# PRODUCT INFORMATION AND QUALITY CONTROL SHEET
# KF STREPTOCOCCUS AGAR

**I. INTENDED USE**
KF Streptococcus agar with TTC is used in isolating and enumerating fecal streptococci.

**II. SUMMARY AND EXPLANATION**
KF Streptococcal agar with TTC is based on the formulation described by Kenner et al.[1] The performance of their formulation were compared to other media used for enumerating fecal streptococci and achieved greater recoveries with KF Streptococcal Agar. The medium is recommended for use in determining counts of fecal streptococci in water. [2]

**III. PRINCIPLES OF THE PROCEDURE**
This medium supports the growth of Streptococcal species due to its content of peptone, yeast extract, maltose, lactose, and sodium azide. Peptone provides a source of nitrogen, amino acids, and carbon. Yeast extract is a source of trace elements, vitamins, and amino acids. Maltose and lactose are fermentable carbohydrates and carbon sources. Sodium azide is a selective agent. Bromcresol purple is an indicator dye.

TTC is used as a redox indicator in culture media. It is colorless in the oxidized form and is reduced to formazan, an insoluble red pigment , by actively growing microbial cells.

**IV. TYPICAL FORMULA AND APPEARANCE**
Appearance = purple
(Approximate formula* per liter of processed water)

| | |
|---|---|
| Protease Peptone No. 3 | 10.0 g |
| Yeast Extract | 10.0 |
| Sodium Chloride | 5.0 |
| Sodium Glycerophosphate | 10.0 |
| Maltose | 20.0 |
| Lactose | 1.0 |
| Sodium Azide | 0.4 |
| Bromcresol Purple | 15.0 mg |
| 2,3,5-Triphenyltetratolium Chloride | 0.1g |
| Agar | 20.0 |

*adjusted and/or supplemented to meet performance criteria.
Final pH: 7.2 ± 0.2 @ 25$^0$C

**V. PRECAUTIONS**
This product is for IN VITRO diagnostic use only. Culture specimens may contain microorganisms which can be potentially infectious to the user. Strict adherence to aseptic techniques and established precautions against microbiological hazards should be followed throughout the procedure. Carefully dispose of all items which contact patient specimens or isolated bacteria.

**VI. STORAGE/SHELF LIFE**
Plated media should be stored at 2-8$^0$C (36-46$^0$F), media side up, in the unopened or resealed package protected from light. DO NOT FREEZE OR EXPOSE TO HIGH TEMPERATURES. Allow unopened plates to warm to room temperature prior to inoculation. Prior to and during inoculation procedures, plates should be handled in a manner that minimizes product exposure to the environment. Product which has exceeded the assigned expiration date noted on the label should not be used. Do not use plates that exhibit evidence of drying, cracking, discoloration, microbial contamination or any other signs of deterioration. The presence of excessive condensate may indicate plates which have been damaged by exposure to temperature extremes.

**VII. SPECIMEN COLLECTION**
The quality of culture results depends primarily on the adequacy and condition of the specimen submitted for examination. Proper specimen collection techniques must be followed to ensure the most accurate culture results. Consult appropriate references for information about the processing and inoculation of specimens bacterial culture. Sterile swabs and collection containers should be used. Plates should be inoculated promptly after specimen collection.

**VIII. MATERIALS PROVIDED**
KF Streptococcus Agar plates (10/pkg)

**IX. MATERIALS REQUIRED BUT NOT PROVIDED**
Incubator maintaining 35-37$^0$C.
Ancillary culture media, reagents and laboratory equipment as required.

**X. PROCEDURE**
Inoculate the specimen as soon as possible after it is received in the laboratory. Streak the specimen with a sterile inoculating loop to obtain isolated colonies. Incubate the inoculated plates at 35-37$^0$C, agar side for 46-48 hours.

**XI. EXPECTED RESULTS**
NCCLS CONTROL ORGANISMS (ATCC STRAINS)

| Microorganism | Response | Colony Color |
|---|---|---|
| *Enterobacter aerogenes* ATCC 13048 | inhibited | _ |
| *Enterococcus faecalis* ATCC 19433 | growth | pink to red |
| *Enterococcus faecalis* ATCC 29212 | growth | pink to red |
| *Escherichia coli* ATCC 25922 | Inhibited | _ |

**XII. LABORATORY RESULTS**
This medium is intended to be used as a primary isolation medium. Identification of organisms may be made on the basis of typical gross colony morphology, microscopic characteristics, and physiologic and pathologic characteristics. Additional test procedures should be used to confirm findings.

**XIII. LIMITATIONS**
The ability to detect microorganisms by culture techniques can be affected by the following factors: improper specimen collection, storage and inoculation, improper culture incubation temperatures and atmospheres, improper length of culture incubation, and improper storage and handling of culture media.

**XIV. REFERENCES**
1. Kenner, Clark, and Kabler. 1961. Appl. Microbiol. 9:15.
2. Bordner and Winter. 1978. Microbiological methods for monitoring the environment, water and wastes. Environmental Protection Agency, Cincinnati , Ohio.

## USER QUALITY ASSURANCE/ QUALITY CONTROL PROCEDURES AND INFORMATION

HealthLink recommends that the following quality assurance and quality control procedures be performed on each batch of product.

**I. QUALITY ASSURANCE**

The following quality assurance procedures must be performed to assure the product will perform according to its intended use within the assigned expiry date:

1. Daily, document that product storage refrigerator maintains temperature within 2-8$^0$C.
2. Daily, document that laboratory incubator maintains temperature within the recommended range: 35-37$^0$C.

**II. QUALITY CONTROL**

The following incoming inspection procedures must be performed for each batch (batch = same lot, same shipment) of culture media received in the laboratory:

Inspect plates according to instructions contained in the Section VI "STORAGE/SHELF LIFE"

Note: Notify Technical Service immediately if media does not meet the inspection criteria.

## TECHNICAL SERVICE

HealthLink provides a toll free technical service line (1-800-638-2625) to assist with product usage. To have technical questions answered; please call between the hours of 9:00 am to 5:00 pm EST.

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**1-800-638-2625**

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