



## Dey-Engley (D/E) Neutralizing Broth (without Bromo cresol purple) MU1062

### Intended Use:

Used in disinfectant testing where neutralization of antiseptics and disinfectants is important for determining its bactericidal activity in accordance with USP.

### Composition\*\*

Ingredients	g / L
Tryptone	5.000
Yeast extract	2.500
Dextrose (Glucose)	10.000
Sodium thioglycollate	1.000
Sodium thiosulphate	6.000
Sodium bisulphite	2.500
Lecithin	7.000
Polysorbate 80 (Tween 80)	5.000

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

### Directions

Suspend 39.0 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks as desired. 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 (3). 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.

### Type of specimen

Pharmaceutical samples for sterility testing.

### Specimen Collection and Handling:

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. After use, contaminated materials must be sterilized by autoclaving before discarding.

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

### Limitations :

1. Due to nutritional variations, some strains may show poor growth

### 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.

## 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

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.

Organism	Inoculum (CFU)	Growth
** <i>Bacillus spizizenii</i> ATCC 6633 (00003*)	50-100	luxuriant
<i>Pseudomonas aeruginosa</i> ATCC 27853 (00025*)	50-100	luxuriant
<i>Salmonella</i> Typhimurium ATCC 14028 (00031*)	50-100	luxuriant
<i>Escherichia coli</i> ATCC 8739 (00012*)	50-100	luxuriant
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 6538 (00032*)	50-100	luxuriant
# <i>Aspergillus brasiliensis</i> ATCC 16404 (00053*)	50-100	luxuriant
<i>Candida albicans</i> ATCC 10231 (00054*)	50-100	luxuriant

Key:-\*- Corresponding WDCM numbers

#Formerly known as *Aspergillus niger*

\*\*Formerly known as *Bacillus subtilis* subsp. *spizizenii*

## Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

## 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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

## Reference

1. The United States Pharmacopoeia, 2022, The United States Pharmacopoeial Convention, Rockville, MD.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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### Disclaimer :

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