OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
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TECHNICAL DATA SHEET

KF Streptococcal Agar Base

Principle

Kenner-Faecal (KF) Medium was developed by Kenner et al (1960 & 1961) for detecting Streptococci in water and food materials. KF Streptococcus Agar Base is recommended by APHA for enumerating faecal Streptococci in food materials (2015). Media is composed of special peptone, yeast extract, sodium chloride, sodium glycerophosphate, maltose, lactose, sodium azide and agar. Special peptone and yeast extract provide nitrogen, carbon, amino acids, and vitamins and trace ingredients essential for the growth of faecal Streptococci. Sodium chloride maintains osmatic balance. 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. Sodium glycerophosphate is buffering agent. The media can be fortified with 2,3,5-Triphenyl Tetrazolium Chloride, which is reduced to insoluble formazan by actively metabolizing cells, resulting in the formation of pink or red colonies. The acidity caused due to metabolic reaction, changes the color of the indicator dye (Bromo cresol purple) to yellow. Bacterial cells reduce TTC to insoluble formazan, resulting in the formation of pink to red colonies. After this presumptive identification, further confirmatory tests should be carried out on selective media.

Use: For selective isolation and enumeration of faecal Streptococci in surface water by direct plating or by membrane filter technique.

Contents*

Ingredients	Gram/Liter
Proteose Peptone	10.000
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
Agar	20.000
pH at 25˚C	7.2 ±0.2

*** Formula adjusted for optimum performance and parameters**

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Directions: Dissolve 76.4 grams in 1000 ml distilled water. Boil to dissolve the medium completely and additionally heat for 5 minutes. Avoid overheating and DO NOT AUTOCLAVE. Add 10 ml of TTC solution 1% to the medium at 50°C and mix well, distribute aseptically in petri plates for membrane filter procedure (if pour plate technique is used, kept the medium at 45°C). Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed

Clinical, fecal samples etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	**Light greenish beige colored free flowing, homogeneous powder**
Reaction of 7.64% solution	**7.2 ±0.2 at 25 ˚C**
pH	**7.00- 7.40**
Gelling	**Firm comparable with 2% agar gel**
Color and clarity of ready medium	**Light purple and slightly opalescent gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h**
Negative control	**Performed using sterile distilled water**

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Different Microbial Response: Cultural characteristics observed after incubation at 33-37°C for 24-48 hours. (Inoculum 50-100 CFU).

Organism	ATCC	Growth	Recovery	Colony Color
Enterococcus faecalis	14506	Luxuriant	≥ 60%	Red centered
Klebsiella aerogenes	13048	Inhibition	--	---
Escherichia coli	8739	Inhibition	--	---

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. **Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.**
2. ***Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.**
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4. **Kenner B. A., Clark H. F. and Kabler P. W., (1961), Appl. Microbiol., 9:15**
5. **Salfinger Y., and Tortorello M.L. Fifth (Ed.), (2015), Compendium of Methods for the Microbiological Examination ofFoods, 5thEd., American Public Health Association, Washington, D.C.**

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