

# PRODUCT SPECIFICATION SHEET



## Tryptone Soya Yeast Extract Agar (DM1443)

### Intended Use

Tryptone Soya Yeast Extract Agar (DM1443) is recommended for initial recognition of *Listeria* colonies using Henry's light technique.

### Product Summary and Explanation

Tryptone Soya Yeast Extract Agar is formulated according to the APHA<sup>(1)</sup> for the isolation and cultivation of *Listeria monocytogenes* from foods. This media was recommended for confirmation of *Listeria* species by the ISO Committee.<sup>(2)</sup> It is also used as a cultivation and maintenance medium for a wide variety of heterotrophic microorganisms.<sup>(3)</sup> The FDA<sup>(4)</sup> recommends this medium as purification medium for *Listeria monocytogenes* in dairy products.

### Principles of the Procedure

Tryptone Soya Yeast Extract Agar contains casein enzymic hydrolysate and papaic digest of soyabean meal which provides amino acids and other complex nitrogenous substances. Yeast extract is the rich source of vitamin B complex and other nutritive compounds like amino acids. Dextrose is the carbon and energy source. Sodium chloride maintains the osmotic balance in the medium. Dipotassium hydrogen phosphate buffers the medium.

### Formula / Liter

Ingredients	Gms / Liter
Casein enzymic hydrolysate	17.00
Papaic digest of soyabean meal	3.00
Sodium chloride	5.00
Dipotassium hydrogen phosphate	2.50
Dextrose	2.50
Yeast extract	6.00
Agar	15.00
Final pH: 7.3 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

### Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

### Directions

1. Suspend 51 grams of the medium in one liter of distilled water.
2. Heat to boiling, to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile petri plates.

### Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Yellow coloured clear to slightly opalescent gel forms in Petri plates
Reaction of 5.1% Solution	pH : 7.3 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

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**Expected Cultural Response:** Cultural characteristics observed after an incubation at 30-37°C for 24-48 hours.

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Recovery
1.	<i>Listeria monocytogenes</i> ATCC 19111	50 - 100	good-luxuriant	≥70%
2.	<i>Listeria monocytogenes</i> ATCC 19118	50 - 100	good-luxuriant	≥70%

The organisms listed are the minimum that should be used for quality control testing.

## Test Procedure

1. For isolation of *L. monocytogenes* from dairy products, the sample to be tested is inoculated in enrichment broth and incubated at 30°C for 24-48 hours.
2. This culture is streaked on Modified McBride Listeria Agar (DM1100) with cycloheximide or Lithium-Phenylethanol-Moxalactam (LPM) Agar (DM1707) and incubated at 35°C for 48 hours.

## Results

1. Presumptive *Listeria* colonies are selected under 45° transillumination and colonies are further purified on Tryptone Soya Yeast Extract Agar under the light illumination.
2. *Listeria* colonies are dense white to iridescent white appearing as crushed glass. Other colonies tend to be yellowish or orange.

## Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

## Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

## Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

## Packaging

**Product Name :** Tryptone Soya Yeast Extract Agar

**Product Code :** DM1443

**Available Pack sizes :** 500gm

## References

1. Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington, D.C.
2. International Organization for Standardization (ISO), 1993, Draft, ISO/DIS 10560.
3. Atlas R. M. 2004, 3rd Ed., Handbook of Microbiological Media, Parks, L.C. (Ed.), CRC Press, Boca Raton.
4. FDA, Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, DC.

## Further Information

For further information please contact your local MICROMASTER Representative.



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