GN Broth, Hajna

M242

Intended use

GN Broth, Hajna, is recommended for selective enrichment of gram-negative enteric organisms.

Composition **

Ingredients	Gms / Litre
Tryptose	20.000
Dextrose	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
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 39.0 grams in 1000 ml purified/distilled water.Heat if necessary to disssolve the medium completely Dispense in test tubes or flasks as desired. Sterilize by autoclaving at 115°C (10 lbs pressure) for 15 minutes. AVOID EXCESSIVE HEATING.

Principle And Interpretation

Hajna (4) 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 (4,5). GN Broth, Hajna is also recommended by APHA (11) for the microbiological examination of foods. Croft and Miller isolated more strains of *Shigella* from rectal swabs using this medium (1). Taylor and Schelhart showed the superiority of GN Broth to selenite enrichment media for isolation of *Shigella* (12). Hajna (5,6) also suggested the enrichment of organisms from rectal swabs in this medium 1-6 hours before plating on solid media.

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 (9.10.11).

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 (2,3,10,11). After incubation of 6-8 hours and again after 24 hours, sub culturing on selective agar media should be carried out (9).

Type of specimen

Clinical samples - Blood.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (7,8).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

7. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.

8. Jorgensen, J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

9. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.

10. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.

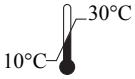
11. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

12. Taylor W.I., Schelhart D., 1968, Appl. Environ. Microbiol., 16:1383.

Revision : 02/ 2019

In vitro diagnostic medical device

CE Marking



Storage temperature

Do not use if package is damaged

HiMedia Laboratories Pvt. Limited,
23 Vadhani Industrial Estate,
LBS Marg,Mumbai-86,MS,India

CE Partner 4U ,Esdoornlaan 13, 3951
DB Maarn The Netherlands,
www.cepartner 4u.eu

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory,diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.