Neutralizing Buffer

Intended Use

Neutralizing Buffer is recommended for detection of microorganisms found on dairy and food equipment disinfected with chlorine or quaternary ammonium compounds.

Summary and Explanation

Neutralizing Buffer has the ability to inactivate the bactericidal and bacteriostatic effect of chlorine as well as quaternary ammonium compounds. Neutralizing Buffer is recommended for use in the microbiological examination of surfaces in standard methods for the examination of dairy products and foods.^{1,2} Neutralizing Buffer is also recommended for the digestion and decontamination of mycobacterial specimens.³

User Quality Control

Identity Specifications Difco[™] Neutralizing Buffer

Dehydrated Appearance: Tan, free-flowing, homogeneous. Solution. 0.52% solution; soluble in purified water. Solution is very light to light amber, clear to very slightly opalescent. Prepared Appearance: Light amber, clear to very slightly opalescent. Reaction of 0.52% Solution at 25°C: pH 7.2 ± 0.2

Cultural Response Difco[™] Neutralizing Buffer

Prepare the buffer per label directions. Verify the neutralizing effect by diluting a quaternary ammonium compound with Neutralizing Buffer from 1:2,500 to 1:100,000. Inoculate tubes with Staphylococcus aureus ATCC^{${}^{\mathrm{M}}$} 6538P. Prepare pour plates by transferring 1 mL from each dilution to Tryptone Glucose Extract Agar (Cat. No. 223000) and incubate at $32 \pm 1^{\circ}$ C for 42-48 hours. Observe for inactivation of the bactericidal activity as indicated by the growth pattern.

Principles of the Procedure

Monopotassium phosphate provides the buffering capability. Sodium thiosulfate inactivates the effect of chlorine compounds. The aryl sulfonate complex neutralizes the effects of quaternary ammonium compounds.

Formula

Difco[™] Neutralizing Buffer

Approximate Formula* Per Liter		
Monopotassium Phosphate	42.5 r	ng
Sodium Thiosulfate	0.16	g
Aryl Sulfonate Complex	5.0	g
*Adjusted and/or supplemented as required to meet performance criteria.		

Directions for Preparation from Dehydrated Product

- 1. Dissolve 5.2 g of the powder in 1 L of purified water.
- 2. Autoclave at 121°C for 15 minutes.
- 3. Test samples of the finished product for performance using stable, typical control cultures.

Procedure

See appropriate standard methods for specific test methodologies.¹⁻³

Expected Results

Refer to appropriate references for results.

References

- Wehr and Frank (ed.). 2004. Standard methods for the examination of dairy products, 17th ed. 1. American Public Health Association, Washington, D.C.
- Downes and Ito (ed.). 2001. Compendium of methods for the microbiological examination of foods,
- 4th ed. American Public Health Association, Washington, D.C. Cernoch, Enns, Saubolle and Wallace. 1994. Cumitech 16A, Laboratory diagnosis of the mycobacte-rioses. Coord. ed., Weissfeld. American Society for Microbiology, Washington, D.C. 3.

Availability

Difco[™] Neutralizing Buffer

CCAM COMPF SMD

Cat. No. 236210 Dehydrated - 100 g

