



## Dey-Engley (D/E) Neutralizing Broth (without Bromo cresol purple)

MU1062

Dey-Engley (D/E)(without Bromo cresol purple) is used in disinfectant testing where neutralization of antiseptics and disinfectants is important for determining its bactericidal activity in accordance with United States Pharmacopoeia

### Composition\*\*

Ingredients	Gms / Litre
Tryptone	5.000
Yeast extract	2.500
Dextrose	10.000
Sodium thioglycollate	1.000
Sodium thiosulphate	6.000
Sodium bisulphite	2.500
Lecithin	7.000
Polysorbate 80	5.000

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 39 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

### Principle And Interpretation

Dey-Engley (D/E) Neutralizing Broth (without Bromo cresol purple) is formulated as per United States Pharmacopoeia (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, sodium bisulphite, soya lecithin and polysorbate 80 act as neutralizing components.

For testing disinfectants, prepare two sets of test tubes, one containing 9 ml Dey-Engley Neutralizing Broth (MU1062) and other with 9 ml Dey-Engley Neutralizing Broth Base. 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 30-35°C for 48 hours Growth in Neutralizing Broth and no growth in Neutralizing Broth Base indicates neutralization of disinfectant. To check bactericidal activity, both broth tubes are inoculated on D/E Neutralizing Agar (M186). Positive growth from negative tubes of Neutralizing Broth Base indicates bacteriostatic substance while negative growth indicates a bactericidal disinfectant. All positive tubes should show growth on Dey-Engley Neutralizing Agar. 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.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Light yellow coloured opalescent solution

#### Growth Promotion Test

As per United States Pharmacopoeia

#### Cultural Response

MU1062: Cultural characteristics observed after an incubation at i)For bacteria at 30-35°C for <=3 days i)For fungi at 20-25°C for <=5days.

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Organism	Inoculum (CFU)	Growth
<i>Bacillus subtilis</i> ATCC 6633	50-100	luxuriant
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	luxuriant
<i>Salmonella Typhimurium</i> ATCC 14028	50-100	luxuriant
<i>Escherichia coli</i> ATCC 8739	50-100	luxuriant
<i>Staphylococcus aureus</i> ATCC 6538	50-100	luxuriant
* <i>Aspergillus brasiliensis</i> ATCC 16404	50-100	luxuriant
<i>Candida albicans</i> ATCC 10231	50-100	luxuriant

### 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.

### Reference

1. The United States Pharmacopoeia 2011, The US Pharmacopoeial Convention Inc., Rockville, MD

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#### Disclaimer :

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