

## Technical Information

### KF Streptococcal Broth Base

#### Product Code: DM 1249

**Application:** - KF Streptococcal Broth is used for detection and enumeration of faecal Streptococci in waters. Also used for examination of faeces and other materials.

#### Composition\*\*

Ingredients	Gms / Litre
Peptone, special	10.000
Yeast extract	10.000
Sodium chloride	5.000
Sodium glycerophosphate	10.000
Sodium carbonate	0.636
Maltose	20.000
Lactose	1.000
Sodium azide	0.400
Phenol red	0.018
Final pH (25°C)	7.2±0.2

\*\*Formula adjusted, standardized to suit performance

#### Principle & Interpretation

Streptococci are gram-positive cocci 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 include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus bovis* and *Streptococcus duran* which share with group D Lancefield antigens. 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 were developed by Kenner et al <sup>(1, 2)</sup> for detecting Streptococci in water and food materials.

Special peptone along with yeast extract provides nitrogen, carbon, sulphur, amino acids, vitamins and trace ingredients to the faecal Streptococci. Lactose and maltose are the fermentable carbohydrates and serve as energy sources. Sodium azide is a selective agent, which inhibit 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.

#### Methodology

Suspend 57.05 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. Dispense (DM1249) and sterilize by autoclaving at 15 lbs pressure (121°C) for 10 minutes. Cool to 50°C and aseptically add 10 ml of 1% 2, 3, 5-Triphenyl Tetrazolium Chloride (TTC) (MS2057) to sterile medium.

## Quality Control

### Physical Appearance

Light yellow to pinkish beige homogeneous free flowing powder

### Colour and Clarity of prepared medium

Red coloured, clear solution without any precipitate

### Reaction

Reaction of 5.7% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH Range: 7.0-7.4

### Cultural Response/ characteristics

DM 1249: Cultural characteristics observed after an incubation at 35-37°C for 48-72 hours.

Organism	Inoculum (CFU) Growth	Colour of colony
<i>Escherichia coli</i> ATCC 25922	$\geq 10^3$ inhibited	
<i>Enterobacter aerogenes</i> ATCC 13048	$\geq 10^3$ inhibited	
<i>Enterococcus faecalis</i> ATCC 29212	50-100 good-luxuriant	yellow

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

**Prepared Media:** 2-8° in sealable plastic bags for 2-5 days.

## Further Reading

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.

## Disclaimer :

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