TM 117 - GN BROTH, HAJNA

INTENDED USE

For selective enrichment of gram-negative organisms of the enteric group.

PRODUCT SUMMARY AND EXPLANATION

Hajna developed Gram Negative (GN) Broth as an enrichment medium for recovery of *Salmonella* and *Shigella* from clinical and non-clinical specimens such as urine, blood clots, throat swabs, swabs from eating and drinking utensils etc. GN Broth, Hajna is also recommended by APHA for the microbiological examination of foods. 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*. Hajna also suggested the enrichment of organisms from rectal swabs in this medium 1-6 hours before plating on solid media.

GN Broth, Hajna should be inoculated directly with the specimen. In case of stool specimens, approximately 1 gram should be used for inoculation. Appropriate references for processing of clinical and food samples should be followed. After incubation of 6-8 hours and again after 24 hours, sub culturing on selective agar media should be carried out.

COMPOSITION

Ingredients	Gms / Ltr
Tryptose	20.000
Dextrose (Glucose)	1.000
Mannitol	2.000
Sodium citrate	5.000
Sodium deoxycholate	0.500
Dipotassium phosphate	4.000
Monopotassium phosphate	1.500
Sodium chloride	5.000

PRINCIPLE

The medium contains tryptose, 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. The higher concentration of mannitol over dextrose limits the growth of *Proteus* and enhances growth of mannitol fermenting *Salmonella* and *Shigella.* This enrichment broth should be used in conjunction with selective and nonselective plating media to increase the probability of isolating pathogens.

INSTRUCTION FOR USE

- Dissolve 39.0 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense in test tubes or flasks as desired.
- Sterilize by autoclaving at 115°C (10 psi pressure) for 15 minutes, avoid excessive heating.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light amber coloured, clear to slightly opalescent solution in tubes.
pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Growth after24 hours on macconkey Agar	Color of the colony	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Good	Good	Pink-red with bile ppt	35 - 37°C	18 - 24 Hours
Enterococcus faecalis	19433	50-100	None-poor	None-poor	Pale pink-red	35 - 37°C	18 - 24 Hours
Proteus mirabilis	25933	50-100	Good	Good	Colourless	35 - 37°C	18 - 24 Hours
Pseudomonas aeruginosa	27853	50-100	Good	Good	Colourless	35 - 37°C	18 - 24 Hours
Salmonella Typhimurium	14028	50-100	Good	Good	Colourless	35 - 37°C	18 - 24 Hours
Shigella flexneri	12022	50-100	Good	Good	Colourless	35 - 37°C	18 - 24 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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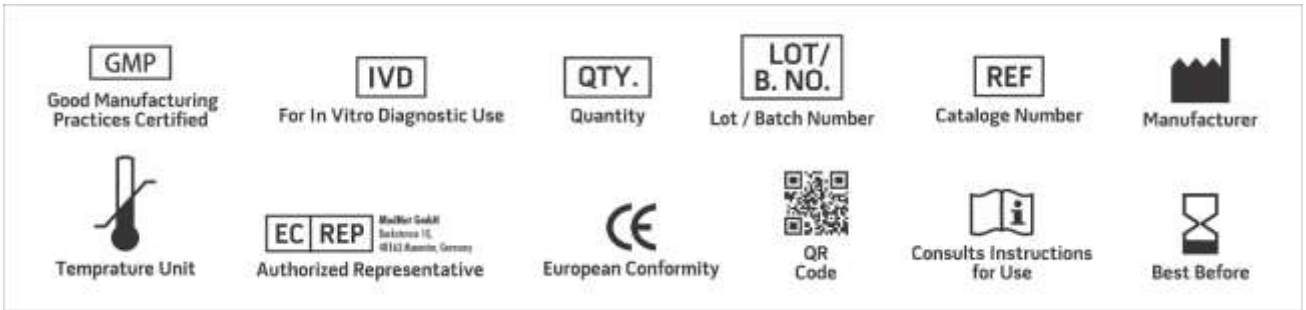

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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