



PRODUCT DATA SHEET

DEY ENGLE Y NEUTRALIZING BROTH

TM 716

For neutralizing and testing antiseptics and disinfectants

Composition

Ingredients	Gms/Ltr.
Dextrose	10.00
Lecithin	7.00
Sodium thiosulphate	6.00
Casein enzymatic hydrolysate	5.00
Polysorbate 80	5.00
Yeast extract	2.50
Sodium bisulphite	2.50
Sodium thioglycollate	1.00
Bromocresol purple	0.020

* Dehydrated powder, hygroscopic in nature, store, in a dry place in tightly- sealed containers below 25°C and protect from direct Sunlight.

Instructions for Use

Dissolve 39.00gms in 1000ml distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15psi (121°C) for 15 minutes. Pour the medium into sterile tubes.

Appearance: Purple colour, opalescent solution

pH (at 25°C): 7.6 ± 0.2

Principle

DEY ENGLE Y NEUTRALIZING BROTH is used for neutralizing and testing antiseptics and disinfectants. D/E Neutralizing media neutralize higher concentrations of residual antimicrobials when compared with other standard neutralizing formulations, such as Lethen media, Thioglycollate media, and Neutralizing Buffer. This medium contains Yeast extract provides carbon, nitrogen, minerals, vitamins, trace elements and other essential nutrients for growth. Sodium thiosulphate is for the osmotic balance. Dextrose is the carbohydrate source. Bromocresol purple is used as a colorimetric indicator to demonstrate the production of acid from the fermentation of dextrose. Sodium thiosulphate neutralizes iodine and chlorine. Sodium bisulphite neutralizes formaldehyde and gluteraldehyde. Lecithin neutralizes quaternary ammonium compounds and Polysorbate 80 neutralizes phenols, hexachlorophene, formalin, and with lecithin, ethanol. 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 purple to yellow.

Interpretation

Cultural characteristics observed after inoculating (10^3 CFU / ml), on aerobically incubation at $35 \pm 2^\circ\text{C}$ and examined after 40 - 48 hours.

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Microorganisms	ATCC	Inoculum (CFU/ml)	Growth
<i>Escherichia coli</i>	25922	10 ³	Good
<i>Bacillus subtilis</i>	9372	10 ³	Good
<i>Salmonella typhimurium</i>	14028	10 ³	Good
<i>Pseudomonas aeruginosa</i>	27853	10 ³	Good
<i>Staphylococcus aureus</i>	25923	10 ³	Good

References

1. Dey, B. P. and F. B. Engley, Jr. Methodology for recovery of chemically treated *Staphylococcus aureus* with neutralizing medium. *Appl. Environ. Microbiol.* 45:1533-1537. (1983).
2. Dey, B. P., and F. B. Engley, Jr. Environmental sampling devices for neutralization of disinfectants, presented at the 4th International Symposium on Contamination Control. (1978).
3. Engley, F. B., Jr. and B. P. Dey. A universal neutralizing medium for antimicrobial chemicals. Presented at the Chemical Specialties Manufacturing Association (CSMA) Proceedings. 56th Mid-Year Meeting. (1970).