microgen
Ready Prepared Media

Technical Information

Violet Red Bile Glucose Agar Plate

Product Code: PM 1581H

Application: Recommended for the selection and subculture of bile tolerant organisms in accordance with the harmonized methodology of USP/EP/BP/JP/IP.

Composition**

Ingredients	Gms / Litre
Yeast extract	3.000
Gelatin peptone #	7.000
Bile salts	1.500
Sodium chloride	5.000
Glucose monohydrate	10.000
Agar	15.000
Neutral red	0.030
Crystal violet	0.002
pH after heating (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters
Pancreatic digest of gelatin

Principle & Interpretation

Violet Red Bile Glucose 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/BP/EP/JP/IP (1,2,3,4,5) from non-sterile products and pharmaceutical preparations. Gelatin peptone 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; bile salts positive organisms especially Staphylococci. Neutral red indicator helps to detect glucose fermentation. Glucose is the fermentable carbohydrate, utilization of which leads to the production of acids. Neutral red indicator detects the acidity so formed. Crystal violet and bile salts help to inhibit the accompanying gram-positive and unrelated flora. Sodium chloride maintains the osmotic equilibrium. Further biochemical tests are necessary for positive identification (6).

Type of specimen

Pharmaceutical samples

Specimen Collection and Handling:

For pharmaceutical samples, follow appropriate techniques for sample collection, processing as per guidelines (1,2,3,4,5). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium
2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3.It is recommended to store the plates at 24-30°C to avoid minimum condensation.
4.Over incubation may result in reverting of reaction.
5.Further biochemical identification is necessary for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Methodology

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Quality Control

Appearance
Sterile Violet Red Bile Glucose Agar in 90 mm disposable Petri plate.
Colour
Red with purplish tinge coloured medium
Quantity of Medium
25ml of medium in 90mm plate.
pH
7.20 - 7.60
Sterility Check
Passes release criteria
Cultural Response
Growth Promotion is carried out in accordance with the harmonized method of USP/EP/BP/JP. Cultural response was observed after incubation at 30-35°C for 18-24 hours. Recovery rate is considered as 100% for bacteria growth on Soyabean Casein Digest Agar.
Growth promoting properties
Growth of microorganism comparable to that previously obtained with previously tested and approved lot of medium occurs at the specified temperature for not more than the shortest period of time specified inoculating <=100 cfu (at 30-35°C for <=18 hours).
Indicative properties
Colonies are comparable in appearance and indication reaction to those previously tested and approved lot of medium occurs for the specified temperature for a period of time within the range specified inoculating 100 cfu (at 30-35°C for 18-24hours).

Cultural Response

Organism	Inoculum (CFU)	Growth	Observed Lot Value (CFU)	Recovery	Colour of Colony	Incubation Temprature
Growth promoting + Indicative						
Escherichia coli ATCC 8739 (00012*)	50 -100	luxuriant	25 -100	>=50 %	pink-red with Bile Precipitate	18-24rhs
Pseudomonas aeruginosa ATCC 9027 (00026*)	50 -100	luxuriant	25 -100	>=50 %	pink to red	18-24rhs
Additional Microbiological Testing						
Escherichia coli NCTC 9002	50 -100	good-luxuriant	25 -100	>=50 %	pink-red with Bile Precipitate	18-24hrs
Escherichia coli ATCC 25922 (00013*)	50 -100	good-luxuriant	25 -100	>=50 %	pink-red with bile precipitate	18 -24 hrs

Salmonella Enteritidis ATCC 13076 (00030*)	50 -100	good-luxuriant	25 -100	>=50 %	light pink	18 -24 hrs
# Klebsiella aerogenes ATCC 13048 (00175*)	50 -100	good-luxuriant	25 -100	>=50 %	pink-red	18 -24 hrs
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	>=10^3	inhibited	0	0%		>=24 hrs
Staphylococcus aureus subsp. *aureus* ATCC ATCC 6538 (00032*)	>=10^3	inhibited	0	0%		>=24 hrs

Key :- (#) Formerly known as *Enterobacter aerogenes* (*) Corresponding WDCM numbers

Storage and Shelf Life

On receipt store between 20-30°C. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

Further Reading

1.The United States Pharmacopoeia, 2022 The United States Pharmacopoeial Convention. Rockville, MD.
2.British Pharmacopoeia, 2022, The Stationery office British Pharmacopoeia.
3.European Pharmacopoeia, 2022, European Dept. for the quality of Medicines.
4.Japanese Pharmacopoeia, 2016.
5.Indian Pharmacopoeia, 2022. Ministry of Health and Family Welfare, Govt. of India.
6.MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
7.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
8.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.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and developmentwork carried at **CDH** is true and accurate
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