Campylo Thioglycollate Medium Base

Campylo Thioglycollate Medium is recommended for maintenance, transport and storage of Campylobacter species.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casein enzymic hydrolysate</td>
<td>20.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>2.500</td>
</tr>
<tr>
<td>Dipotassium phosphate</td>
<td>1.500</td>
</tr>
<tr>
<td>Sodium thioglycollate</td>
<td>0.600</td>
</tr>
<tr>
<td>L-Cystine</td>
<td>0.400</td>
</tr>
<tr>
<td>Sodium sulphite</td>
<td>0.200</td>
</tr>
<tr>
<td>Agar</td>
<td>1.600</td>
</tr>
<tr>
<td><strong>Final pH (at 25°C)</strong></td>
<td>7.0±0.2</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 26.8 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. To make the medium selective for Campylobacter species, add reconstituted contents of 2 vials of Campylobacter supplement-I (Blaser-Wang, FD006). Mix well before dispensing.

**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). 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 (6). 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 Campylobacter Supplement-I (Blaser-Wang, FD006).

**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**
M908: Cultural characteristics observed with added Campylobacter Supplement I(Blaser Wang,FD006) in an atmosphere of 5-15% O2 and 5-12% CO2 after an incubation at 42°C for 18-24 hours.

- **Organism**
  - **Campylobacter coli ATCC 33559**
    - Growth: good-luxuriant
  - **Campylobacter jejuni ATCC 33291**
    - Growth: good-luxuriant
  - **Escherichia coli ATCC 25922**
    - Growth: none-poor
  - **Helicobacter pylori ATCC 43504**
    - Growth: good-luxuriant

**Storage and Shelf Life**
Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on label.

**Reference**