TM 1311 – TRYPTONE SUCROSE TETRAZOLIUM AGAR BASE (TSTA)

INTENDED USE

For isolation of *Vibrio* species with addition of TTC.

PRODUCT SUMMARY AND EXPLANATION

The Vibrionaceae are straight or curved, gram-negative rods, motile by polar flagella. Many strains require 2-3% sodium chloride for growth and are primarily inhabitants of aquatic environments. Of the 35 *Vibrio* species recognized, 12 have been implicated in gastrointestinal and extra-intestinal infections in man; the most important of these is cholera. The species most frequently isolated from clinical specimens are strains of *Vibrio cholera*, *Vibrio parahaemolyticus*, *Vibrio vulnificus*, *Vibrio mimicus* and *Vibrio alginolyticus*.

Tryptone Sucrose Tetrazolium Agar is formulated in accordance with Kourany medium and is approved by ISO Committee for the isolation of *Vibrio* species, especially *V. parahaemolyticus*. Inoculate 25 grams of the test sample into 225ml of Salt Polymyxin Broth Base. Incubate at 35-37°C for 7 to 8 hours. After incubation, inoculate a loopful onto TCBS Agar & Tryptone Sucrose Tetrazolium Agar Base. Presumptive *V. parahaemolyticus* colonies are further confirmed by appropriate biochemical tests.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	15.000
Papaic digest of soyabean meal	5.000
Sodium chloride	30.000
Saccharose	20.000
Bile salts	0.500
Agar	15.000

PRINCIPLE

Casein enzymic hydrolysate and papaic digest of soyabean meal provide nitrogenous compounds and other essential growth nutrients. Saccharose (sucrose) is the energy source. High salt concentration makes it specific for organisms having high osmotic tolerance. Bile salts inhibit gram-positive organisms. TTC is reduced by *V. parahaemolyticus* to red formazan dyes, visualized as red colonies.

INSTRUCTION FOR USE

- Suspend 85.5 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add 3 ml of 1% 2, 3, 5-Triphenyl Tetrazolium Chloride (TTC).
- Mix well before pouring into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light yellow coloured clear to slightly opalescent gel forms in petriplates.
pH (at 25°C) : 7.1±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

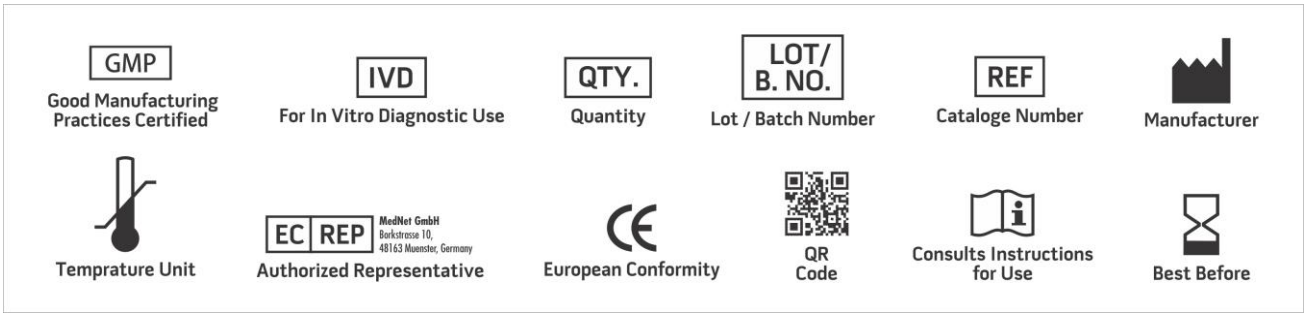
Microorganism	ATCC	Inoculum (CFU)	Growth	Recovery	Incubation Temperature	Incubation Period
Vibrio parahaemolyticus	17802	50-100	Good-luxuriant	>=50%	35-37°C	24-48 Hours
Vibrio cholerae	15748	50-100	Good-luxuriant	>=50%	35-37°C	24-48 Hours

PACKAGING:
In pack size of 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1996, 14th Edition, Churchill Livingstone.
2. Kourany M., 1983, Appl. Environ. Microbiol., 45: 310.3. International Organization for Standardization (ISO) 1990, Draft, ISO/DIS 8914.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019