# GN Broth IP (Medium 11)

## Intended Use
GN Broth is used for the isolation of *Shigella* species in compliance with IP.

## Summary
GN Broth is recommended by the Indian Pharmacopoeia for the selective isolation of *Shigella* species with subsequent isolation on a selective medium, XLD Agar. Croft and Miller isolated more strains of *Shigella* from rectal swabs using this medium. Taylor and Schelhart showed the superiority of GN Broth to selenite enrichment media for isolation of *Shigella*.

## Principle
This 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 non-selective plating media to increase the probability of isolating pathogens.

## Formula*

| Ingredients | g/L |
|---|---|
| Polypeptone Peptone | 20.0 |
| Glucose | 1.0 |
| Sodium Citrate | 2.0 |
| Sodium Deoxycholate | 0.5 |
| Di-Potassium Hydrogen Phosphate | 4.0 |
| Mono-Potassium Dihydrogen Phosphate | 1.5 |
| Sodium Chloride | 5.0 |
| Final pH (at 25°C) | 7.0 ± 0.2 |

*Adjusted to suit performance parameters.

## Directions
1. Bring the GN Broth IP (Medium 11) bottle to the room temperature 22°C-30°C.
2. Use GN Broth IP (Medium 11) as per required application.

## Quality Control
**Appearance**: Light yellow to amber coloured, clear solution.
**Growth Promotion Test:** Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP and growth is observed after an incubation at 30°C-35°C for 24-48 hours. Subculturing is carried out using Xylose Lysine Deoxycholate Agar after enrichment in GN Broth IP (Medium No. 11) and incubated at 30°C-35°C for 24-48 hours.
**Growth Promoting Properties:** The test results observed are within the specified temperature and the shortest period of time, inoculating ≤ 100 cfu (at 30°C-35°C for 24 hours).
**Inhibitory Properties:** No growth of the test microorganism occurs for the specified temperature and longest period of time, inoculating >100 cfu (at 30°C-35 °C for ≥ 48 hours).

| Organism (ATCC) | Growth |
|---|---|
| **Growth Promoting** | |
| *Shigella boydii* serotype 10 strain CDC 6336-52 (12030) | Good |
| **Inhibitory** | |
| *Staphylococcus aureus* subsp. *aureus* (6538) | Inhibited |

**Note:** No growth of the organism should occur for the inhibitory test.
Inoculum for good growth is 10-100 cfu and that for inhibition is greater than 100 cfu.

## Remarks

1. Do not use media bottles that exhibit any damage, cracks, microbial contamination, discoloration, drying or other sign of deterioration.
2. Good laboratory practices and hazard precautions must be observed at all times.
3. After use media containers, sample, sample containers and other contaminated materials must be sterilized or incinerated before discarding.
4. All autoclaved biohazards should be disposed off in accordance with state and local environmental regulations.
5. Only qualified personnel who have been trained in microbiological procedures should handle all infected specimens and inoculated culture media.
6. User should ensure that any machinery or apparatus used and by chance contaminated must be safely disinfected or sterilized. The environment in which microbiological cultures are handled must also be taken into account.

## Storage and Stability

1. Store the ready to use GN Broth IP (Medium 11) at 15°C-25°C in a cool, dry place away from light.
2. Stability of the kit is as per expiry date mentioned on the label.

## Warranty

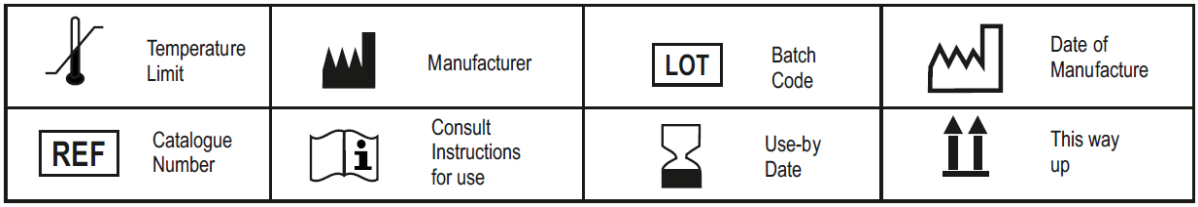
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

## References


1. Indian Pharmacopoeia, 2017, Ministry of Health and Family
2. Welfare, Govt. of India. 2. Croft C. C., Miller M. J., 1956, Am. J. Clin. Pathol., 26:411.
3. Taylor W.I., Schelhart D., 1968, Appl. Environ. Microbiol., 16:1383.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.


## Product Presentation:

| Cat. No. | Product Description | Pack Size |
|---|---|---|
| 203070110010 | Ready Prepared Tube | 25 x 10 mL |
| 203070110100 | Bottle Media | 100 mL |

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**Disclaimer**

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.