



Crystal Violet Lactose Broth

M831

Crystal Violet Lactose Broth is used for detection of coliforms in water filtration control works.

Composition**

Ingredients	Gms / Litre
Peptone	5.000
Lactose	5.000
Dipotassium phosphate	5.000
Monopotassium phosphate	1.000
Crystal violet	0.00143
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 16 grams in 1000 ml distilled water. Distribute in 10 ml quantities in tubes with inverted Durhams tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. If the inoculum is more than 1 ml double or multiple strength media must be used.

Principle And Interpretation

The extent to which total coliforms are present in the source water can indicate the general quality of that water and the likelihood that the water is faecally contaminated. Total coliforms are currently controlled in drinking water regulations (i.e. Total Coliform Rule) because their presence above the standard indicates inefficacy in treatment or in the distribution system. Environmental Protection Agency (EPA) requires all public water systems to monitor for total coliforms in distribution systems. If coliforms are found, then the public water system must further analyze coliform-positive sample for specific types of coliforms (i.e., faecal coliforms or *E. coli*). EPA is increasing protection from pathogens in surface water systems as part of the Interim Enhanced Surface Water Treatment Rule. Crystal Violet Lactose Broth is used for the detection of coliforms in such water filtration control works.

The media contains proteose peptone, beef extract and peptone as sources of carbon, nitrogen, vitamins and minerals. Dipotassium and mono potassium phosphates provide buffering to the medium. Lactose is the carbon and energy source. Crystal violet inhibits most of the gram positive organisms.

Quality Control

Appearance

Light yellow to light tan homogeneous free flowing powder

Colour and Clarity of prepared medium

Light purple coloured, clear solution in tubes

Reaction

Reaction of 1.6% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

M831: Cultural characteristics observed after an incubation at 35-37°C for 40-48 hours.

Organism	Inoculum (CFU)	Growth	Colour of medium
<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	purple
<i>Staphylococcus aureus</i> ATCC 25923	50-100	none-poor	light yellow

<i>Staphylococcus epidermidis</i> ATCC 12228	50-100	fair-good	purple/very slightly yellow
<i>Streptococcus pyogenes</i> ATCC 19615	$\geq 10^3$	inhibited	

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.

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Disclaimer :

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