
D/E NEUTRALIZING BROTH

INTENDED USE

Remel D/E Neutralizing Broth is a liquid medium recommended for use in qualitative procedures for environmental sampling when neutralization of a chemical disinfectant is important to distinguish bacteriostatic and bactericidal activity.

SUMMARY AND EXPLANATION

This medium was formulated by Engley and Dey in 1970 for the neutralization and testing of antiseptics and disinfectants.¹ It is recommended in the *Compendium of Methods for the Microbiological Examination of Foods* by the American Public Health Association (APHA) for environmental sampling.² The medium will neutralize a broad spectrum of antiseptic and disinfectant chemicals including mercurials, iodine and chlorine preparations, quaternary ammonium compounds, phenolics, formaldehydes, and glutaraldehydes.

PRINCIPLE

Peptone and yeast extract provide amino acids, peptides, nitrogenous compounds, and B-complex vitamins which are sources of nutrients necessary for growth. Dextrose is a carbon energy source. Lecithin neutralizes quaternary ammonium compounds. Polysorbate 80, a non-ionic surface-active agent, neutralizes phenolics. Thioglycollate neutralizes mercurials, and sodium thiosulfate neutralizes iodine and chlorine preparations. Sodium bisulfite neutralizes formaldehyde and glutaraldehyde. The medium is highly opalescent, and growth is often indicated by a change in the pH indicator from purple to yellow showing utilization of dextrose. This medium is suited for environmental sampling, where neutralization of the chemical is important to determine its bactericidal activity. A bacteriostatic substance may contain bacteria held in bacteriostasis but which may still be able to cause infection.

REAGENTS (CLASSICAL FORMULA)*

Dextrose.....	10.0 g	Sodium Bisulfate	2.5 g
Lecithin.....	7.0 g	Yeast Extract	2.5 g
Sodium Thiosulfate	6.0 g	Sodium Thioglycollate	1.0 g
Casein Peptone.....	5.0 g	Brom Cresol Purple	0.02 g
Polysorbate 80	5.0 g	Demineralized Water.....	1000.0 ml

pH 7.6 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PRECAUTIONS

This product is For Laboratory Use only. It is not intended for use in the diagnosis of disease or other conditions.

PREPARATION OF DEHYDRATED CULTURE MEDIUM

1. Suspend 39 g of medium in 1000 ml of demineralized water.
2. Mix thoroughly.
3. Heat to boiling with agitation to completely dissolve.
4. Dispense into appropriate containers.
5. Sterilize by autoclaving at 121°C for 15 minutes or following established laboratory procedures.

PROCEDURE

1. Consult current editions of appropriate references for the recommended procedure for sample preparation, inoculation, testing, and interpretation.
2. Growth may be evidenced by a color change from purple to yellow or by pellicle growth. All tubes of D/E Neutralizing Broth should be subcultured to appropriate media, such as D/E Neutralizing Agar, to determine if viable organisms are present. Positive growth from negative D/E Neutralizing Broth indicates a bacteriostatic substance, whereas the absence of growth from negative tubes indicates a bactericidal disinfectant. Growth in D/E Neutralizing Broth indicates neutralization of the disinfectant and a possible bacteriostatic substance.

QUALITY CONTROL

Each lot number of D/E Neutralizing Broth has been manufactured, packaged, and processed in accordance with current Good Manufacturing Practice regulations. All lot numbers have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures.

CONTROL

Escherichia coli ATCC® 25922
Pseudomonas aeruginosa ATCC® 27853
Staphylococcus aureus ATCC® 25923

INCUBATION

Aerobic, 18-24 h @ 33-37°C
Aerobic, 18-24 h @ 33-37°C
Aerobic, 24-48 h @ 33-37°C

RESULTS

Good growth w/ yellow color
Good growth w/ pellicle
Good growth w/ yellow color

BIBLIOGRAPHY

1. Engley, F.B. and B.P. Dey. 1970. Chemical Specialties Manufacturing Association Proceedings.
2. Downes, F.P. and K. Ito. 2001. *Compendium of Methods for the Microbiological Examination of Foods*. 4th ed. APHA, Washington, D.C.

Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, sample collection, storage and transportation, materials required, quality control, and limitations.

ATCC® is a registered trademark of American Type Culture Collection.
IFU 112160, Revised June 10, 2010

Printed in U.S.A.

remel

12076 Santa Fe Drive, Lenexa, KS 66215, USA

General Information: (800) 255-6730 Website: www.remel.com Email: remel@remel.com
Local/International Phone: (913) 888-0939 International Fax: (913) 895-4128