

## Crystal Violet Lactose HiVeg™ Agar

MV897

### Intended Use:

Recommended for differentiation of pure cultures of pathogenic and nonpathogenic Staphylococci.

### Composition\*\*

Ingredients	g / L
HiVeg™ peptone No.3	5.000
HiVeg™ extract	3.000
Lactose	10.000
Crystal violet	0.0033
Agar	15.000
Final pH ( at 25°C)	6.8±0.2

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

### Directions

Suspend 33 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

### Principle And Interpretation

Crystal Violet Lactose Agar was recommended by Chapman (1) for the differentiation of pure cultures of pathogenic from nonpathogenic strains of Staphylococci. It is prepared by using vegetable peptones in place of animal based peptones which make the media free of BSE/TSE risks. The media contains HiVeg™ peptone No.3 and HiVeg™ extract as sources of carbon, nitrogen, vitamins and minerals. Lactose is the carbon and energy source.

The toxicity of Staphylococci is estimated on the basis of their pigment production, haemolytic and coagulating characteristic. In the study of the correlation between haemolytic and coagulase activities, animal inoculation and other tests, Chapman and Berens (2, 3) reported that Staphylococci produced different coloured growths when cultured on Crystal Violet Agar. Haemolytic and coagulating strains produced purple to violet colour whereas non-hemolytic and non-coagulating strains produced white colonies after incubation. Crystal violet inhibits most of the gram-positive organisms and is markedly inhibitory to Staphylococci. A fair growth can be obtained at a 1: 300,000 concentration of the dye when the medium is inoculated heavily. So, this medium is used for study of pure cultures where a mass inoculation can be used rather than for primary isolation.

### Type of specimen

Isolated Microorganism

### Specimen Collection and Handling

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

### Warning and Precautions

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 specimens. Safety guidelines may be referred in individual safety data sheets.

### Limitations

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

### Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## Quality Control

### Appearance

Light yellow to light tan homogeneous free flowing powder

### Gelling

Firm, comparable with 1.5% Agar gel

### Colour and Clarity of prepared medium

Light purple coloured, clear to slightly opalescent gel forms in Petri plates

### Reaction

Reaction of 3.3% w/v aqueous solution at 25°C. pH : 6.8±0.1

### pH

6.70-6.90

### Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 40-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	luxuriant	≥50%	purple
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	50-100	fair-good	30-40%	light yellow
<i>Staphylococcus epidermidis</i> ATCC 12228 (00036*)	50-100	fair - good	30-40%	purple/ very slightly yellow
<i>Streptococcus pyogenes</i> ATCC 19615	50-100	none - poor	0 -10 %	colourless

Key : (\*) Corresponding WDCM numbers.

## Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

## 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 (4,5).

## Reference

1. Chapman, 1936, J. Bact., 32:199.
2. Chapman, Berens. Peters and Curcio, 1934, J. Bact., 28:343.
3. Chapman and Berens, 1935, J. Bact., 29:437.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 03/2024

### Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.