Ready Prepared Media

Technical Information

Dey/ Engley Neutralizing Agar Plate

Product Code: PM 1186GT

Application: Used in disinfectant testing, where neutralization of the chemical is important for determining its bactericidal activity.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	5.000
Yeast extract	2.500
Dextrose	10.000
Sodium thiosulphate	6.000
Sodium thioglycollate	1.000
Sodium bisulphite	2.500
Lecithin	7.000
Polysorbate 80	5.000
Bromocresol purple	0.020
Agar	15.000

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Dey-Engley Neutralizing Agar is formulated as per the procedure described by Engley and Dey (1). A strongly bacteriostatic substance inhibits the growth and reproduction of bacteria without killing them. These bacteria hold the ability to cause infectionunder favourable conditions. Dey-Engley Neutralizing Agar neutralizes a broad spectrum of antiseptics and disinfectants including quaternary ammonium compounds, phenolics, iodine and chlorine preparations, mercurials, formaldehyde and glutaraldehyde. (1).

Casein enzymic hydrolysate provide essential nutrients. Dextrose is an energy source. Yeast extract is also a rich source of vitamin B-complex. The present formulation incorporate neutralizing substances for almost all the active products used as antiseptics and disinfectants. Sodium bisulfite neutralizes aldehydes; sodium thioglycollate neutralizes mercurials; sodium thiosulfate neutralizes iodine and chlorine (1); lecithin neutralizes quaternary ammonium compounds; and polysorbate 80,a non-ionic surface-active agent, neutralizes substituted phenolics (2-5). Bromocresol purple is an indicator for dextrose utilization. Due to the high concentration of lecithin in the broth medium, turbidity cannot be used to detect growth. Therefore,bromocresol purple and dextrose are added to the medium. Those organisms that ferment dextrose will turn the medium from

Ready to use sterile poured plates of Bi.G.G.Y. agar plate, requires no preparation of media & helps to obtain exact no. of the microorganisms. These plates are very useful in detecting the presence of microorganisms by conventional inoculation method;also growth promotion test can be carried out by ISO 11130. Or Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

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

Directions

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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 tovalidate 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 .

Methodology

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Quality Control

Appearance
Sterile Dey/Engley Neutralizing Agar in 90mm plate
Colour
Purple coloured medium
Reaction
7.40- 7.80
Dose of irradiation
10.00- 25.00
Sterility Test
Passes release criteria.
Cultural Response
Growth Promotion was carried out in accordance with the harmonized method and growth was observed after an incubationas specified.
Recovery rate
Recovery rate is considered 100% for bacteria growth on Soyabean Casein Digest Agar and fungus growth on SabouraudDextrose Agar .

Oragnism	Growth	Incubation period	Recovery	Inoculum (CFU)	Incubation temperature	Observed Lot value (CFU)
Growth at 30-35°C for < =3 days						
Salmonella Abony NCTC6017	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Micrococcus luteus ATCC9341	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Salmonella Typhimurium ATCC 14028	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Pseudomonas aeruginosa ATCC 15442	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Escherichia coli NCTC 9002	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Pseudomonas aeruginosa ATCC 27853	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Pseudomonas aeruginosa ATCC 9027	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Escherichia coli ATCC11229	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Staphylococcus aureus ATCC 25923	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Escherichia coli ATCC25922	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Escherichia coli ATCC 8739	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Bacillus subtilis ATCC19659	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Bacillus subtilis ATCC 6633	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Staphylococcus aureus ATCC 6538	luxuriant	18-24hr	>=70%	50-100	30-35°C	35-100
Growth at 20-25°C for < =5 days						
Aspergillus brasiliensis ATCC 16404	luxuriant	<=5d	>=70%	50-100	20-25°C	8-80
Candida albicans ATCC10231	luxuriant	<=5d	>=70%	50-100	20-25°C	35-100
Candida albicans ATCC2091	good luxuriant	<=5d	>=70%	50-100	30-35°C	35-100
Penicillium chrysogenum ATCC 11709	luxuriant	<=5d	>=70%	50-100	30-35°C	35-100

Storage and Shelf Life

Store at 15-25°C. Use before expiry date on the label.

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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,4).

Further Reading

1. Engley and Dey, 1970. Chem. Spec. Manuf. Assoc. Proc., Mid-Year Meet., p. 100.
2. Downes F. P. and Ito K., (Ed.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed.American Public Health Association, Washington, D.C.
3. Quisno R.A., Gibby I.W., and Foter M.J., 1946, Am. J. Phar., 118:320.
4. Erlandson A. L., and Lawrence C. A., 1953, Science 118:274.
5. Brummer B., 1976, Appl. Environ. Microbiol., 32:80.

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 developmentwork carried at **CDH** is true and accurate
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
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