



Neutralizing Buffer

M1334

Neutralizing buffer is used for detection of microorganisms found on dairy and food equipments disinfected with chlorine or quaternary ammonium compounds.

Composition**

Ingredients	Gms / Litre
Monopotassium phosphate	0.0425
Sodium thiosulphate	0.160
Aryl sulphonate complex	5.009
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 5.2 grams in 1000 ml distilled water. Heat if necessary, to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.

Principle And Interpretation

Neutralizing buffers are used in the examination of dairy and food equipments for possible contamination of microorganisms. The buffer is generally used to inactivate the bactericidal and bacteriostatic effect of chlorine and quaternary ammonium compounds. It is also recommended by APHA for use in the microbiological examination of surfaces (1, 2). Neutralizing buffer is also used in the digestion and decontamination of mycobacterial specimens (3).

Monopotassium phosphate buffers the medium well. The aryl sulphonate complex neutralizes the effect of quaternary ammonium compounds while sodium thiosulphate inactivates the effect of chlorine compounds.

Quality Control

Appearance

White to cream homogeneous free flowing powder

Colour and Clarity of Prepared medium

Colourless clear to slightly opalescent solution without significant precipitation

Reaction

Reaction of the 0.52% w/v solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

M1334: Cultural characteristics observed when subcultured on Tryptone Glucose Extract Agar (M014), after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth
Cultural Response <i>Enterococcus faecalis</i> ATCC 50-100 29212		luxuriant
<i>Salmonella</i> Typhimurium ATCC 14028	50-100	luxuriant
<i>Staphylococcus aureus</i> ATCC 25923	50-100	luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Downes F. P. and Ito K., (Ed.), 2001. Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA Inc. Washington D. C .
2. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
3. Cernoch, Enns, Saubolle and Wallace, 1994, Cumitech 16A, Laboratory Diagnosis of the Mycobacterioses, Coord, (Ed.), Weissfeld, American Society for Microbiology, Washington, D.C.

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