	2.5
Yeast extract	6.0
Agar	15.0
Final pH 7.3 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Appearance: Light yellow coloured, homogeneous, free flowing powder.
Colour and Clarity: Yellow colourled, clear gel forms in petri plates.

Directions:
Suspend 51 g in 1000 ml distilled water. Boil gently to dissolve the medium completely. Sterilize by autoclaving at 121°C for 15 min.

Principle and Interpretation:
Tryptone Soya Yeast Extract Agar is formulated according the APHA (2) for the isolation and cultivation of *Listeria monocytogenes* from foods. ISO Committee (2) has recommended these media for confirmation of *Listeria* species. It is also used as a cultivation and maintenance medium for a wide variety of heterotrophic microorganisms. The FDA (5) recommends this medium as purification medium for *Listeria monocytogenes* in dairy products. After enrichment the cultures are streaked out on McBride Agar with cycloheximide or LPM Agar. Presumptive *Listeria* colonies are selected under 45 tansillumination and then purified on Tryptone Soya Yeast Extract Agar. *Listeria* colonies are dense white and to iridescent white appearing as crushed glass. Other colonies tend to be yellowish or orange.
Casein enzymic hydrolysate and papaic digest of soyabean meal provide essential growth nutrients, like amino acids and other nitrogenous substances. Yeast extract is the source of the vitamin B complex and other nutritive compounds like e.g. amino acids. Dextrose is the fermentable sugar and seves as the energy source. Sodium chloride is for the osmotic balance, while dipotassium hydrogen phosphate acts as the buffering agent.

Cultural characteristics after 24-48 hours at 30°C

Organisms (ATCC)	Growth
Listeria monocytogenes (19111)	+++
Listeria monocytogenes (19118)	+++

References:
1. R.V. Lachica, Simplified Henry technique for initial recognition of *Listeria* colonies, Appl Environ Microbiol., 56(4), 1164 (1990)
2. C. Vanderzant, D. Splitterstösser (Eds.), Compendium of Methods for the Microbiological Examination of Foods, 3rd ed., APHA, Washington D.C. (1992)
3. International Organisation for Standardization (ISO), Milk and milk products - Detection of *Listeria monocytogenes*, Draft, ISO/DIS 10560 (1993)
4. R.M. Atlas, Handbook of Microbiological Media, CRC Press, Inc., Boca Raton (1993)
5. Bacteriological Analytical Manual, 1989, 6th ed. Supplement, 29, 01, Sept. 1987 (Second printing 1989)

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.