



Gram Negative Broth, GN Broth |

AS-1244

For the selective isolation of Gram-negative intestinal bacteria, especially of *Shigella*, from all types of materials.

GN broth, a selective enrichment medium, is used to isolate *Shigella* and *Salmonella* from a variety of sample types. It uses peptone as its main source of nutrients, while some Gram-negative bacteria and Gram-positive organisms are inhibited by sodium deoxycholate and sodium citrate. pH stability is maintained by phosphate buffering. Target pathogen recovery is more effective when mannitol concentration is higher than when dextrose concentration is used because it inhibits *Proteus* growth. To improve isolation performance, GN broth is frequently used in combination with both selective and non-selective agar media.

Composition (gr/L)

Tryptose	20
Sodium Chloride	5
Sodium Citrate	5
Dipotassium Hydrogen Phosphate	4
Mannitol	2
Potassium dihydrogen Phosphate	1.5
Glucose	1
Sodium Deoxycholate	0.5
Final pH at 25°C	7.0 ± 0.2

Preparation

Dissolve 39 g of the powder into 1 liter distilled water. Mix well. Autoclave at 121 °C for 15 minutes.

Quality Control

Dehydrated Appearance: Off-white to light tan, free-flowing, homogeneous.

Prepared Appearance: Light amber, clear to slightly opalescent.

Reaction of 3.9% Solution at 25°C: pH 7.0 ± 0.2

Microbial Test Results

Incubate at 35±2 °C for 18 to 24 hours.

Organism (ATCC)	Recovery
<i>Escherichia coli</i> (25922)	Good
<i>Enterococcus faecalis</i> (19433)	None to poor
<i>Salmonella enterica</i> subsp. <i>enterica</i> serotype <i>Typhimurium</i> (14028)	Good
<i>Shigella flexneri</i> (12022)	Good

Storage

Keep the container at 15-30 °C and prepared medium at 2-8 °C.