



## Violet Red Bile Glucose HiVeg™ Agar w/o Lactose

MV581

### Intended Use

Recommended to be used for detection and enumeration of *Enterobacteriaceae* in raw foods and clinical samples.

### Composition\*\*

Ingredients	Gms / Litre
HiVeg™ peptone	7.000
Yeast extract	3.000
Sodium chloride	5.000
Synthetic detergent No. 1	1.500
Glucose (Dextrose)	10.000
Neutral red	0.030
Crystal violet	0.002
Agar	12.000
Final pH ( at 25°C)	7.4±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 38.53 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

### Principle And Interpretation

Violet Red Bile Agar, a modification of MacConkeys original formulation (1) is used for the enumeration of coli-aerogens bacterial group. VRBGA, HiVeg™ is prepared by completely replacing animal peptone with vegetable peptones, to make the media BSE/TSE risks free. Violet Red Bile Glucose HiVeg™ Agar w/o Lactose, is a modification of VRBA (MV049), formulated by Mossel et al (2,6,7) where glucose is added to serve the same purpose of enumeration of *Enterobacteriaceae* (2). It employs the selective inhibitory components crystals violet and bile salts and the indicator system glucose and neutral red. Sought bacteria will dissimilate glucose and produce purple zones around the colonies (3). ISO committee has also recommended this medium (4). Selectivity of VRBGA can be increased by incubation under anaerobic conditions and/ or at elevated temperature, i.e. equal to or above 42°C (5-7).

HiVeg™ peptone and yeast extract serve as sources of carbon, nitrogen, vitamins and other essential growth nutrients. 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 mixture help to inhibit the accompanying gram-positive and unrelated flora. Sodium chloride maintains the osmotic equilibrium. Further biochemical tests are necessary for positive identification (8).

### Type of specimen

Clinical samples - Blood ; Food samples

### Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (9,10).

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (11).

After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions :

In Vitro diagnostic Use only. 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 clinical specimens. Safety guidelines may be referred in individual safety data sheets

### Limitations :

1. Further Biochemical testing is required for identification of microorganisms.
2. Some organisms may show poor growth due to nutritional variations.

## Quality Control

### Appearance

Light yellow to pinkish beige homogeneous free flowing powder

### Gelling

Firm, comparable with 1.2% Agar gel.

### Colour and Clarity of prepared medium

Reddish purple coloured clear to slightly opalescent gel forms in Petri plates.

### Reaction

### pH

7.20-7.60

### Cultural Response

Cultural characteristics was observed after an incubation at 35-37°C for 18-24 hours. Recovery rate is considered as 100% for bacteria growth on Soyabean Casein Digest Agar.

Organism	Inoculum (CFU)	Growth	Observed Lot value (CFU)	Recovery	Colour of colony	Incubation temperature
<i>Escherichia coli</i> ATCC 8739	50 -100	luxuriant	25 -100	≥50 %	pink-red with bile precipitate	18 -24 hrs
<i>Pseudomonas aeruginosa</i> ATCC 9027	50 -100	luxuriant	25 -100	≥50 %	pink to red	18 -24 hrs
<i>Escherichia coli</i> NCTC 9002	50 -100	good-luxuriant	25 -100	≥50 %	pink-red with bile precipitate	18 -24 hrs
<i>Escherichia coli</i> ATCC 25922	50 -100	good-luxuriant	25 -100	≥50 %	pink-red with bile precipitate	18 -24 hrs
<i>Salmonella Enteritidis</i> ATCC 13076	50 -100	good-luxuriant	25 -100	≥50 %	light pink	18 -24 hrs
<i>Enterobacter aerogenes</i> ATCC 13048	50 -100	good-luxuriant	25 -100	≥50 %	pink-red	18 -24 hrs
<i>Staphylococcus aureus</i> ATCC 25923	≥10 <sup>3</sup>	inhibited	0	0%		≥24 hrs
<i>Staphylococcus aureus</i> ATCC 6538	≥10 <sup>3</sup>	inhibited	0	0%		≥24 hrs

## Storage and Shelf Life

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

## Reference

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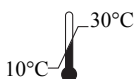
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In vitro diagnostic medical device



CE Marking



Storage temperature



Do not use if package is damaged



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