

TECHNICAL DATA SHEET

Hemorrhagic Coli (HC) Agar

Principle

Hemorrhagic Coli Agar is general media used for the isolation of Hemorrhagic colitis type of *Escherichia coli*. The Hemorrhagic colitis is a type of gastroenteritis in which certain strains of the bacterium *Escherichia coli* infect the large intestine and produce a toxin that causes bloody diarrhea and other serious complications. The media is composed of tryptone, sorbitol, sodium chloride, bile salt, bromocresol purple and agar.

Tryptone provides carbon, protein and nutrient sources required for the growth of microorganisms. Sorbitol provides selectivity and Hemorrhagic coli (*E. coli* O157:H7) does not ferment sorbitol and produces colorless colonies. Sodium chloride maintains the osmotic balance of the medium. Bile salts inhibit accompanying gram-positive bacteria. Homogenize 10 grams of test sample in 90 ml Peptone Water (prepare 1:100 dilutions). Pipette 1 ml aliquots through disposable 100 µm pre filter and add to 10 ml Peptone Water filtered through Hydrophobic Grid Membrane Filters. Place the filters onto Hemorrhagic Coli Agar and incubate at 43°C for 16-20 hours. Replicate colony growth onto other HGMEs using HGME replicator. Incubate replicates on HC Agar at 43°C for 16-20 hours and test original filters with conjugated antibody.

Use: For isolation and enumeration with an enzyme labeled monoclonal antibody of *Escherichia coli*.

Contents*

Ingredients	Gram/Litre
Tryptone	20.000
Sorbitol	20.000
Sodium Chloride	5.000
Bile Salts	1.120
Bromocresol purple	0.015
Agar	15.000
pH at 25°C	7.2 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 61.00 grams in 1000 ml distilled water. Boiling to dissolve the medium completely. Sterilize by autoclaving at 121°C for 15 minutes. Cool to 45-50°C immediately dispense as desired. Ensure complete solidification and inoculate test sample aseptically.

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Specimens' types analyzed Clinical samples etc.,

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige colored, free-flowing, homogeneous
Reaction of 6.10 % solution	7.2 $\pm$ 0.2 at 25 °C
pH	7.00 - 7.40
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Purple colored , opalescent gel
Growth Promotion properties	Best at $\leq$ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at $\leq$ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Cultural characteristics observed after an incubation at 43°C for 18-22 hours

Organism	Growth	Recovery
<i>Escherichia coli</i> O157:H7	Luxurious	$\geq$ 50%

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

Note: Sterilize media immediately after reconstitution.

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Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. 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.
2. 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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