

CM 20776 - GN BROTH MEDIUM 11 (as per IP)

INTENDED USE

For enrichment of Shigella from pharmaceutical products.

PRODUCT SUMMARY AND EXPLANATION

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. Hajna also suggested the enrichment of organisms from rectal swabs in this medium 1-6 hours before plating on solid media.

COMPOSITION

Ingredients	Gms / Ltr
Polypeptone peptone	20.000
Glucose	1.000
Sodium citrate	2.000
Sodium deoxycholate	0.500
Di-potassium hydrogen phosphate	4.000
Mono potassium dihydrogen phosphate	1.500
Sodium chloride	5.000

PRINCIPLE

The 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 nonselective plating media to increase the probability of isolating pathogens.

INSTRUCTION FOR USE

Dissolve 34.00 grams in 1000 ml purified/distilled water.

Mix well and allow to stand for 15 minutes

With continuous stirring bring gently to boil and maintain at boiling till completely dissolved, do not autoclave.

Dispense in test tubes or flasks as desired

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 inoculation in GN Broth and then subculture on XLD Agar and incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Growth on XLD Agar	Colour of colony	Incubation Temperature	Incubation Period
Shigella boydii	8700	50-100	Good	Good-luxuriant	Red translucent	30-35°C	<=24 Hours
Staphylococcus aureus	6538	>=10 ³	Inhibited	-	-	30-35°C	>=48 Hours

PACKAGING:

Inpacksize 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.

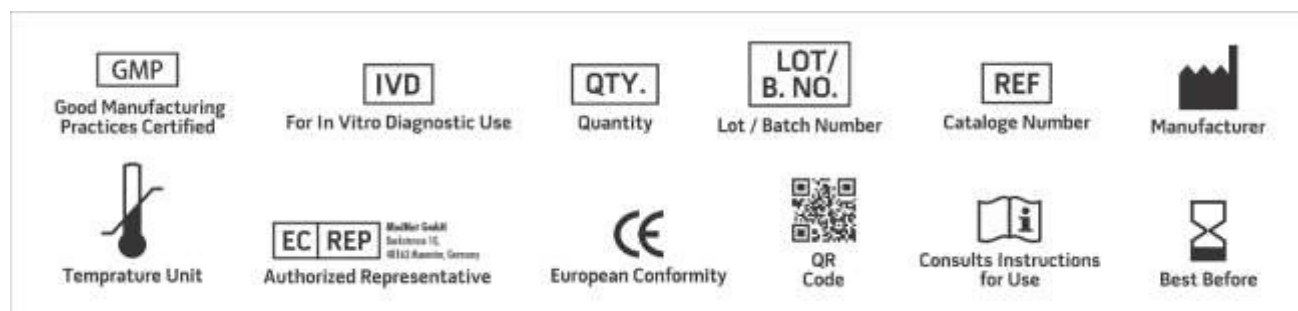
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

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9. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015)
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NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.



*For Lab Use Only

