PRODUCT INFORMATION AND QUALITY CONTROL SHEET
TRYPTIC SOY AGAR w/ LECITHIN & TWEEN 80 CONTACT PLATE

I. INTENDED USE
Contact plates are used for the detection and enumeration of microorganisms present on surfaces of sanitary importance. **Tryptic Soy Agar w/ Lecithin & Tween 80** is used for the isolation of microorganisms from surfaces sanitized with quaternary ammonium compounds.

II. SUMMARY AND EXPLANATION
Environmental sampling plates are manufactured so that the agar medium can be filled to produce a meniscus or dome-shaped surface that can be pressed onto a surface for sampling its microbial burden. After touching the surface to be sampled with the medium, the dish is covered with the lid and incubated at an appropriate temperature. The presence or absence of microorganisms is determined by the appearance of colonies on the surface of the agar medium.

In 1955, Leavitt et al. discovered Tryptic Soy Agar supported excellent growth of aerobic and anaerobic microorganisms.[1] Tryptic Soy Agar is a nutritious base and a variety of supplements are added to enhance the medium, including Lecithin and Tween 80. The Lecithin and Tween 80 inactivate some preservatives that may inhibit bacterial growth, reducing "preservative carryover".[2] Tryptic Soy Agar w/ Lecithin & Tween 80 is recommended for determining the sanitation efficiency of containers, equipment, and work area (environmental monitoring).

III. PRINCIPLES OF THE PROCEDURE
Enzymatic Digest of Casein and Enzymatic Digest of Soybean Meal provide nitrogen, vitamins, and carbon in Tryptic Soy Agar w/Lecithin & Tween 80. Sodium Chloride maintains osmotic balance in the medium. Lecithin and Tween 80 are added to neutralize surface disinfectants.[2,3,4] Lecithin is added to neutralize quaternary ammonium compounds. Tween 80 is incorporated to neutralize phenols, hexachlorophene, formalin and, with lecithin, ethanol.[5] Agar is the solidifying agent.

IV. TYPICAL FORMULA AND APPEARANCE
Appearance = trace hazy and beige.

(Approximate formula* per liter of processed water)
Enzymatic Digest of Casein ..... 15 g
Enzymatic Digest of Soybean Meal..... 5 g
Sodium Chloride ..... 5 g
Lecithin..... 0.7 g
Tween 80 ..... 5 g
Agar ..... 20.5 g
Final pH: 7.3 ± 0.2 at 25°C
*Formula may be adjusted and/or supplemented as required to meet performance specifications.

V. PRECAUTIONS
This product is for IN VITRO diagnostic use only. Strict adherence to aseptic techniques and established precautions against microbiological hazards should be followed throughout the procedure. Carefully dispose of all items, which contact specimens.

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 that 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 that have been damaged by exposure to temperature extremes.

VII. SPECIMEN COLLECTION
This product is not for use directly with clinical specimens. Proper specimen collection techniques must be followed to ensure the most accurate culture results. Plates should be incubated promptly after inoculation.

VIII. MATERIALS PROVIDED
Tryptic Soy Agar w/ Lecithin & Tween 80 Contact Plates (10/pkg)

IX. MATERIALS REQUIRED BUT NOT PROVIDED
Ancillary culture media, reagents and laboratory equipment as required**.**

X. PROCEDURE
Carefully remove a single plate from the bag and remove lid. Invert plate and press agar firmly on surface to be tested. Note: Use firm but equal pressure on plate to ensure uniform sampling. Incubate the inoculated plates at 25-37^{0}C, agar side up for 24-48 hours for bacteria and up to one week for fungi. Examine cultures at least every other day for fungal growth.

XI. EXPECTED RESULTS
NCCLS CONTROL ORGANISMS (ATCC STRAINS)

Candida albicans (ATCC 10231)	Growth
Aspergillus niger (ATCC 16404)	Growth
Escherichia coli (ATCC 25922)	Growth
Bacillus subtilis (ATCC 6633)	Growth
Psuedomonas aeruginosa (ATCC 10145)	Growth
Micrococcus luteus (ATCC 9341)	Growth

XII. LABORATORY RESULTS
Identification of fungal 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 bacteria, yeasts, molds and fungi 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. **Leavitt, J. M., I. J. Naidorf and P. Shugaevsky.** 1955. The undetected anaerobe in endodontics: a sensitive medium for detection of both aerobes and anaerobes. The NY J. Dentist. **25**:377-382.
2. **Orth, D. S.** 1993.Handbook of cosmetic microbiology. Marcel Dekker, Inc., New York, NY.
3. **Quisno, R., I. W. Gibby, and M. J. Foter.** 1946. A neutralizing medium for evaluating the germicidal potency of the quaternary ammonium salts. Am. J. Pharm. **118**:320-323.
4. **Erlandson, A. L., Jr., and C. A. Lawrence.** 1953. Inactivating medium for hexachlorophene (G-11) types of

compounds and some substituted phenolic disinfectants. Science **118**:274-276.
5. **Brummer, B.** 1976. Influence of possible disinfectant transfer on *Staphylococcus aureus* plate counts after contact sampling. App.
Environ. Microbiol. **32**:80-84.
6. **Favero (chm.).** 1967. Microbiological sampling of surfaces – a state of the art report. Biological Contamination Control Committee, American Association of Contamination Control.

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: 25-37^{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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