

## **TECHNICAL DATA SHEET**

### **Violet Red Bile Glucose Agar**

#### **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:** For the selective isolation, detection and enumeration of coli-aerogenes bacteria in water, milk other dairy products.

#### **Contents\***

| <b>Ingredients</b>                  | <b>Gram/Litre</b> |
|-------------------------------------|-------------------|
| <b>Yeast Extract</b>                | <b>3.000</b>      |
| <b>Pancreatic Digest of Gelatin</b> | <b>7.000</b>      |
| <b>Bile Salts</b>                   | <b>1.500</b>      |
| <b>Sodium Chloride</b>              | <b>5.000</b>      |
| <b>Glucose Monohydrate</b>          | <b>10.000</b>     |
| <b>Neutral Red</b>                  | <b>0.030</b>      |
| <b>Crystal Violet</b>               | <b>0.002</b>      |
| <b>Agar</b>                         | <b>15.000</b>     |
| <b>pH at 25°C</b>                   | <b>7.4 ±0.2</b>   |

**\* Formula adjusted for optimum performance and parameters**

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**Directions:** Dissolve 41.5 grams in 1000 ml distilled water. Heat to boil for 2 minutes to dissolve ingredients completely, 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

These microbial media are intended for the in-vitro use only. 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 °C for 18-72 h           |
| Indicative properties             | Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h        |
| Negative control                  | Performed using sterile distilled water             |

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**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                   |
|-------------------------------|-------|-----------|----------|--------------------------------|
| <i>Escherichia coli</i>       | 8739  | Luxuriant | ≥ 60%    | Pink-red with bile precipitate |
| <i>Klebsiella aerogenes</i>   | 13048 | Luxuriant | ≥ 60%    | Pinkish red                    |
| <i>Salmonella enteritidis</i> | 13076 | Luxuriant | ≥ 60%    | Light pinkish                  |
| <i>Pseudomonas aeruginosa</i> | 27853 | Luxuriant | ≥ 60%    | Pink to purple                 |
| <i>Staphylococcus aureus</i>  | 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.

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