

## **CM 20576 – DEY-ENGLEY NEUTRALIZING AGAR (D/E AGAR DISINFECTANT TESTING)**

### INTENDED USE

For disinfectant testing, where neutralization agent is important for determining its bactericidal activity.

### PRODUCT SUMMARY AND EXPLANATION

Dey-Engley Neutralizing Agar is formulated as per the procedure described by Engley and Dey. A strongly bacteriostatic substance inhibits the growth and reproduction of bacteria without killing them. These bacteria hold the ability to cause infection under favorable conditions. Dey-Engley Neutralizing Agar neutralizes a broad spectrum of antiseptics and disinfectants including quaternary ammonium compounds, phenolic, iodine and chlorine preparations, mercurial, formaldehyde and glutaraldehyde.

### COMPOSITION

Ingredients	Gms / Ltr
Tryptone	5.000
Yeast extract	2.500
Dextrose (Glucose)	10.000
Sodium thiosulphate	6.000
Sodium thioglycollate	1.000
Sodium bisulphite	2.500
Lecithin	7.000
Polysorbate 80	5.000
Bromocresol purple	0.020
Agar	15.000

### PRINCIPLE

The medium consists of Tryptone which provide nitrogen and carbon source, long chain amino acids, vitamins and other essential nutrients. Dextrose is an energy source. Yeast extract is also a rich source of vitamin B-complex. The present formulation incorporates neutralizing substances for almost all the active products used as antiseptics and disinfectants. Sodium bisulfite neutralizes aldehydes; sodium thioglycollate neutralizes mercurial; sodium thiosulfate neutralizes iodine and chlorine; lecithin neutralizes quaternary ammonium compounds; and polysorbate 80, a non-ionic surface-active agent, neutralizes substituted phenolic. Bromocresol purple is an indicator for dextrose utilization. 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.

### INSTRUCTION FOR USE

Dissolve 54.02 grams in 1000 ml purified/distilled water.

Heat to boiling to dissolve the medium completely.

Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.



- Mix well and pour into sterile Petri plates.

**QUALITY CONTROL SPECIFICATIONS**

Appearance of Powder : Light yellow to bluish grey homogeneous free flowing powder.  
 Appearance of prepared medium : Purple to reddish purple coloured, opalescent gel (may have particulate precipitate) forms in Petri plates.  
 pH (at 25°C) : 7.6 ± 0.2

**INTERPRETATION**

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Luxuriant	>=70%	35-37 °C	40-48 Hours
Pseudomonas aeruginosa	27853	50-100	Luxuriant	>=70%	35-37 °C	40-48 Hours
Salmonella Typhimurium	14028	50-100	Luxuriant	>=70%	35-37 °C	40-48 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	Luxuriant	>=70%	35-37 °C	40-48 Hours
Bacillus subtilis subsp. spizizenii	6633	50-100	Luxuriant	>=70%	35-37 °C	40-48 Hours
Candida albicans	10231	10-100	Luxuriant	>=70%	35-37 °C	40-48 Hours
Aspergillus brasiliensis	16404	10-100	Luxuriant	>=70%	35-37 °C	40-48 Hours

**PACKAGING:**

In pack size of 500 gm bottles.

**STORAGE**

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for



the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

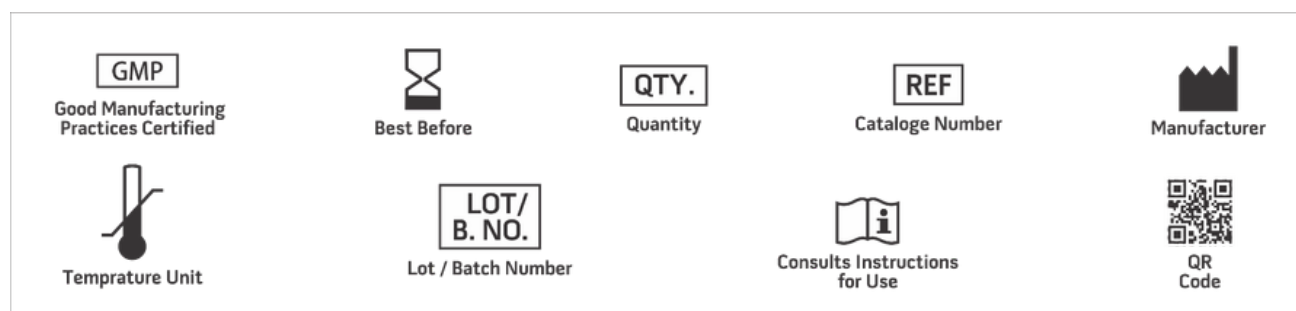
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

#### DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

#### REFERENCES

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
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3. Engley and Dey, 1970. Chem. Spec. Manuf. Assoc. Proc., Mid-Year Meet., p. 100.
4. Erlandson A. L., and Lawrence C. A., 1953, Science 118:274.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. 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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8. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
9. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

\*For LabUse Only

