Glucose Broth

Intended Use:
Recommended for study of dextrose fermentation where pH indicator is not desired.

Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tryptone</td>
<td>10.000</td>
</tr>
<tr>
<td>Dextrose (Glucose)</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.3±0.2</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters

Directions
Suspend 20 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes containing inverted Durhams tubes. Sterilize by autoclaving at 118°C for 15 minutes. Cool to 45-50°C.

Principle And Interpretation
Waisbren, Carr and Dunnett used Glucose Broth for testing antibiotic sensitivity by the tube dilution method (3). This medium is also used to study glucose fermentation where pH indicator is not desired. Glucose Broth was developed to exclude the ingredients like beef extract that would contain small amount of carbohydrates. Thus the glucose fermentation studies can be performed more accurately using only pure 0.5% glucose as the source of carbohydrate.

Tryptone and glucose serve as sources of essential nutrients and energy respectively to support the growth of many fastidious organisms. The tryptone used is free of carbohydrates and glucose acts as source of energy by being the only fermentable carbohydrate. The broth gives rapid growth and hastens the early development of injured cells. Sodium chloride maintains the osmotic equilibrium.

Type of specimen
Isolated Microorganisms

Specimen Collection and Handling:
For samples follow appropriate techniques for handling specimens as per established guidelines.(1,2)
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. This media is not intended for primary isolation of specimens.
2. Overincubation is not recommended.

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
Light yellow coloured, clear solution without any precipitate

Reaction
Reaction of 2.0% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH
7.10-7.50

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>
<th>Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Escherichia coli</em> ATCC 25922 (00013*)</td>
<td>50-100</td>
<td>luxuriant</td>
<td>positive reaction</td>
</tr>
<tr>
<td><em>Salmonella Typhi</em> ATCC 6539</td>
<td>50-100</td>
<td>luxuriant</td>
<td>negative reaction</td>
</tr>
<tr>
<td><em>Shigella flexneri</em> ATCC 12022 (00126*)</td>
<td>50-100</td>
<td>luxuriant</td>
<td>negative reaction</td>
</tr>
<tr>
<td><em>Staphylococcus aureus subsp. aureus</em> ATCC 25923 (00034*)</td>
<td>50-100</td>
<td>luxuriant</td>
<td>negative reaction</td>
</tr>
<tr>
<td><em>Staphylococcus epidermidis</em> ATCC 12228 (00036*)</td>
<td>50-100</td>
<td>luxuriant</td>
<td>negative reaction</td>
</tr>
<tr>
<td><em>Streptococcus pyogenes</em> ATCC 19615</td>
<td>50-100</td>
<td>luxuriant</td>
<td>negative reaction</td>
</tr>
</tbody>
</table>

Key : (*) Corresponding WDCM numbers.

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

Disclaimer:
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