

GN BROTH (HAJNA)
Powdered and ready to use liquid medium
for the enrichment of Gram-negative microorganisms

Typical formula (g/l)

Tryptose	20.0
Sodium Chloride	5.0
Dipotassium Hydrogen Phosphate	4.0
Potassium Dihydrogen Phosphate	1.5
Sodium Citrate	5.0
Sodium Desoxycholate	0.5
Mannitol	2.0
Dextrose	1.0

Directions for powdered medium

Suspend 39g in 1000 ml of cold distilled water. Heat to dissolve, distribute 10 ml into tubes and autoclave at 121°C for 15 minutes. Avoid excessive heating of the medium.

Final pH 7.3 ± 0.1

Description

GN Broth is prepared according to the formula proposed by Hajna. The medium is recommended for the enrichment of Gram-negative microorganisms from clinical and non-clinical samples.

The presence of the phosphate buffer and two fermentable carbohydrates, with a mannitol concentration twice that of glucose, allows for a poor growth of *Proteus* and *Pseudomonas* in samples where *Salmonella* and *Shigella* are present. Inhibitory chemicals in the medium allow normal fecal flora to be maintained in a prolonged lag phase. The medium is particularly recommended for the promotion of *Shigella* and *Salmonella* which are less inhibited and enter a lag or stimulated phase of growth during the first few hours of incubation..

Technique

1. Place 1 g of faeces or 1 ml of liquid stool in tube. Swab specimens may be inserted directly into the broth. Emulsify the specimen thoroughly.
2. Incubate aerobically for six to eight hours at 35°C
3. Place one or two drops of incubated broth onto selective plate media.
4. Incubate aerobically at 35°C and examine for pathogens after 18-24 hours.

User quality assurance (37°C-8 h)

Productivity control

S.typhimurium ATCC 14028*: growth on subculture

S.sonnei ATCC 9290*: growth on subculture

E.coli ATCC 25922*: partially inhibited on subculture

*NCCLS M22-A2 recommended strains

Storage

Dehydrated medium: 10-30°C

Ready to use tubes: 2-8°C

User prepared tubes: 1 month at 2-8°C

References

- Hajna, A.A. (1955 Pub. Hlth. Lab. **13**, 83.
- NCCLS document M22-A2, 1996. Quality Assurance for Commercially prepared Microbiological Culture Media-Second Ed.; Approved Standard

Packaging

4015242	GN Broth (Hajna),	500g (12.8 l)
551524	GN Broth (Hajna),	20 x 10 ml, ready to use tubes