

Violet Red Bile Glucose Agar

Intended Use

Violet Red Bile Glucose Agar is recommended for detection and enumeration of Enterobacteriaceae from pharmaceutical products in accordance with the microbial limit testing by harmonized methodology of BP

Typical Composition (g/litre)

Yeast extract 3.0; Pancreatic digest of gelatin 7.0; Bile Salts 1.5; Sodium chloride 5.0; Glucose monohydrate 10.0; Neutral red 0.03; Crystal violet 0.002; Agar 15.0

Mode of Action

Crystal violet inhibits the accompanying bacterial flora inhibits especially Staphylococci. Pancreatic digest of gelatin and yeast extract provide nitrogenous compounds and other nutrients essential for bacterial metabolism. This media is selective due to presence of the inhibitors bile salts and crystal violet. Glucose fermenting strains produce red colonies with pink-red halos in the presence of neutral red. Sodium chloride maintains the osmotic equilibrium in the medium. All Enterobacteriaceae are detected as they all degrade glucose to acid

Preparation

Suspend 40.62 grams of dehydrated medium in 1 Liter purified /distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Reddish purple coloured clear to slightly opalescent gel forms in Petri plates.

pH after heating (at 25°C) 7.4 ± 0.2

Storage

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Experimental Procedure and Evaluation

The sample is initially enriched in Enterobacteria Enrichment broth -Mossel and then sub cultured on Violet Red Bile Glucose Agar



E.coli

Quality Control

Organism	Inoculum	Observed Lot value (CFU)	Recovery	Colony colour
Escherichia coli ATCC 8739	50 - 100	25 -100	>=50 %	Pink-red with bile ppt
Pseudomonas aeruginosa ATCC 9027	50 - 100	25 -100	>=50 %	Pink to purple
Escherichia coli NCTC 9002	50 - 100	25 -100	>=50 %	Pink-red with bile ppt
Escherichia coli ATCC 25922	50 - 100	25 -100	>=50 %	Pink-red with bile ppt
Salmonella Enteritidis ATCC 13076	50 - 100	25 -100	>=50 %	Light pink
Enterobacter aerogenes ATCC 13048	50 - 100	25 -100	0%	Pink red
Staphylococcus aureus ATCC 25923	>=10 ³	0	0%	Large brown black
Staphylococcus aureus ATCC 6538	>=10 ³	0	0 -10 %	Large brown black

Reference

1. The United States Pharmacopoeia, 2011, The United States Pharmacopoeial Convention. Rockville, MD.
2. British Pharmacopoeia, 2011, The Stationery office British Pharmacopoeia
3. European Pharmacopoeia, 2011, European Dept. for the quality of Medicines.
4. Japanese Pharmacopoeia, 2008. Revision: 1 / 2011
5. Indian Pharmacopoeia, 2010, Govt. of India, the controller of Publication, Delhi, India.