Reference : 02-583 ***Scharlau Microbiology* - Technical data sheet**

Product :
NEUTRALIZING SPECIAL BROTH

Specification

Liquid medium used for the neutralisation of preservatives in cosmetics and pharmaceutical products.

Formula * in g/L

Tryptone..... 5,00
Yeast extract..... 2,50
Dextrose..... 10,00
Sodium thioglycollate..... 1,00
Sodium thiosulfate (anhy.)..... 0,60
Sodium Bi-sulfite 2,50
Lecithin..... 1,00
Bromocresol purple 0,04

Final pH 7,6 ±0,2 at 25 ºC

* Adjusted and /or supplemented as required to meet performance criteria

Directions

Dissolve 22,64 g of the powder in 1 L of distilled water containing 5 mL of Polysorbate 80 (Art. No. TW0080). Distribute into suitable containers and sterilize in the autoclave at 121ºC for 15 minutes.

Description

This broth is a modification of the classical Dey-Engley Neutralizing Broth in which the concentration of lecithin and thiosulfate are lowered and the indicator increased to obtain an optimum balance between neutralization of preservatives and recuperation of stressed cells. Complete neutralization of preservatives and disinfectants is important because carry over of biocides can cause a false non-growth test result, as can an excess of neutralizing agents on the stressed cells. These are critical points to consider when evaluating a disinfectant or a preservative and being able to differentiate between bacteriostatic or bactericidal effects. Tryptone provides the nitrogen and carbon sources for growth. Dextrose as a fermentable carbohydrate is the main source of energy and the yeast extract provides vitamins and cofactors required for microbial growth. Sodium thioglycollate neutralizes mercurials. Sodium thiosulfate neutralizes chlorine and iodine.
Sodium bi-sulfite neutralizes formaldehyde and glutaraldehyde. Lecithin neutralizes quaternary ammonium compounds. Polysorbate neutralizes phenols, hexachlorophene, formalin and, with lecithin, ethanol. Bromocresol purple acts as a colorimetric indicator to show the production of acid due to the fermentation of dextrose. However, the response may be slow and does not appear until 48-72 hours. For this reason, it is advisable to reseed in a plate at 24-48 hours to determine growth beforehand.

Quality control

Incubation temperature: 30-35ºC **Incubation time:** 24-48 h

Inoculum: Practical range 50-500 CFU. (Productivity) according to ISO 11133. verified IF ≤2.0

Microorganism	Growth	Remarks
Staphylococcus aureus ATCC® 6538	Good	Recovery in D/E Neutralizing A./ 48h
Pseudomonas aeruginosa ATCC® 9027	Good	Recovery in D/E Neutralizing A./ 24h
Bacillus subtilis ATCC® 6633	Good	Recovery in D/E Neutralizing A./ 48h
Escherichia coli ATCC® 25922	Good	Recovery in D/E Neutralizing A./ 24h
Candida albicans ATCC® 10231	Good	Recovery in D/E Neutralizing A./ 48h

References

· ATLAS, R.M. & L.C. PARKS (1993) Handbook of microbiological methods. CRC Press. Boca Ratón. Fla. USA.
· DEY, B.P. & F.B. ENGLEY, Jr. (1994) Neutralization of antimicrobial chemicals by recovery media. J. Microbiol. Methods. 19:51-58.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 ºC to 30 ºC).