

CM 20778 - GN BROTH, HAJNA (VEG.)

INTENDED USE

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

PRODUCT SUMMARY AND EXPLANATION

GN Veg Broth is prepared by using plant based protein hydrolysate and synthetic sources and is therefore free of TSE/BSE risks. It is prepared by using Veg Hydrolysate No.1 in place of Tryptose and Synthetic detergent No.III in place of sodium deoxycholate. GN Veg Broth is the modification of GN Broth can be used against conventional GN Broth, Hajna which is recommended by APHA for examination of foods. GN Broth, Hajna medium is generally used as a enteric enrichment broth for clinical specimens and as a nonselective enrichment broth for foods to recover Salmonella and Shigella species. Hajna suggested enrichment of organisms from clinical samples, like rectal swabs upto 6 hours before plating on solid media. This enrichment broth should be used in conjunction with selective and nonselective plating media to increase the probability of isolating pathogens. GN Veg Broth can be used for similar purposes.

COMPOSITION

Ingredients	Gms / Ltr
Veg hydrolysate No.1	20.00
Dextrose	1.00
Mannitol	2.00
Sodium citrate	5.00
Synthetic detergent No. III	0.50
Dipotassium phosphate	4.00
Monopotassium phosphate	1.50
Sodium chloride	5.00

PRINCIPLE

Veghydrolysate No.1 serves as a source of carbon, nitrogen, vitamins and amino acids necessary for bacterial growth. Sodium citrate and Synthetic detergent No.III inhibit gram-positive and some gram-negative bacteria other than Salmonella and Shigella. 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. Proteus, Pseudomonas and coliforms do not overgrow Salmonella and Shigella in GN Broth during first 6 hours of incubation.

INSTRUCTION FOR USE

- Dissolve 39.0grams 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 : Light yellow coloured, may have slightly greenish tinge, 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 after 24 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.

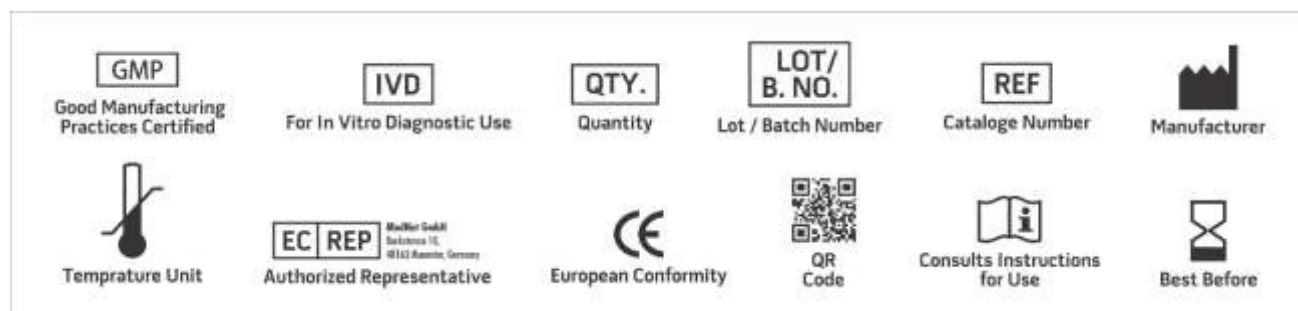
DISPOSAL



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

REFERENCES

1. Downes F.P and Ito K (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.
2. Hajna, 1955, Publ. Health Lab., 13:59.
3. Hajna, 1955, Publ. Health Lab., 13:83.
4. Hajna, 1956, Air. Univ. Sch. Ar. Med., USAF, 56:39.
5. Patrick Murray et.al, 2005, Manual of Clinical Microbiology, 7th ed., ASM, Washington, D.C.
6. Forbes, B.A., Sahem D.F and Weissfeld A.S., 2002, Bailey and Scott's Diagnostic Microbiology, 11th ed., The C.V. Mosby Co., St. Louis.
7. MacFaddin J.F., 2000(ed), Biochemical Tests for Identification of Medical Bacteria, 3rd edition, Lippincott Williams and Wilkins, New York.



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

*For LabUse Only

