

TM 1100 – TMAO MEDIUM (TRIMETHYLAMINE-N-OXIDE MEDIUM) (as per APHA)

INTENDED USE

For cultivation and differentiation of *Campylobacter* species from foods, except *Campylobacter jejuni* and *Campylobacter coli*.

PRODUCT SUMMARY AND EXPLANATION

Campylobacter are mainly present in the intestinal tract of animals and therefore contaminate the foods of animal origin. *Campylobacter lari* is a thermophilic species that was first isolated from gulls and has since been isolated from other avian species, dogs, cats and chickens. *C. lari* has been frequently reported from humans with bacteremia and with gastrointestinal and urinary tract infections. TMAO is an osmolyte found in salt water fish, sharks and rays, molluscs and crustaceans. TMAO decomposes to trimethylamine (TMA) which is the main odorant that is characteristic of degrading seafood.

TMAO (Trimethylamine-N-Oxide) Medium is prepared as recommended by APHA for cultivation and differentiation of *Campylobacter* species from foods except *Campylobacter jejuni* and *Campylobacter coli*. *C. jejuni* and *C. coli* are sensitive to Trimethylamine-N-Oxide and hence do not grow in this medium while growth of *C. lari* remains unaffected as it is not sensitive to TMAO. Therefore, anaerobic growth in 1% TMAO is used to differentiate this strain from *C. jejuni* and *C. coli*.

COMPOSITION

Ingredients	Gms / Ltr
Peptic digest of animal tissue	10.000
Beef extract	10.000
Sodium chloride	5.000
Yeast extract	1.000
Trimethylamine-N-Oxide	1.000
Agar	2.000

PRINCIPLE

Beef extract, peptic digest of animal tissue and yeast extract provide nitrogenous compounds, vitamin B complex and growth factors for *C. lari*. Sodium chloride maintains the isotonic atmosphere in the medium.

INSTRUCTION FOR USE

- Suspend 29 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense 4 ml in 13x100 mm screw cap tubes.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool the tubes in an upright position.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Yellow coloured clear to slightly opalescent gel forms in tubes as butts.
pH (at 25°C)	: 7.5±0.2

INTERPRETATION



Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Campylobacter coli</i>	33559	50-100	Inhibited	42°C	24-48 Hours
<i>Campylobacter jejuni</i>	29428	50-100	Inhibited	42°C	24-48 Hours
<i>Campylobacter lari</i>	35221	50-100	Good-luxuriant	42°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. Murray P. R., Baron J. H., Pfaller M. A., Tenover J. C. and Tenover F. C., (Eds.). 2003, Manual of Clinical Microbiology, 8th Ed. American Society for Microbiology, Washington, D.C.
2. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.

 Good Manufacturing Practices Certified	 For In Vitro Diagnostic Use	 Quantity	 Lot / Batch Number	 Catalogue Number	 Manufacturer
 Temperature Unit	 Authorized Representative	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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