

TM 1157 – CAMPYLO THIOGLYCOLLATE MEDIUM BASE (CAMPY-THIO MEDIUM)

INTENDED USE

For isolation, maintenance and transport of *Campylobacter* species.

PRODUCT SUMMARY AND EXPLANATION

Campylobacter infections occur sporadically in the summer months and usually follow ingestion of improperly handled or cooked food, primarily poultry products. Dekeyser et al reported that *Campylobacter jejuni* could be isolated on a selective media supplemented with antimicrobials from the faeces of patients having diarrhea and gastroenteritis (by the filtration technique). The antimicrobials help to inhibit the normal enteric flora of faeces. Skirrow used a selective medium with three antimicrobials i. e. vancomycin, polymyxin B and trimethoprim. Later on, Blaser et al isolated *C.jejuni* by direct inoculation of faeces sample on an agar medium containing four antibiotics. They also reported that *C.jejuni* could be isolated from faeces sample held at refrigeration temperature for duration of 8-10 hours in Thioglycollate Broth, incorporated with the four antibiotics. Blaser et al later included the fifth antibiotic cephalothin to inhibit nonpathogenic *Campylobacter fetus*. Campylo Thioglycollate Medium Base (with antibiotics) is generally used as a holding medium when immediate examination and testing of samples is not possible. Campylo Thioglycollate Medium Base is also recommended by APHA for maintenance, transport and storage of cultures of *Campylobacter* species. It is also used for enrichment of *Campylobacter* species from stool samples.

The medium contains necessary nutrients to promote growth of *Campylobacter* species. Moreover the supplement (Blaser-Wang) consists of five antibiotics viz. amphotericin B, cephalothin, polymyxin B, trimethoprim and vancomycin which inhibits multiplication of normal microbial flora in faecal specimens thus facilitating isolation of *C.jejuni*. Cephalothin may not always inhibit *C.fetus* species and some strains may grow at 42°C. Further tests should be performed to confirm *C. jejuni*. Rectal swabs can be directly inoculated into the medium in tubes. About 5 drops of stool sample (prepare a saline suspension if stool is solid) can be placed on the medium about 1cm below the surface. Inoculated Campylo Thioglycollate Medium Base can be refrigerated and subcultured on Campylobacter Agar Base with Campylobacter Supplement-I.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	20.000
Sodium chloride	2.500
Dipotassium hydrogen phosphate	1.500
Sodium thioglycollate	0.600
L-Cystine	0.400
Sodium sulphite	0.200
Agar	1.600

PRINCIPLE

Tryptone provides nitrogenous, carbonaceous nutrients along with vitamins. Phosphates are added to buffer the medium. Sodium chloride maintains the osmotic equilibrium. L-cystine provides amino acids to the media and agar acts as a solidifying agent.

INSTRUCTION FOR USE

- Dissolve 26.8 grams in 1000 ml purified / 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.
- To make the medium selective for Campylobacter species, add reconstituted contents of 2 vials of Campylobacter supplement-I.
- Mix well and dispense into sterile tubes or flasks as desired.

QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder** : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light to medium amber coloured, very slightly opalescent solution.
pH (at 25°C) : 7.0±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	Good-luxuriant	42°C	18-24 Hours
<i>Campylobacter jejuni</i>	33291	50-100	Good-luxuriant	42°C	18-24 Hours
<i>Escherichia coli</i>	25922	50-100	None-poor	42°C	18-24 Hours
<i>Helicobacter pylori</i>	43504	50-100	Good-luxuriant	42°C	18-24 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. Blaser et al, 1979, Ann. Intern. Med., 91:179. 2
2. Dekeyser, Gossuin-Detrain, Butzler and Sternan, 1972, J. Infect. Dis ., 125:390



3. 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.
4. Reller, Wang and Blaser, 1979, ASCP check sample, Microbiology No.MB -99. Commission of Continuing Education, ASCP, Chicago.
5. 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.
6. Skirrow M. B., 1977, Br. Med. J., 2:9.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MediNet GmbH Barkstrasse 10 48163 Muenster, Germany</small>	 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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