Technical Information

C.L.E.D. MiVeg Agar with Andrade Indicator

Product Code : VM1352

Application:- C.L.E.D. MiVeg Agar, with Andrade Indicator is used generally for urine bacteriology, supporting the growth of all urinary pathogens and giving good colonial differentiations and clear diagnostic characteristics.

Composition

Ingredients	Gms / Litre
MiVeg peptone	4.0
MiVeg extract	3.0
MiVeg hydrolysate	4.0
Lactose	10.0
L-Cystine	0.128
Bromo thymol blue	0.02
Andrade indicator	0.1
Agar	15.0
Final pH (at 25°C)	7.5 ±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

C.L.E.D. MiVeg Agar with Andrade Indicator is prepared by using MiVeg peptone, MiVeg hydroysate and MiVeg extract thereby making the media free from BSE/TSE risks.

Originally Mackey and Sandys devised C.LE.D. medium with lactose, L-Cystine and BTB for growing urinary pathogens (1). This medium is the modification of C.L.E.D. MiVeg Agar with Andrade Indicator and is recommended for urinary bacteriology, supporting the growth of all urinary pathogens and giving good colonial differentiations. It contains highly nutritious MiVeg peptone, MiVeg hydrolysate and MiVeg extract which provides all nutrients. Lactose is the fermentable sugar. L-Cystine supports the growth of cystine-dependent coliforms (2). Bromothymol blue serve as a pH indicator which turns yellow at acidic pH. Addition of Andrade's indicator, enhances the appearance of colony and aids in theidentification of microorganisms. As the pH changes , the colour of the medium varies from the standard medium, which is well documented by Bevis (3).

pH Colour of C.L.E.D. medium

7.4 - deep blue
7.0 - bluish grey
6.8 - pale grey
6.6 - pinkish grey
6.4 - bright red with whitish tinge
6.0 - bright red

For better results, the medium should not be incubated for more than 24 hours because if lactose fermenters predominate, the entire medium may turn pink masking the presence of non-lactose fermenters. The medium should be inoculated as soon as urine is collected. *Shigella* species may not grow on this medium. Prior initiation of antibiotic therapy, urine with low pH (less than 5) etc. may result in low count of organisms from infected patients.

Methodology

Suspend 36.25 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

Greyish yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Greenish blue coloured, clear to slightly opalescent gel forms in petri plates.

Reaction

Reaction of 3.62 % w/v aqueous solution pH: 7.5 ±0.2 at 25°C

pH range

7.3-7.7

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of colony
Enterobacter aerogenes (13048)	10^2-10^3	luxuriant	>70%	greyish green, mucoid
Enterococcus faecalis (29212)	10^2-10^3	luxuriant	>70%	orange-yellow or greenish
Escherichia coli (25922)	10^2-10^3	luxuriant	>70%	bright pink with pink halo
Proteus mirabilis (25933)	10^2-10^3	luxuriant	>70%	blue-green
Staphylococcus aureus (25923)	10^2-10^3	luxuriant	>70%	golden-yellow
Streptococcus pyogenes (19615)	10^2-10^3	luxuriant	>70%	greyish green

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: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Mackey and Sandys ., 1965, Br. Med J. 2:1286.
2. Mackey and Sandys ., 1966, Br. Med J. 1:1173.
3. Bevis T.D., 1968, J. Med. Lab. Technol., 25:38.

Disclaimer :

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