H Broth

M243

Intended Use:

Recommended for preparation of "H" antigen, used in the identification and differentiation of *Salmonella* species.

Composition**

Ingredients	g / L
Tryptone	5.000
Peptone	5.000
HM peptone B #	3.000
Dextrose (Glucose)	1.000
Dipotassium hydrogen phosphate	2.500
Sodium chloride	5.000
Final pH (at 25°C)	7.2±0.2

Equivalent to Beef extract

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 21.5 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Dispense in 4 ml amounts in 13 x 100 mm test tubes and sterilize by autoclaving at Δ 115°C for 15 minutes.

Δ Corresponds to 10 lbs pressure

Principle And Interpretation

The genus Salmonella is a member of the family *Enterobacteriaceae*. *Salmonella* has three kinds of major antigen with diagnostic or identifying applications: Somatic (O) or Cell Wall Antigens, Surface (Envelope) Antigens and Flagellar (H) Antigens (1). Identification and differentiation of *Salmonella* based on H antigen were found to be less labor-intensive than the standard methods while requiring no more technical skill. H Broth,used for the preparation of H antigen in the identification and differentiation of *Salmonella*, was originally formulated by Hajna and Damon (2). The medium is also used for differentiating *Enterobacteriaceae* (3). The combination of Tryptone and Peptone makes the medium highly nutritive for the growth of gram-negative enteric bacteria (4).

Tryptone, Peptone and HM peptone B in the medium provide nitrogen, vitamins and minerals necessary to support bacterial growth. Dextrose is the carbon and energy source. Dipotassium phosphate provides buffering to the medium. Sodium chloride provides essential ions and maintains the osmotic equilibrium.

Presumptive typical colonies should be recovered from SS Agar (M108) or Bismuth Sulphite Agar (M027) and used to inoculate tubes of TSI Agar (M021), Motility Test Medium (M260) and H Broth (M243). *Salmonella* Typhi or *Salmonella*-like organisms identified from these tests are subjected to serological testing including indole test.

Type of specimen

Pure isolates from clinical specimen

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. For professional 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.

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured, clear solution without any precipitate

Reaction

Reaction of 2.15% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth
Salmonella Typhi ATCC 6539	50-100	luxuriant
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	luxuriant
Salmonella Enteritidis ATCC 13076 (00030*)	50-100	luxuriant
Salmonella Paratyphi A ATCC 9150	50-100	luxuriant
Salmonella Paratyphi B ATCC 8759	50-100	luxuriant
Salmonella Arizonae	50-100	luxuriant

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1. Gruenewald R., Dixon D. P., Brun M., Yappow S., Henderson R., Douglas J. E., and Backer M. H., Appl. Environ. Microbiol., 1990, 56 (1),24-30
2. Hajna A. A. and Damon S. R., 1950, Pub. Health Rep., 65:116
3. Hajna A. A., 1951, Pub. Health Lab., 9:23
4. Hajna A. A., 1951, Personal communication.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. 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.

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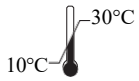
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE **CE Marking**

Do not use if package is damaged

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