Dey-Engley Neutralizing Broth (D/E Broth Disinfectant Testing)

Intended Use
Dey-Engley Neutralizing Broth (D/E Broth Disinfectant Testing) is a medium used in disinfectant testing where the neutralization of antiseptics and disinfectant is important for determining its bactericidal activity.

Summary
Dey and Engley described a procedure of neutralizer evaluation and also formulated a medium, known as Dey-Engley Neutralizing medium. This medium neutralizes a broad spectrum of antiseptics and disinfectants including quaternary ammonium compounds, phenolics, iodine and chlorine preparations, mercurials formaldehyde and glutaraldehyde. Sodium thioglycollate, sodium thiosulfate, sodium bisulfite, soya lecithin and polysorbate 80 act as neutralizing components.

Principle
Casein enzymic hydrolysate serves as a rich source of nitrogen and amino acid. Yeast extract provides a source of trace elements and vitamins. Dextrose is a source of energy. Five neutralizers are incorporated into the medium to inactivate different types of biocides. Sodium thiosuliate neutralizes iodine and chlorine; sodium thioglycollate neutralizes mercurials; sodium bisulphate neutralizes aldehydes; lecithin neutralizes quaternary ammonium compounds; and Polysorbate 80 neutralizes substituted phenolics. Bromocresol purple acts as an indicator, which indicates the utilization of dextrose.

Formula*

Ingredients	**g/L**
Casein Enzymic Hydrolysate	5.0
Yeast Extract	2.5
Dextrose	10.0
Sodium Thiosulphate	6.0
Sodium Thioglycollate	1.0
Sodium Bisulphite	2.5
Lecithin	7.0
Polysorbate 80	5.0
Bromocresol Purple	0.02
Final pH (at 25°C)	7.6 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of specimen
Pharmaceutical samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 39.02 g of the powder in 1000 mL purified / distilled water.
2. Mix thoroughly.
3. Boil with frequent agitation to dissolve the powder completely. DO NOT OVERHEAT.
4. Dispense in tubes or adequate container and Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control

Dehydrated Appearance: Bluish grey coloured, homogeneous, appears moist and lumpy.
Prepared Appearance: Purple-red coloured, clear to slightly opalescent solution forms in tubes.
Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP and growth is observed after an incubation at 30°C-35°C for 40-48 hours. Subculturing is carried out using Dey Engley Neutralizing Agar after enrichment in Dey Engley Neutralizing Broth at 30°C-35°C for <=3 days.
Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism at 30°C-35°C for 40 hours.

Organism (ATCC)	Growth
Escherichia coli (8739)	Good
Staphylococcus aureus subsp. *aureus* (6538)	Good
Pseudomonas aeruginosa (9027)	Good
Bacillus spizizenii (6633)	Good

Interpretation of results

1. Growth is indicated by a colour change from purple to yellow, or pellicle formation.
2. 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.
3. All positive broth tubes should be positive on the plates

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

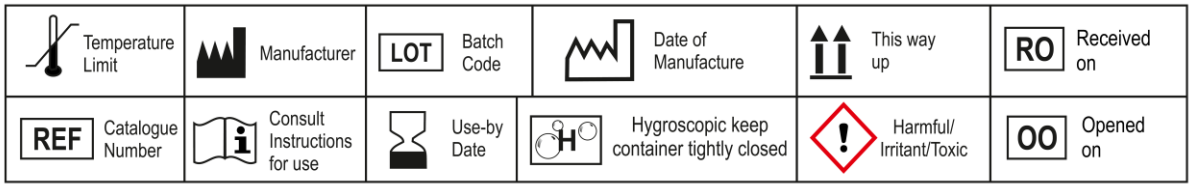
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Engley and Dey.I970, CSMA Proceedings.
2. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201040090500	Dehydrated Culture Media	500 g
201040350500	Dehydrated Culture Media (RT)	500 g
203040190010	Ready Prepared Tube	25 x 10 mL
203040190002	Ready Prepared Tube	25 x 2 mL
203040190100	Bottle Media	100 mL



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Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.