

## D/E Neutralizing Broth

Liquid medium for testing antiseptics and disinfectants.

TYPICAL FORMULA	(g/l)
Enzymatic Digest of Casein	5.0
Yeast Extract	2.5
Dextrose	10.0
Sodium Thioglycollate	1.0
Sodium Thiosulfate	6.0
Sodium Biosulfite	2.5
Lecithin	7.0
Bromcresol Purple	0.02
Final pH 7.6 ± 0.2 at 25°C	

### DESCRIPTION

D/E Neutralizing Broth is a liquid medium used for neutralizing disinfectants in qualitative procedures for environmental sampling, allowing to distinguish between bacteriostatic and bactericidal activity.

### PRINCIPLE

Enzymatic digest of casein provides amino acids, nitrogen, carbon, minerals, vitamins and other nutrients which support the growth of microorganism. Yeast extract is a source of vitamins, particularly of B-group. Dextrose is the fermentable carbohydrate. Sodium thioglycollate neutralizes mercurial compounds. Sodium thiosulfate neutralizes iodine and chlorine. Sodium biosulfite neutralizes aldehydes. Lecithin neutralizes quaternary ammonium compounds. Bromcresol purple is the pH indicator.

Supplementation with Tween 80 (ref. 80031), a non-ionic surface-active agent, serves to neutralize phenolics.

### PREPARATION

Suspend 34.0 g of powder in 1 liter of deionized or distilled water. Add 5 ml of Tween 80 Supplement (ref. 80031). Mix well. Sterilize by autoclaving at 121°C for 15 minutes. Distribute into final containers.

### TECHNIQUE

Add 1 ml of disinfectant to a tube containing 9 ml of D/E Neutralizing Broth. Inoculate the tube with a overnight microbial culture and incubate at 35 ± 2°C for 24-48 hours.

To determine whether viable organisms are present in a "bacteriostatic" or "bactericidal" solution, inoculate samples from the broth onto D/E Neutralizing Agar (ref. 610086) or other suitable media. Incubate plates at 35 ± 2°C for 48 hours.

### INTERPRETATION OF RESULTS

Either the color change of the medium from purple to yellow or the formation of a pellicle on the surface of the broth indicate microbial growth.

Growth on the plates from negative broth tubes indicates a bacteriostatic substance. No growth on the plates from negative broth tubes indicates a bactericidal substance. All positive broth tubes should be positive on the plates.

### STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared tubes at 2-8°C away from light.

### WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is intended for professional use only and must be used by properly trained operators.

### DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

### REFERENCES

- Dey B.P. and F.B. Engley Jr. (1995) Comparison of Dey and Engly (D/E) Neutralizing Medium to Lethen Medium and Standard Methods Medium recovery of Staphylococcus aureus from sanitized surfaces. J. Ind. Microbiol. 14:21-25
- Dey B.P. and F.B. Engley Jr. (1994) Neutralization of antimicrobial chemicals by recovery media. J. Microbiol. Methods. 19:51-58.
- Dey B.P. and F.B. Engley Jr. (1983) Methodology for recovery of chemical treated Staphylococcus aureus with neutralizing medium. Appl. Environ. Microbiol. 45:1533-1537.
- Engly F.B. Jr. and B.P. Dey (1970) A universal neutralizing medium for antimicrobial chemicals. Chem. Spec. Manuf. Assoc. Proc. Mid-Year Meet. p. 100-106.



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## PRODUCT SPECIFICATIONS

### NAME

D/E Neutralizing Broth

### PRESENTATION

Dehydrated medium

### STORAGE

10-30°C

### PACKAGING

Ref.	Content	Packaging
610088	500 g	500 g of powder in plastic bottle
620088	100 g	100 g of powder in plastic bottle

### pH OF THE MEDIUM

7.6 ± 0.2

### USE

D/E Neutralizing Broth is a liquid medium used for neutralizing disinfectants in qualitative procedures for environmental sampling, allowing to distinguish between bacteriostatic and bactericidal activity

### TECHNIQUE

Refer to technical sheet of the product

### APPEARANCE OF THE MEDIUM

#### Powder medium

Appearance: free-flowing, homogeneous

Colour: bluish-gray

#### Ready-to-use medium

Appearance: opaque

Colour: purple

### SHELF LIFE

2 years

### QUALITY CONTROL

- Control of general characteristics, label and print
- Microbiological control  
Tubes are prepared with and without the addition of disinfectants.  
Inoculum: 10<sup>3</sup>-10<sup>4</sup> CFU  
Incubation conditions: 24-48 h at 35 ± 2°C

#### Microorganism

*Bacillus subtilis*

ATCC® 6633

#### Growth

Good

*Escherichia coli*

ATCC® 8739

Good

*Pseudomonas aeruginosa*

ATCC® 27853

Good

*Salmonella typhimurium*

ATCC® 14028










Good

*Staphylococcus aureus*

ATCC® 6538

Good

### TABLE OF SYMBOLS

 <b>LOT</b>	Batch code	 Do not reuse	 Manufacturer	 Use by	 Fragile, handle with care
 <b>REF</b>	Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult instructions for use	



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