PRODUCT INFORMATION AND QUALITY CONTROL SHEET
LAURYL TRYPTOSE BROTH

I. INTENDED USE
Lauryl Tryptose Broth is used for the detection of coliform bacteria in water and wastewater.

II. SUMMARY AND EXPLANATION
The coliform group of bacteria includes aerobic and facultative anaerobic, gram-negative, non-sporeforming bacilli that ferment lactose and form acid and gas at 35^{0}C within 48 hours.[1] Members of the *Enterobacteriacae* comprise the majority of this group, but organisms such as *Aeromonas* spp. May also be included. Procedures to detect and confirm coliforms are used in testing water, foods, dairy products, and other materials. [1-4]

Lauryl Tryptose Broth also referred to as Lauryl Sulfate Broth, is prepared according to the formula al Mallmann and Darby.[3] During their investigation, Sodium Lauryl Sulfate produced the best results for inhibition of organisms other than coliforms.[5] Lauryl Tryptose Broth is used in the presumptive phase of the Standard Total Coliform Fermentation Technique in the examination of water,[2] and coliform detection of foods.[3,4,5]

III. PRINCIPLES OF THE PROCEDURE
Enzymatic Digest of Casein provides nitrogen, vitamins, minerals, and amino acids in Lauryl Tryptose Broth. Lactose is the fermentable carbohydrate for coliforms. Potassium Phosphates are the buffering agents, and Sodium Chloride is used to maintain the osmotic balance of the medium. Sodium Lauryl Sulfate is the selective agent used to inhibit non-coliform organisms.

IV. TYPICAL FORMULA AND APPEARANCE
Appearance = Light amber, clear to very slightly opalescent.
(Approximate formula* per liter of processed water)

Enzymatic Digest of Casein	20 g
Lactose	5 g
Sodium Chloride	5 g
Monopotassium Phosphate	2.75 g
Disodium Phosphate	2.75 g
Sodium Lauryl Sulfate	0.1 g

Final pH 6.8 ± 0.2 @ 25^{0}C
*adjusted and/or supplemented to meet performance criteria.

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
Media should be stored at 2-8^{0}C (36-46^{0}F). DO NOT FREEZE OR EXPOSE TO HIGH TEMPERATURES. Allow unopened tubes to warm to room temperature prior to inoculation. Prior to and during inoculation procedures, tubes should be handled in a manner that minimizes product exposure to the environment. Product that has exceeded the assigned expiration date noted on the label should not be used.

VII. SPECIMEN COLLECTION
The quality of culture results depends primarily on the adequacy and condition of the specimen submitted for examination.

VIII. MATERIALS PROVIDED
Lauryl Tryptose Broth Tubes – 10/box

IX. MATERIALS REQUIRED BUT NOT PROVIDED
Incubator maintaining 35^{0}C.
Ancillary culture media

X. PROCEDURE
Follow the methods and procedures for the detection of coliform organisms as described in standard methods.[1-4,6]

XI. EXPECTED RESULTS
NCCLS CONTROL ORGANISMS (ATCC STRAINS)

Microorganism	Response	Reaction (Gas)
Staphylococcus aureus (25923)	Inhibition	------
Escherichia coli (25922)	Good growth	positive
Proteus mirabilis (12453)	Good growth	negative

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

XIII. REFERENCES
1. Marshall, R.T. (ed.). 1992. Standard methods for the examination of dairy products, 16th ed. American Public Health Association, Washington, D.C.
2. Eaton, A.D., L.S. Clescari, and A.E. Greenberg (eds.). 1995. Standard methods for the examination of water and wastewater. 19th ed. American Public Health Association, Washington, D.C.
3. Vanderzant, C., and D.F. Splittstoesser (eds.). 1992. Compendium of methods for the microbiological examination of foods, 3rd ed. American Public Health Association, Washington, D.C.
4. U.S. Food and Drug Administration. 1995. Bacteriological analytical manual, 8th ed., AOAC International, Gaithersburg, MD.
5. Mallmann, W.L., and C.W. Darby. 1941. Uses of a lauryl sulfate tryptose broth for the detection of coliform organisms. Am. J. Public Health, 31:127.
6. Cunnif, P. (ed.). 1995. Official methods of analysis AOAC International, 16th ed. AOAC International, Arlington, VA.

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 the recommended range: 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 tubes according to instructions contained in 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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June, 2002

Product No. 1777 Rev. No. New