TM 2191 - M-HD ENDO BROTH W/ BG

INTENDED USE

For the detection of coliform in highly polluted waters using membrane filter technique.

PRODUCT SUMMARY AND EXPLANATION

Coliform bacteria are traditionally described as a group of bacteria that are aerobic and facultative anaerobic, gram-negative, non-spore forming, rod-shaped, fermenting lactose with gas and acid production at 35°C in 24 to 48 hours. The bacteria are classically used as indicators of faecal contamination or water pollution from sewage and thus are of sanitary significance. Coliform bacteria usually originate from the intestinal tract of warm blooded animals and may also originate from waters from wood industry, surfaces of red wood water tanks, biofilms within drinking water distribution systems.
M-HD Endo Broth w/ BG is formulated as per Hajna and Damon and is used for detection of coliforms in highly polluted water using membrane filter technique. This medium is a modification of M-HD Endo Broth with the basic fuchsin in the later being replaced with Brilliant green in the former.
Sterile cotton absorbent pads are saturated with around 2 ml of M-HD Endo Broth w/ BG. Membrane filter through which the test water sample has been passed is aseptically placed on these cotton pads. Following an incubation at 35-37°C for 18-24 hours, lactose-fermenting coliforms will from green colonies with metallic sheen. Non-lactose fermenting coliforms will form colourless colonies.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	10.000
Peptic digest of animal tissue	10.000
Yeast extract	3.000
Lactose	20.000
Sodium deoxycholate	0.200
Sodium chloride	5.000
Dipotassium phosphate	6.000
Sodium sulphite	2.100
Brilliant green	0.140

PRINCIPLE

M-HD Endo Broth w/ BG contains casein enzymic hydrolysate, peptic digest of animal tissue and yeast extract as the sources of essential nutrients. Lactose is the fermentable carbohydrate and energy source. Sodium deoxycholate and brilliant green form the selective system against non-coliform bacteria including *Shigella* species. Sodium chloride maintains osmotic equilibrium while phosphate buffers the medium. Brilliant green along with sodium sulphite forms the indicator system.

INSTRUCTION FOR USE

- Dissolve 56.44 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely. Do not autoclave.
- Dispense as desired.
- It is preferable to use the medium on the same day of preparation.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder
Appearance of prepared medium : Dark green coloured clear solution without any precipitate
pH (at 25°C) : 7.5±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony (on membrane filter)	Incubation Temperature	Incubation Period
Escherichia coli	*25922*	50-100	luxuriant	>=70%	green with metallic sheen	35-37°C	18-24 Hours
Enterobacter aerogenes	*13048*	50-100	luxuriant	>=70%	green	35-37°C	18-24 Hours
Salmonella Typhi	*6539*	50-100	luxuriant	>=70%	colourless	35-37°C	18-24 Hours
Staphylococcus aureus	25923	>=10^3	inhibited	0%	-	35-37°C	18-24 Hours

PACKAGING:

In pack size of 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

1. Dutka B. J., Chau A. S. Y., Coburn J., 1974, Water Res. 8: 1047-1055
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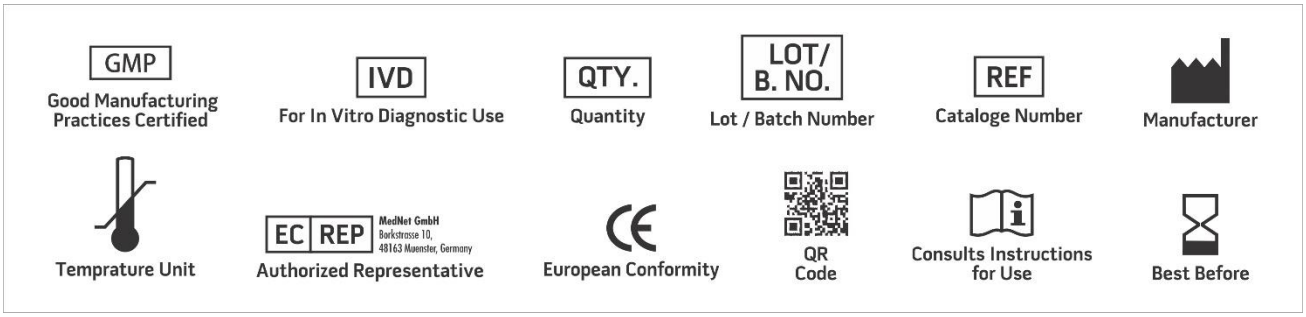
3. Hajna A. A. and Damon S. R., 1954, Public Health Rep., 69, 58
4. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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