Medium 11.GN Broth

Recommended for the enrichment of *Shigella* from pharmaceutical & clinical products in accordance with IP 2018.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypeptone peptone</td>
<td>20.000</td>
</tr>
<tr>
<td>Glucose (Dextrose)</td>
<td>1.000</td>
</tr>
<tr>
<td>Sodium citrate</td>
<td>2.000</td>
</tr>
<tr>
<td>Sodium deoxycholate</td>
<td>0.500</td>
</tr>
<tr>
<td>Di-potassium hydrogen phosphate</td>
<td>4.000</td>
</tr>
<tr>
<td>Potassium dihydrogen phosphate</td>
<td>1.500</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.0±0.2</td>
</tr>
</tbody>
</table>

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

**Directions**

Label the ready to use LQ151 / LQ151C tube or bottle. Inoculate the sample and Incubate at specified temperature and time.

**Principle And Interpretation**

GN Broth is recommended by the Indian Pharmacopoeia (1) for the selective isolation of *Shigella* species with subsequent isolation on a selective medium, XLD Agar (MH031). Croft and Miller isolated more strains of *Shigella* from rectal swabs using this medium (2). Taylor and Schelhart showed the superiority of GN Broth to selenite enrichment media for isolation of *Shigella* (3). Hajna (4,5) also suggested the enrichment of organisms from rectal swabs in this medium 1-6 hours before plating on solid media. The medium contains polypeptone peptone, which provides amino acids and other nitrogenous substances to support bacterial growth. The combination of sodium citrate and sodium deoxycholate inhibit gram-positive and some gram-negative bacteria such as coliforms. Phosphates serve as a buffering system. Sodium chloride maintains osmotic equilibrium. *Proteus, Pseudomonas* and coliforms do not overgrow *Salmonella* and *Shigella* in GN Broth during the first 6 hours of incubation. This enrichment broth should be used in conjunction with selective and nonselective plating media to increase the probability of isolating pathogens (6,7,8).

**Quality Control**

**Appearance**
Sterile clear GN Broth.

**Colour**
Light amber coloured, clear to slightly opalescent solution.

**Quantity of medium**
10 ml of medium in tubes (LQ151) & 100ml of medium in bottles (LQ151C).

**Reaction**
6.80-7.20

**Sterility test**
Passes release criteria

**Cultural Response**
Cultural characteristics observed after inoculation in GN Broth and then subculture on XLD Agar and incubation at 30-35°C for 24-48 hours.

Please refer disclaimer Overleaf.
### Storage and Shelf Life

On receipt, store between 15-25°C. Use before expiry date on the label.

### Reference

1. Indian Pharmacopoeia, 2018, Ministry of Health and Family Welfare, Govt. of India,

### Disclaimer:

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