Campylo Thioglycollate Medium Base

M908

Intended Use:

Recommended for isolation, maintenance and transport of cultures of *Campylobacter* species.

Composition**

Ingredients	g / L
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
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 26.8 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. To make the medium selective for Campylobacter species, add reconstituted contents of two vials of Blaser-Wang Selective Supplement (Blaser-Wang, FD006). Mix well and pour into sterile test tubes or dispense as desired.

Principle And Interpretation

Campylobacter infections occur sporadically in the summer months and usually follow ingestion of improperly handled or cooked food, primarily poultry products (1). Dekeyser et al (2) 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 (3). Later on, Blaser et al isolated *C.jejuni* by direct inoculation of faeces sample on an agar medium containing four antibiotics (4,5). 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 (5). Blaser et al later included the fifth antibiotic cephalothin to inhibit non-pathogenic *Campylobacter fetus* (5). Campylo Thioglycollate Medium Base (with antibiotics) is generally used as a holding medium when immediate examination and testing of samples is not possible (6). Campylo Thioglycollate Medium Base is also recommended by APHA for maintenance, transport and storage of cultures of *Campylobacter* species (7). It is also used for enrichment of *Campylobacter* species from stool samples (1). The medium contains necessary nutrients to promote growth of *Campylobacter* species. Moreover the supplement FD006 (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 (M994) with Blaser-Wang Selective Supplement (Blaser-Wang, FD006).

Type of specimen

Clinical samples - Faeces; Food and dairy samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (8,9).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (6,7).

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 clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium
2. It is generally used as a holding medium when immediate examination and testing of samples is not possible (9).

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
Highly viscous solution comparable with 0.16% Agar gel.
Colour and Clarity of prepared medium
Light to medium amber coloured, very slightly opalescent solution
Reaction
Reaction of 2.68% w/v aqueous solution at 25°C. pH : 7.0±0.2
pH
6.80-7.20
Cultural Response
Cultural characteristics observed with added Blaser-Wang Selective Supplement (Blaser Wang, FD006) in an atmosphere of 5-15% O_2 and 5-12% CO_2 after an incubation at 42°C for 18-24 hours.

Organism	Growth
Campylobacter coli ATCC 33559	good-luxuriant
Campylobacter jejuni ATCC 33291 (00005*)	good-luxuriant
Escherichia coli ATCC 25922 (00013*)	none-poor
Helicobacter pylori ATCC 43504	good-luxuriant

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°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 (8,9).

Reference

1.Reller, Wang and Blaser, 1979, ASCP check sample, Microbiology No.MB -99. Commission of Continuing Education, ASCP, Chicago.
2.Dekeyser, Gossuin-Detrain, Butzler and Sternan, 1972, J. Infect. Dis ., 125:390.
3.Skirrow M. B., 1977, Br. Med. J., 2:9.
4.Blaser, Cravens, Powers and Wang, 1978, Lancet, 2:979.

5.Blaser et al, 1979, Ann. Intern. Med., 91:17
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.
7.Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
8.Isenberg, H.D. Clinical Microbiology Proceures Handbook 2nd Edition
9.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.

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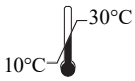
IVD ***In vitro* diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE **CE Marking**

Do not use if package is damaged

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