



Modified Phosphate Buffer

M1341

Modified Phosphate Buffer is recommended as a washing buffer solution required during detection of *Escherichia coli* O157:H7 from food and animal feeding stuffs. The composition and performance criteria of this medium are as per the specifications laid down in ISO/DIS 16654

Composition**

Ingredients	Gms / Litre
Sodium chloride	8.000
Potassium chloride	0.200
Disodium phosphate	1.440
Potassium phosphate	0.240
Polysorbate 20	0.200
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 10.08 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.

Principle And Interpretation

Modified Phosphate Buffer is prepared as per the formula recommended by ISO Committee under the specification ISO/DIS 16654:1999 (1). This buffer solution is used as washing solution for immunomagnetic separations. It is important to keep the pH of the suspending fluid within the same range, as variation in pH may affect the viability of the microorganisms (2). Phosphate buffer is preferred to unbuffered distilled water in order to standardize wide variation in the pH of distilled water from various sources.

Sodium chloride maintains the osmotic equilibrium. Polysorbate 20 is a dispersing agent.

Test procedure: Initial suspension is prepared in Soyabean Bile Broth Base (M1286) and incubate for 6 hours at 35-37°C and subsequently for further 12-18 hours. This enriched culture is used in capture/ separation procedure where Modified Phosphate Buffer is used as washing solution as per ISO (1).

Quality Control

Appearance

White to cream homogeneous free flowing powder

Colour and Clarity of prepared medium

colourless clear solution without any precipitate

Reaction

Reaction of 1.0% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

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. International Organisation for Standardisation (ISO) 1999, Draft/ISO/DIS 16654.
2. Collee J. G., Duguid J. P., Fraser A. G., Marmion B. P., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1989, 13th Edition, Churchill Livingstone, UK

Please refer disclaimer Overleaf.

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