

Technical Information

Crystal Violet Lactose Agar

Product Code: DM 1897

Application: - Crystal Violet Lactose Agar is used for differentiation of pure cultures of pathogenic and nonpathogenic Staphylococci.

Composition**

Ingredients	Gms / Litre
Proteose peptone	5.000
Beef 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

Principle & Interpretation

Chapman ⁽¹⁾ recommended Crystal Violet Lactose Agar for the differentiation of pure cultures of pathogenic from nonpathogenic strains of Staphylococci.

The toxicity of Staphylococci is estimated on the basis of their pigment production, haemolytic and coagulating characteristics. 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 colonies when cultured on Crystal Violet Agar. Haemolytic and coagulating strains produced purple to violet colour whereas non-hemolytic and non-coagulating strains produced the 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 concentration of 1: 300,000 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.

The media contains proteose peptone and beef extract as sources of carbon, nitrogen, vitamins and minerals. Lactose is the carbon and energy source.

Methodology

Suspend 33 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Quality Control

Physical Appearance

Light yellow to light tan homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

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±0.2

pH range: 6.6-7.0

Cultural Response/ characteristics

DM 1897: Cultural characteristics observed after an incubation at 35-37°C for 40-48 hours.



Dehydrated Culture Media
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	>=50%	purple
<i>Staphylococcus aureus</i> ATCC 25923	50-100	fair-good	30-40%	light yellow
<i>Staphylococcus epidermidis</i> ATCC 12228	50-100	fair-good	30-40%	purple/ very slightly yellow
<i>Streptococcus pyogenes</i> ATCC 19615	>=10 ³	inhibited	0%	

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Chapman, 1936, J. Bact., 32:199.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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