TMH 108 - VIOLET RED BILE DEXTROSE AGAR (as per USP/BP/EP/JP/IP)

INTENDED USE

For detection and enumeration of coliform bacteria

PRODUCT SUMMARY AND EXPLANATION

Violet Red Bile Dextrose Agar is a selective medium recommended for detection and enumeration of Enterobacteriaceae especially the bile tolerant gram negative bacteria in accordance with the microbial limit testing by harmonized methodology of USP/EP/BP/JP/IP from non-sterile products and pharmaceutical preparations. This medium is a modification of the Violet Red Bile Agar and the MacConkey Agar as described by Mossel et al. The addition of dextrose to the Violet Red Bile Agar enhances both the growth of the most fastidious enterobacteria and the recovery of those having suffered from adverse conditions.

COMPOSITION

Ingredients	Gms / Ltr
Agar	15.00
Dextrose	10.000
Pancreatic digest of gelatin	7.000
Sodium chloride	5.000
Yeast Extract	3.000
Bile salt mixture	1.500
Neutral red	0.030
Crystal Violet	0.002

PRINCIPLE

Pancreatic digest of gelatin and yeast extract provide nitrogenous, carbonaceous compounds, long chain amino acids, vitamins and other nutrients essential for bacterial metabolism. This media is selective due to presence of the inhibitors for bile salts positive organisms especially *Staphylococci*. Neutral red indicator helps to detect dextrose fermentation. Enterobacteriaceae, such as *Escherichia coli* and *Salmonella* spp., are able to ferment dextrose and this results in production of acid and a decrease in pH that is indicated by neutral red which causes growth of the bacteria as pink colonies. Enough acid production will cause the precipitation of bile salts resulting in bile precipitate or halo around dextrose fermenting bacteria. Non-dextrose fermenting bile tolerant bacteria such as *Pseudomonas aeruginosa* grow but remain colorless with no bile precipitate. Bile salts and crystal violet act as selective agents inhibiting many Gram-positive bacteria. Sodium chloride maintains the osmotic equilibrium in the medium and agar acts as a solidifying agent.

INSTRUCTION FOR USE

- Dissolve 41.53 grams of the medium in 1000 ml distilled water.
- Gently heat to boiling with swirling to dissolve the medium completely. Do not autoclave.
- Cool to 45 - 50°C.
- Mix well and pour into sterile Petri plate.

QUALITY CONTROL SPECIFICATIONS

Appearance of Dehydrated powder	:	Cream to yellow colour, homogeneous free flowing powder
Appearance of Prepared medium	:	Light yellow colour, clear to slightly opalescent gel
pH (at 25°C)	:	7.4± 0.2

INTERPRETATION

Culture characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of colony	Recovery	Incubation Temp.	Incubation Period
Escherichia coli	25922	50-100	Good-Luxuriant	Pink-red with bile precipitate	≥50%	30-35°C	18-24 Hours
Escherichia coli	8739	50-100	Good-Luxuriant	Pink-red with bile precipitate	≥50%	30-35°C	18-24 Hours
Pseudomonas aeruginosa	9027	50-100	Good-Luxuriant	Pink colonies	≥50%	30-35°C	18-24 Hours
#Klebsiella aerogenes	13048	50-100	Good-Luxuriant	Pink-Red	≥50%	30-35°C	18-24 Hours
Salmonella enteritidis	13076	50-100	Good-Luxuriant	Pink- W or W/O bile precipitate	≥50%	30-35°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Good-Luxuriant	Pink- W or W/O bile precipitate	≥50%	30-35°C	18-24 Hours
Staphylococcus aureus	25923	≥1000	Inhibited	-	0%	30-35°C	=>24 Hours
Staphylococcus aureus	6538	≥1000	Inhibited	-	0%	30-35°C	=>24 Hours

#Formerly known as Enterobacter aerogenes.

PACKAGING

In 100 & 500 gm packaging size.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°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.

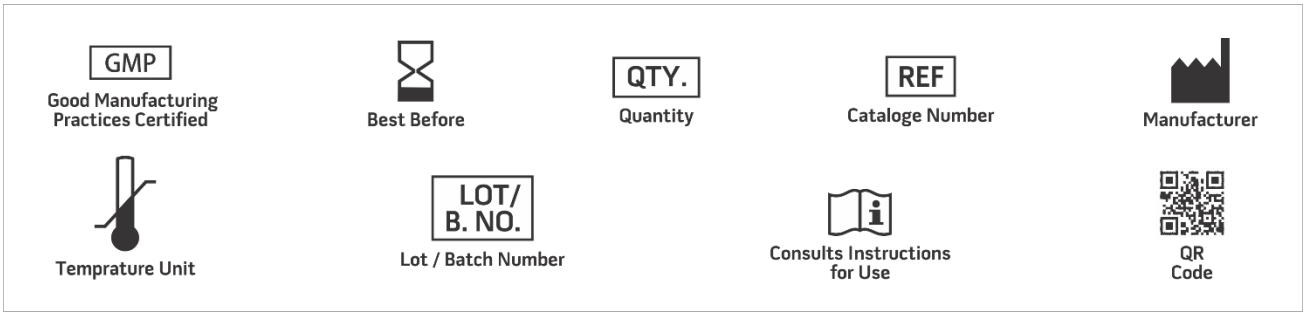
Product Deterioration: Do not use powder if they show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

DISPOSAL

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

REFERENCES

1. British Pharmacopoeia, 2017, The Stationery office British Pharmacopoeia
2. European Pharmacopoeia, 2016, European Dept. for the quality of Medicines.
3. Japanese Pharmacopoeia, 2016. Revision :03 / 2019 7
4. Indian Pharmacopoeia, 2018 Ministry of Health and Family Welfare, Govt. of India.
5. The United States Pharmacopoeia, 2019 The United States Pharmacopoeial Convention. Rockville, MD.
6. Mossel, D.A.A. Media for Enterobacteriaceae (1985) International Journal of Food Microbiology, 2 (1- 2), pp. 27-32.



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

***For professional use only.**

Revision: 11th July 2020.