HealthLink®
800-638-2625

Product No. 1088
Revision No. New

PRODUCT INFORMATION AND QUALITY CONTROL SHEET
MALT EXTRACT AGAR PLATE

I. INTENDED USE
Malt Extract Agar is for the isolation, detection, and enumeration of yeasts and molds.

II. SUMMARY AND EXPLANATION
Malt media for yeasts and molds have been in use for many years[1]. In 1919, Reddish[2] prepared a satisfactory substitute for beer wort from malt extract. Fulmer and Grimes[3] employed a malt agar for their sutdies of the growth of yeasts on synthetic media. Reddish's medium was used by Thom and Church[4] in their studies of the aspergilli.

III. PRINCIPLES OF THE PROCEDURE
This acididified medium inhibits the growth of bacteria, and the the nutirent content allows colonies of yeasts and molds to flourish.

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

MALT EXTRACT AGAR
Appearance = light to medium amber, slightly opalescent

Malt Extract - powdered	20.0g
Papaic Digest of Casein	1.0
Dextrose	20.0
Agar	20.0

Final pH: 5.6 +/- 0.2 at 25°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
Plated media should be stored at 2-8°C (36-46°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 for fungal culture.[5,6,7] Sterile swabs and collection containers should be used. Plates should be inoculated promptly after specimen collection. Specimens should be collected prior to the initiation of antifungal therapy.

VIII. MATERIALS PROVIDED
Malt Extract Agar Plates

IX. MATERIALS REQUIRED BUT NOT PROVIDED
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. Reference texts should be consulted for detailed information on processing and inoculating specimens for fungal culture.[5,6,7]

Incubate the inoculated plates at 25-30°C, agar side up, in an atmosphere containing increased humidity for up to one week. 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
Saccharomyces cerevisiae (ATCC 9763)	Growth
Saccharomyces uvarum (ATCC 9080)	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 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. DIFCO Manual. 9th Ed., 1953, pp 65-67.
2. Abs. Bact., 3:6, 1919
3. J. Bact., 8:586, 1923.
4. Thom and Church: The Aspergilli, 1926.
5. Ajello, L., L.K. Georg, W. Kaplan and L. Kaufman. 1963. CDC Laboratory Manual for Medical Mycology. PHS Publication No. 994, U.S. Government Printing Office, Washington, D.C.
6. McGinnis, M.R. 1980. Laboratory Handbook of Medical Mycology. Academic Press Inc., N.Y., N.Y.
7. Lennette, E.H., ed. 1985. Manual of Clinical Microbiology, 4th ed. American Society for Microbiology, Washington, D.C.

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°C.
2. Daily, document that laboratory incubator maintains

temperature within the recommended range: 22-35^{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 :

1. Inspect plates according to instructions contained on the "Quality Control Log Sheet."
2. Peel off the lower portion of a product bag label (Quality Control Certificate) for the lot being accepted into the laboratory and affix it to the Quality Control Log Sheet.
3. Initial and date the Quality Control Log Sheet.

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 receive, QA/QC log sheets or to have technical questions answered, please call between the hours of 9:00 am to 5:00 pm EST.

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