KF Streptococcus Broth Base w/ BCP

M1021

KF Streptococcus Broth Base w/ BCP is recommended for detection and enumeration of faecal Streptococci.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	5.000
Casein enzymic hydrolysate	5.000
Yeast extract	10.000
Sodium chloride	5.000
Sodium glycerophosphate	10.000
Maltose	20.000
Lactose	1.000
Sodium azide	0.400
Bromocresol purple	0.015
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 56.41 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. DO NOT AUTOCLAVE. Overheating will lower the pH and render the medium less productive. Cool to 50°C and aseptically add 10 ml of 1% 2, 3, 5-Triphenyl Tetrazolium Chloride (TTC) (FD057) to sterile medium.

Principle And Interpretation

Streptococci are spherical, gram-positive bacteria and form a part of the normal commensal flora of the mouth, skin, intestine, upper respiratory tract of humans. Streptococci found in the faeces form the faecal Streptococci and constitute of Streptococci with group D Lancefield antigens. The types include *Streptococcus faecalis, Streptococcus faecium, Streptococcus bovis* and *Streptococcus duran* . They are low-grade pathogens and rarely cause disease. However, they may cause urinary tract infection in catheterized patients; mixed abdominal wound infections following gut surgery; and endocarditis on abnormal valves. Kenner - Faecal (KF) Medium was developed by Kenner et al (1, 2) for detecting Streptococci in water and food materials.

Peptic digest of animal tissue and casein enzymic hydrolysate together with yeast extract provide nitrogen, carbon, sulphur, amino acids, vitamins and trace ingredients to the faecal Streptococci. Lactose and maltose are the fermentable carbohydrates and therefore serve as energy sources. Sodium azide is a selective agent, which hampers the growth of gram-negative bacteria.

2, 3, 5-Triphenyl Tetrazolium Chloride is reduced to insoluble formazan by actively metabolizing cells, resulting in the formation of pink or red colour. Bacteria resistant to azide, utilize lactose and / or maltose. The acidity so produced changes the colour of the indicator dyes to yellow. Bacterial cells reduce TTC to insoluble formazan, resulting in the formation of pink to red colour.

Quality Control

Appearance
Cream to greyish yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Light purple coloured, clear solution in tubes

Reaction
Reaction of 5.64% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH
7.00-7.40

Cultural Response
M1021: Cultural characteristics observed after an incubation at 35-37°C for 48 - 72 hours.

Organism	Inoculum (CFU)	Growth
Cultural Response		
Escherichia coli ATCC 25922	>=10^3	inhibited
Enterobacter aerogenes ATCC 13048	>=10^3	inhibited
Enterococcus faecalis ATCC 29212	50-100	good-luxuriant

Storage and Shelf Life

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

Reference

1.Kenner B. A., Clark H. F. and Kabler P. W., 1960, Am. J. Public Health, 50:1553.
2.Kenner B. A., Clark H. F. and Kabler P. W., 1961, Appl. Microbiol., 9:15.

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