Technical Information

Dey-Engley Neutralizing MiVeg Agar

Product Code : VM1186

Application:- Dey-Engley Neutralizing MiVeg Agar is recommended for disinfectant testing where neutralization of the antiseptics and disinfectants is important for determining its bactericidal activity.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	5.00
Yeast extract	2.50
Dextrose	10.00
Sodium thiosulphate	6.00
Sodium thioglycollate	1.00
Sodium bisulphite	2.50
Lecithin	7.00
Polysorbate 80	5.00
Bromo cresol purple	0.02
Agar	15.00
Final pH (at 25°C)	7.6±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Dey-Engley Neutralizing MiVeg is prepared by using MiVeg hydrolysate instead of Casein enzymic hydrolysate thereby making the medium BSE/TSE risks free. This medium is modification of the media formulated as per the procedure described by Engley and Dey (1). It neutralizes a broad spectrum of antiseptics and disinfectants including quaternary ammonium compounds, phenolics, iodine and chlorine preparations, mercurials, formaldehyde and glutaraldehyde. Sodium thioglycollate, sodium thiosulphate, sodiumbisulphite, soya lecithin and polysorbate 80 serve as neutralizing components. This medium contains MiVeg hydrolysate, yeast extract and dextrose supplies carbon, nitrogen and other essential factors for enhanced growth.

Prior to this medium, the samples should be inoculate in both medium. To test disinfactant, prepare two sets of test tubes, one containing 9 ml Dey-Engley Neutralizing MiVeg Broth (VM2062) and other with 9 ml Dey-Engley Neutralizing MiVeg Broth Base (VM1187). Add 1 ml of disinfectant under test. Mix well and allow it to stand for 15 minutes. Inoculate 0.1 ml of 1:100,000 dilution of overnight broth cultures and incubate at 37°C for 48 hours. The colour of medium changes from purple to yellow or pellicle forms which indicates the growth of organisms. Growth in Neutralizing MiVeg Broth and no growth in Neutralizing MiVeg Broth Base indicates neutralization of disinfectant. To examine bactericidal activity, both broth tubes are inoculated on the agar medium (VM1186). Positive growth from negative tubes of Neutralizing MiVeg Broth Base indicates bacteriostatic substance while negative growth indicates a bactericidal disinfectant. All positive tubes should show growth on the agar medium. The control disinfectants used in test procedure are 2% chlorine, 2% formaldehyde, 1% glutaraldehyde, 2% iodine, 2% phenol, 1/750 quaternary ammonium compounds, 1/1000 mercurials etc.

Methodology

Suspend 54 grams of powder media in 1000 ml distilled water. Mix thoroughly. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

Bluish grey coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Purple coloured, opalescent gel forms in petri plates.

Reaction

Reaction of 5.4 % w/v aqueous solution pH: 7.6 ±0.2 at 25°C

pH range

7.4-7.8

Cultural Response/Characteristics

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

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
Bacillus subtilis (6633)	10^2–10^3	luxuriant	>70%
Escherichia coli (25922)	10^2–10^3	luxuriant	>70%
Pseudomonas aeruginosa (27853)	10^2–10^3	luxuriant	>70%
S. serotype Typhimurium (14028)	10^2–10^3	luxuriant	>70%
Staphylococcus aureus (25923)	10^2–10^3	luxuriant	>70%

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. Engley and Dey, 1970, CSMA Proceedings.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
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