TM 2065 – ENDO AGAR MODIFIED

INTENDED USE

For the detection of coliform and other enteric organisms.

PRODUCT SUMMARY AND EXPLANATION

Endo Agar was developed by Endo to differentiate gram-negative bacteria on the basis of lactose fermentation, while inhibiting gram-positive bacteria. Inhibition of the later was achieved without the use of bile salts as was traditionally used. Endo was successful in inhibiting gram-positive bacteria on his medium by the incorporation of sodium sulphite and basic fuchsin. The resulting Endo Agar, also known as Fuchsin Sulphite and Infusion Agar, was used to isolate the typhoid bacilli. Many modifications of this media have been done over the years. Endo Agar, modified is one of the modifications of Endo Agar.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	10.000
Lactose	10.000
Dipotassium hydrogen phosphate	2.500
Sodium sulphite	3.300
Basic Fuchsin	0.300
Agar	12.500

PRINCIPLE

The medium consists of peptone that provide nitrogen, carbon, vitamins and minerals required for bacterial growth. Sodium sulphite and basic fuchsin has inhibitory effect on gram-positive microorganisms. Lactose fermenting coliforms produce aldehyde and acid. The aldehyde in turn liberates fuchsin from the fuchsin-sulphite complex, giving rise to a red colouration of colonies. With *Escherichia coli*, this reaction is very pronounced as the fuchsin crystallizes, exhibiting a permanent greenish metallic lustre (fuchsin lustre) to the colonies.

INSTRUCTION FOR USE

- Dissolve 38.6 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- If the prepared medium is somewhat too red, then to remove the colour, add a few drops (max.1ml/litre) of a freshly prepared 10% Sodium sulphite solution and boil. Cool to 45-50°C.
- Mix well before pouring into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light pink to purple homogeneous free flowing powder.

Appearance of prepared medium : Orangish pink coloured, clear to slightly opalescent gel with fine precipitate forms in Petri plates.

pH (at 25°C) : 7.4 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Bacillus subtilis subsp. spizizenii	6633	>=10^3	Inhibited	0%	-	35-37°C	18-24 Hours
Klebsiella aerogenes	13048	50-100	Good-luxuriant	>=50%	Pink	35-37°C	18-24 Hours
Enterococcus faecalis	29212	50-100	None-poor	<=10%	Pink, small	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Good-luxuriant	>=50%	Pink to rose red with metallic sheen	35-37°C	18-24 Hours
Klebsiella pneumoniae	13883	50-100	Good-luxuriant	>=50%	Pink, mucoid	35-37°C	18-24 Hours
Proteus vulgaris	13315	50-100	Good-luxuriant	>=50%	Colourless to pale pink	35-37°C	18-24 Hours
Pseudomonas aeruginosa	27853	50-100	Good-luxuriant	>=50%	Colourless, irregular	35-37°C	18-24 Hours
Salmonella Typhi	6539	50-100	Good-luxuriant	>=50%	Colourless to pale pink	35-37°C	18-24 Hours
Shigella sonnei	25931	50-100	Good-luxuriant	>=50%	Colourless to pale pink	35-37°C	18-24 Hours
Staphylococcus aureus subsp. aureus	25923	>=10^3	Inhibited	0%	-	35-37°C	18-24 Hours
Enterobacter cloacae	13047	50-100	Good	40-50%	Pink	35-37°C	18-24 Hours

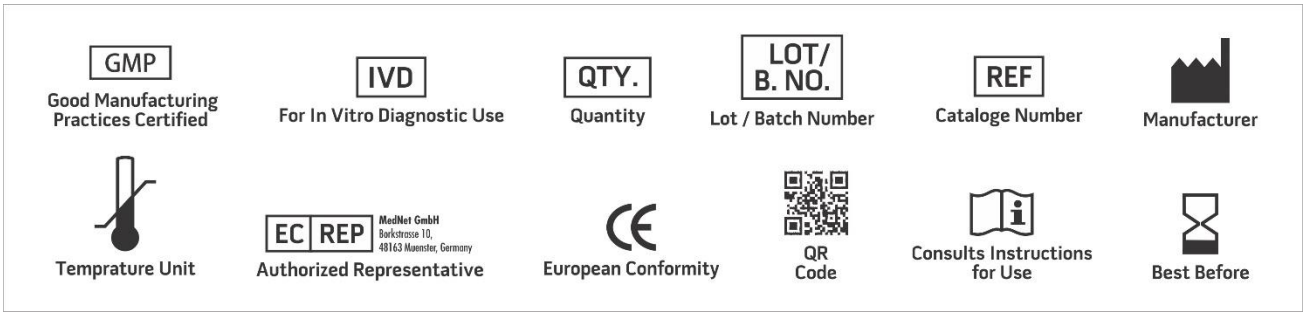
Salmonella Typhimurium	14028	50-100	Good-luxuriant	>=50%	Colourless	35-37°C	18-24 Hours
Salmonella Enteritidis	13076	50-100	Good-luxuriant	>=50%	Colourless	35-37°C	18-24 Hours
Shigella flexneri	12022	50-100	Good-luxuriant	>=50%	Colourless	35-37°C	18-24 Hours

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. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
2. Endo, 1904, Zentralbl. Bakteriol., Abt. I. Orig., 35:109.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.



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

***For Lab Use Only**

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