

TM 1533 – ENDO DEV AGAR

INTENDED USE

For isolation and differentiation of Escherichia coli in the bacteriological analysis of water.

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. Endo DEV Agar is the modification of Endo Agar according to the German legislation, to obtain a better detection of damaged coliforms. The agar concentration in Endo DEV Agar has been increased to maintain the strength of the medium after the water sample is incorporated. Also the buffering system is removed from this formulation. It includes more rich nutrient base and sodium chloride to restore the osmotic balance.

COMPOSITION

Ingredients	Gms / Ltr
Lactose	10.000
Meat peptone	10.000
Meat extract	10.000
Sodium chloride	5.000
Sodium sulphite	2.500
Basic fuchsin	0.500
Agar	20.000

PRINCIPLE

The medium consists of meat peptone and meat extract, which provide nitrogen, carbon, vitamins and minerals required for bacterial growth. Sodium sulphite and basic fuchsin make this medium selective by suppressing gram-positive organisms. Coliforms produce pink colonies on fermenting lactose while lactose non-fermenters produce colourless colonies on the medium. With Escherichia coli, this reaction is very pronounced as the fuchsin crystallizes, exhibiting a permanent greenish metallic luster (fuchsin luster) to the colonies. Medium should be stored away from light to avoid photo-oxidation.

INSTRUCTION FOR USE

- Dissolve 58.0 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.
- Mix well before pouring into sterile Petri plates.
- If the solidified culture medium is somewhat too red, then to remove the colour, add a few drops (max. 1 ml/litre) of a freshly prepared 10% Sodium sulphite solution and boil.
 - Caution: Basic fuchsin is a potential carcinogen and care should be taken to avoid inhalation of the powdered dye and contamination of the skin.

QUALITY CONTROL SPECIFICATIONS















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

: Orangish pink coloured, clear to slightly opalescent gel with fine precipitate Appearance of prepared medium

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	>=10³	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.

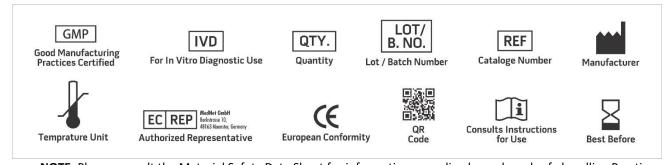
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Endo, 1904, Zentralbl. Bakteriol., Abt. I. Orig., 35:109.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices. *For Lab Use Only

Revision: 08 Nov., 2019





