



## Tween Esterase Test Agar Base

M1912

### Intended Use:

Recommended for confirmation of *Yersinia enterocolitica*. The composition and performance criteria are in accordance with ISO 10273:2017.

### Composition\*\*

Ingredients	Gms / Litre
Peptone	10.000
Sodium chloride	5.000
Calcium chloride	0.100
Agar	15.000
Final pH ( at 25°C)	7.4±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 30.01 grams in 1000 ml purified / distilled water containing 10ml of Tween 80. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 30 minutes. Mix well and distribute in tubes and allow the tubes to set in sloped form with a long slants and a minimal butt.

### Principle And Interpretation

*Yersinia* is a genus of the family *Enterobacteriaceae* and are defined as rod-shaped to coccobacilli, Gram-negative bacteria (1). Tween Esterase Test Agar Base is recommended for differentiation of *Yersinia* spp. by the ISO Committee

for identification of *Yersinia species* (2). The method is applicable to products intended for human consumption or for the feeding animals, and to environmental samples in the area of food production and food handling. Yersiniosis caused by *Y. enterocolitica* and *Y. pseudotuberculosis* are characterized by acute diarrhea and fever. Transmission occurs via the oral-fecal route by contaminated water and foods, or by infected individuals or animals. Hospital transmission as well as through

blood transfusion has also been reported *Y. enterocolitica* is a psychrotrophic bacteria and multiplies in cold-stored foods (3).

Peptone provide nitrogenous and carbonaceous compounds, vitamin B complex, trace elements and other essential growth nutrients. Sodium chloride maintains the osmotic equilibrium

### Type of specimen

Clinical samples - stool samples; Food samples.

### Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (6).

After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions :

In Vitro Diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

### Limitations :

1. Some strains may show poor growth due to nutritional variations.
2. Further biochemical and serological tests must be carried out for complete identification.

### Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## Quality Control

### Appearance

Cream to yellow homogeneous free flowing powder

### Gelling

Firm, comparable with 1.5% Agar gel.

### Colour and Clarity of prepared medium

Yellow coloured opalescent gel forms in tubes as slants

### Reaction

Reaction of 3.0% w/v aqueous solution at 25°C. pH : 7.4±0.2

### pH

7.20-7.60

### Cultural Response

Cultural characteristics observed after an incubation at 26-27°C for 5 days.

Organism	Inoculum (CFU)	Growth	Tween esterase test
<i>Yersinia enterocolitica</i> ATCC 27729	50-100	good-luxuriant	Variable
<i>Yersinia intermedia</i> ATCC 29909 (00217*)	50-100	good-luxuriant	Opaque zone of precipitate

Key : (\*) Corresponding WDCM numbers.

## Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use.

Product performance is best if used within stated expiry period.

## Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

## Reference

1. 2<sup>nd</sup> Edition Bergy's Manual of Systematic Bacteriology (Bottone et al., 2005)
2. International Organization for Standardization (ISO), 2003 Draft ISO/DIS 10273.
3. FDA/CFSAN (ed.) (2009) Foodborne Pathogenic Microorganisms and Natural Toxins Handbook "Bad Bug Book". College Park, Food and Drug Administration, Center for Food Safety & Applied Nutrition.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
6. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

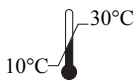
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IVD

In vitro diagnostic medical device



CE Marking



Storage temperature



Do not use if package is damaged



HiMedia Laboratories Pvt. Limited,  
Plot No.C-40, Road No.21Y,  
MIDC, Wagle Industrial Area,  
Thane (W)  
-400604, MS, India

EC

REP

CE Partner 4U ,Esdoornlaan 13, 3951  
DB Maarn The Netherlands,  
[www.cepartner4u.eu](http://www.cepartner4u.eu)

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