Cary- Blair Medium Base (Transport Medium w/o Charcoal)

Intended Use:
Cary-Blair Medium Base (Transport Medium without Charcoal) is recommended for collection and shipment of clinical specimens.

Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disodium phosphate</td>
<td>1.100</td>
</tr>
<tr>
<td>Sodium thioglycollate</td>
<td>1.500</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Agar</td>
<td>5.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>8.4±0.2</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters

Directions
Suspend 12.6 grams in 991 ml distilled water. Heat to boiling to dissolve the medium completely. Cool to 50°C and aseptically add 9 ml of 1% aqueous calcium chloride solution. Adjust pH to 8.4 if necessary. Distribute in 7 ml amounts in screw-capped tubes. Steam for 15 minutes. Cool and tighten the caps.

Principle And Interpretation
Transport Medium is a non-nutritive, chemically defined, semisolid, buffered medium. The sole purpose of this medium is to maintain the viability of organisms during the time from collection to examination of the specimen. Transport Medium should be essentially non-nutritive so that the test organisms do not increase in numbers during transport. Transport media were originally formulated by Stuart et al (1) for carrying gonococcal specimens to the laboratory. Cary and Blair devised a new medium containing fewer nutrients, low oxidation-reduction potential and a high pH (2). Cary-Blair Medium w/o Charcoal is used for collection and transport of clinical specimens. It is also recommended by APHA (3) and various authors for transport of specimens (4,5,6). Since this transport media has a high pH, viability of *Vibrio* cultures can be maintained for a longer duration (7). This medium also facilitates the recovery of *Salmonella* and *Shigella* species (4). Cary-Blair Medium Base is prepared with minimal nutrients to facilitate survival of organisms without multiplication. Sodium thioglycollate provides a low oxidation-reduction potential. Alkaline pH of the medium minimizes bacterial destruction due to the formation of acid. Disodium phosphate buffers the medium whereas sodium chloride maintains the osmotic equilibrium.

For collection of the specimen, use sterile cotton tipped swabs on wooden sticks. Push the swabs down to one third of the medium depth and cut the stick so that when the cap is screwed down, the swab is forced to the bottom of the medium. Tighten the cap firmly on the bottle.

Type of specimen
Clinical samples : pathological samples

Specimen Collection and Handling
For clinical samples follow appropriate techniques for handling specimens as per established guidelines (7,8). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions
In Vitro diagnostic 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. The specimen will be preserved and the viability of the organisms will be also maintained during transport, but over the time it will diminish.
2. Therefore direct inoculation of the specimen is advised.
3. Some growth of accompanying contaminants may also occur during longer period of transit.
4. The specimen should be inoculated into a proper medium as soon as possible.

**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**
Semisolid, comparable with 0.5% Agar gel.

**Colour and Clarity of prepared medium**
Light amber coloured, slightly opalescent solution in tubes

**Reaction**
Reaction of 1.26% w/v aqueous solution at 25°C. pH : 8.4±0.2

**pH**
8.20-8.60

**Cultural Response**

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours, when subcultured on Tryptone Soya Agar (M290).

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterobacter aerogenes ATCC 13048 (00175*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td>Escherichia coli ATCC 25922 (00013*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td>Klebsiella pneumoniae ATCC 13883 (00097*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td>Neisseria meningitidis ATCC 13090</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td>Salmonella Typhimurium ATCC 14028 (00031*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td>Shigella flexneri ATCC 12022 (00126*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td>Vibrio cholerae ATCC 15748</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td>Vibrio parahaemolyticus ATCC 17802 (00037*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
</tbody>
</table>

Key : *Corresponding WDCM numbers.

**Storage and Shelf Life**

Store below 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. Use before expiry date on the label. 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 (7,8).

Please refer disclaimer Overleaf.
Reference
8. Isenberg, H.D. Clinical Microbiology Procedures Handb0ook. 2nd Edition.

Disclaimer:
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