

Violet Red Bile Agar BIS

Intended Use

Violet Red Bile Agar BIS is a selective medium used for the detection and enumeration of coliforms in compliance with BIS specification IS:5401-1969.

Summary

Violet Red Bile Agar is recommended by APHA for the detection and enumeration of coliform organisms in water, milk, dairy and other food products. It is also recommended by BIS as a presumptive test solid medium for detection and estimation of coliform bacteria in food stuff. Druce *et al.*, found this medium equally good as the indicator of coliform-aerogenes in milk as MacConkey Broth. Recently, the agar formulation is recommended by ISO committee for the enumeration of coliforms.

Principle

Peptic digest of animal tissue and yeast extract serve as sources of carbon, nitrogen, vitamins and other essential growth nutrients. Lactose 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 mixture help to inhibit the accompanying Gram-positive and unrelated flora. Sodium chloride maintains the osmotic equilibrium.

Formula*

Ingredients	g/L
Lactose	10.0
Peptic Digest of Animal Tissue	7.0
Sodium Chloride	5.0
Yeast Extract	3.0
Bile Salts Mixture	1.5
Neutral Red	0.03
Crystal Violet	0.002
Agar	15.0
Final pH (at 25°C)	7.4 ± 0.1

*Adjusted to suit performance parameters

Storage and Stability

Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Specimen Collection and Handling

Ensure that all samples are properly labelled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

1. Suspend 41.53 g of the powder in 1000 mL purified / distilled water.
2. Mix thoroughly.
3. Heat with frequent agitation to dissolve the powder completely. DO NOT AUTOCLAVE.
4. Cool to 45°C and pour into sterile petridishes containing the inoculum.

Quality Control

Dehydrated Appearance: Light yellow to pinkish beige coloured, homogenous, free flowing powder.

Prepared Appearance: Light reddish purple to reddish purple coloured, clear to slightly opalescent gel forms in petridishes.

Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP and growth is observed after an incubation at 30°C-35°C for 18 to 24 hours.

Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism at 30°C-35°C for 18 hours.

Indicative Properties : The test results observed are within the specified temperature and time, inoculating ≤ 100 cfu of appropriate microorganism.

Inhibitory Properties: No growth of the test microorganism occurs for the specified temperature and not less than the longest period of the time specified, inoculating > 100 cfu of the appropriate microorganism at 30°C-35°C for ≥ 24 hours.

Organism (ATCC)	Growth	Colour of Colony
<i>Escherichia coli</i> (25922)	Good	Pinkish red with bile precipitate
<i>Escherichia coli</i> (8739)	Good	Pinkish red with bile precipitate
<i>Klebsiella aerogenes</i> (13048)	Good	Pink
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> (14028)	Good	Colourless
Inhibitory		
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> (6538)	Inhibited	-

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

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.

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Speck M. (Ed.), 1984, Compendium of Methods for The Microbiological Examination of Foods, 2nd ed. APHA, Washington, D.C.
2. Richardson G. (Ed.), 1985, Standard Methods for the Microbiological Examination of Dairy Products, 15th ed., APHA, Washington, D.C.
3. Bureau of Indian Standards, IS: 5401, 1969 (Second reprint - June 1990).
4. Druce R.G. et al., 1957, J. Appl. Bact., 20: 1.
5. International Organization for Standardization (ISO), 1991, Draft ISO/DIS 4832.
6. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No. 201220020500	Product Description Dehydrated Culture Media	Pack Size 500 g
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 Temperature Limit	 Manufacturer	 LOT	Batch Code	 Date of Manufacture	 This way up	 RO Received on
REF Catalogue Number	 Consult Instructions for use	 Use-by Date	 Hygroscopic keep container tightly closed	OO Opened on		

Revision: 0825/VER-03

Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.