Culture Medium for RWC (Disinfectant Test Broth) (RWC Medium)

**Intended Use:**
Recommended for determination of phenol coefficients of disinfectants using *Salmonella Typhi* as a test organism.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptone</td>
<td>20.000</td>
</tr>
<tr>
<td>HM peptone B#</td>
<td>20.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>10.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.5±0.2</td>
</tr>
</tbody>
</table>

# Equivalent to Beef extract

**Directions**

Suspend 50 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°. Dispense in sterile test tubes.

**Principle And Interpretation**

Rideal and Walker developed phenol coefficient test in 1903 for determining the germicidal efficiency of disinfectants (3). In addition to being a satisfactory index of the germicidal value of phenol like disinfectants, the phenol coefficient is used as basis for determining the dilutions, which may safely be employed in practice. The phenol coefficient of each disinfectant was first determined by the Food and Drug Administration method, 1931 (4). Since then, there is no standard method for testing disinfectants under practical conditions. Culture Medium for RWC is used for testing disinfectants and especially for determining phenol coefficient of disinfectants using *Salmonella Typhi*.

The medium contains ingredients like HM peptone B and peptone, which provide necessary nutrients to the growth of *Salmonella Typhi* when used as test organism. Presence of sodium chloride balances the osmotic equilibrium.

**Type of specimen**

Disinfectant samples.

**Specimen Collection and Handling:**

For disinfectant samples follow appropriate techniques for handling specimens as per established guidelines (3).

After use, contaminated materials must be sterilized by autoclaving before discarding.

**Warning and Precautions:**

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

**Limitations:**

1. Further biochemical and serological tests must be carried out for further identification.

**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

Colour and Clarity of prepared medium
Yellow coloured, clear solution without any precipitate.

Reaction
Reaction of 5.0% w/v aqueous solution at 25°C. pH : 7.5±0.2

pH
7.30-7.70

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salmonella Typhi ATCC 6539</td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
</tbody>
</table>

Storage and Shelf Life
Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

Revision : 02 / 2019

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