Violet Red Bile Glucose Agar (Harmonized) RDM-H-VRBGA-01

Principle

Violet red bile glucose agar is prepared in accordance with the harmonized principles of USP/EP/IP/JP and recommended for testing bile tolerating gram-negative bacteria and microbial limit testing of pharmaceutical products and raw material used in pharmaceutical industries. Violet red bile glucose agar contains yeast extract, pancreatic digest of gelatin, bile salts, sodium chloride, glucose monohydrate, neutral red, crystal violet and agar. The pancreatic digest of gelatin serves as a source of carbon, nitrogen, vitamins and minerals. Yeast Extract supplies additional nitrogen, carbon and vitamins which stimulate bacterial growth. Glucose is a source of carbohydrate. Bile salts and crystal violet perform inhibitory action and inhibit gram positive bacteria. The fermentation of glucose to acid is indicated by the pH indicator neutral red, which changes its color to red, and by precipitation of bile acids. Organisms that rapidly attack glucose produce red purple colonies surrounded by purple haloes. Agar is a solidifying agent.

Use: Recommended for detection and enumeration of *Enterobacteriaceae*, (group of glucose fermenting) and used for testing bile tolerating gram-negative bacteria and microbial limit testing of pharmaceutical products and food products.

Contents*

Ingredients	**Gram/Liter**
Yeast Extract	3.000
Pancreatic Digest of Gelatin	7.000
Bile Salts	1.500
Sodium Chloride	5.000
Glucose Monohydrate	10.000
Neutral Red	0.030
Crystal Violet	0.002
Agar	15.000
pH at 25˚C	7.4 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 41.5 grams in 1000 ml distilled. Boil to dissolve ingredients completely and sterilize. **Do Not Autoclave**. In aseptic condition immediately cool it to 42-45°C and distribute in sterile petri plates and allow solidify. Ensure complete solidification and inoculate test sample.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken

All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Pink-beige colored free flowing, homogeneous powder
Reaction of 4.15% solution	7.4 ±0.2 at 25 ˚C
pH	7.20- 7.60
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Reddish-purple, slightly opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 ºC for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed after incubation at 33-37°C for 18-24 hours. Inoculum 50-100 CFU.

Organism	ATCC	Growth	Recovery	Colony color
Escherichia coli	8739	Luxuriant	≥ 60%	Pink-red with bile precipitate
Klebsiella aerogenes	13048	Luxuriant	≥ 60%	Pinkish red
Salmonella enteritidis	13076	Luxuriant	≥ 60%	Light pinkish
Pseudomonas aeruginosa	9027	Luxuriant	≥ 60%	Pink to purple
Pseudomonas aeruginosa	27853	Luxuriant	≥ 60%	Pink to purple
Staphylococcus aureus	6538	Inhibited	--	--
Staphylococcus aureus	25923	Inhibited	--	--

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.
Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

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7. *The United States Pharmacopoeia*, (2014), The United States Pharmacopeial Convention. 12601 Twinbrook Parkway, Rockvukke, MD 20852.

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