Technical Data Sheet

CE GN Enrichment Broth acc. to HAJNA

Ordering number: 1.10756.0500

Medium proposed by HAJNA (1955) for the selective cultivation of Gram-negative intestinal bacteria (especially of Shigella) from all types of materials.

The yields of shigellae achieved by previous enrichment with GN enrichment broth are higher than those obtained by smearing directly onto selective or elective plates (CROFT and MILLER 1956). The yields of salmonellae and shigellae are considerably improved by using this medium, combined with XLD Agar (TAYLOR and SCHELHART 1967, 1968; DUNN and MARTIN 1971). GN Enrichment Broth is used as a nonselective enrichment to recover Salmonella and Shigella from clinical and non-clinical specimens such as urine, blood clots, throat swabs, etc. Its author, Hajna, declares an extraordinary selectivity of the medium, whatever the origin of the sample, if it is kept in a transport medium prior to inoculation.

IVD in vitro diagnosticum - For professional use only

Mode of Action

Tryptose serves as a nutrient base. Citrate and deoxycholate act as selective agents and suppress the growth of Gram-positive microorganisms (particularly fecal streptococci), all types of spore-forming bacilli and some coliform bacteria.

Mannitol selectively promotes the growth of mannitol-metabolizing salmonellae and shigellae. Phosphate buffer prevents premature over-acidification of the culture medium by acidic metabolic products. If Proteus and Pseudomonas aerguninosa are present, they usually proliferate more slowly than salmonellae and shigellae during the first 6-8 hours of incubation.

Typical Composition

Tryptose	20.0
D(+)glucose	1.0
D(-)mannitol	2.0
di-potassium hydrogen phosphate	4.0
potassium dihydrogen phosphate	1.5
sodium chloride	5.0
sodium citrate	5.0
sodium deoxycholate	0.5

Preparation

Suspend 39 g/litre, dispense into suitable containers, autoclave (15 min at 121 °C).

pH: 7.0 ± 0.2 at 25 °C.

The prepared broth is clear and yellowish.

Experimental Procedure and Evaluation

Inoculate the enrichment broth with the sample material.

Incubation: approx. 6 hours at room temperature aerobically.

Spread the resulting culture thinly on the surface of elective plates.

Storage

Usable up to the expiry date when stored dry and tightly closed at +15 to +25° C. Protect from light.

After first opening of the bottle the content can be used up to the expiry date when stored dry and tightly closed at +15 to +25° C.

Specimen

e.g. Stool.

Clinical specimen collection, handling and processing, see general instructions of use.

Quality Control

Control Strains	ATCC #	Incubation	Expected Results
Shigella flexneri	12022		Growth good
Shigella sonnei	11060		Growth good
Salmonella typhimurium	14028		Growth good
Salmonella enteritidis	NCTC 5188		Growth good
Escherichia coli	25922		Growth good
Staphylococcus aureus	25923		Growth none
Enterococcus faecalis	11700		Growth none
Bacillus cereus	11778		Growth none

Please refer to the actual batch related Certificate of Analysis.

Literature

DUNN, C., a. MARTIN, W.: Comparison of media for isolation of Salmonella and Shigella from fecal specimen. - Appl. Microbiol., 22; 17-22 (1971).

HAJNA, A.A.: A new specimen preservative for gram-negative organisms of the intestinal group. - Publ. Hlth. Lab., 13; 59-62 (1955).

HAJNA, A.A.: A new enrichment broth medium for gram-negative organisms of the intestinal group. - Publ. Hlth. Lab., 13; 83-89 (1955).

CROFT, C.C., a. MILLER, M.J.: Isolation of shigella from rectal swabs with HAJNA "GN" broth. - Am. J. Clin. Path., 26; 411-417 (1956).

TAYLOR, W.I., a. SCHELHART, D.: Isolation of shigellae, IV. Comparison of plating media with stools. - Am. J. Clin. Path., 48; 356-362 (1968).

TAYLOR, W.I., a. SCHELHART, D.: Isolation of shigellae, V. Comparison of enrichment broth with stools. - Appl. Microbiol., 16; 1383-1386 (1967).

Ordering Information

Product	Cat. No.	Pack size
GN Enrichment Broth acc. to HAJNA	1.10756.0500	500 g

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