Oat Meal Agar

M397

Intended Use:

Recommended for cultivation of fungi, particularly for macrospore formation.

Composition**

Ingredients	Gms / Litre
Oat Meal	60.000
Agar	12.500
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 72.5 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Fungi are multicellular heterotropic members of the plant kingdom that lack roots and stems and are referred to as thallophytes. They are larger than the bacteria and more complex in their morphology. The form of sporulation and the type of spore are important criteria in the identification of various fungi.

Fungi are extremely successful organisms, as evidenced by their ubiquity in nature. Of the estimated 250,000 species, fewer than 150 are known as primary pathogens of humans (1). Identification and classification of fungi is primarily based on the morphologic differences in their reproductive structures. Fungi reproduce sexually or asexually or by both means. Sexual reproduction is associated with the formation of specialized structures that facilitate fertilization and nuclear fission, resulting in the production of specialized spores. Large, multicelled spores are called macroconidia, macroaleuriospores or macrospores and are produced by aerial sporulation (2). Imperfect fungi are those in which no sexual phase has been demonstrated. The spores are produced directly or from the mycelium. Most of the fungi of medical importance belong to the imperfect group.
Oat meal is a source of nitrogen, carbon, protein and nutrients necessary for the growth of fungi.

Type of specimen

Pharmaceutical sample; Food samples

Specimen Collection and Handling

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (1,2,8).
For pharmaceutical samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(3)
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1.This medium is general purpose medium and may not support the growth of fastidious organisms.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow homogeneous powder or soft lumps which can be easily broken down to powder

Gelling
Firm,comparable with 1.25% Agar gel.

Colour and Clarity of prepared medium
Brownish yellow coloured opaque gel with some suspended particles forms in Petri plates

Reaction
Reaction of 7.25% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH
7.00-7.40

Cultural Response
Cultural characteristics observed after an incubation at 25-30°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Aspergillus brasiliensis ATCC 16404	50-100	luxuriant	
Candida albicans ATCC 10231	50-100	luxuriant	>=50%
Saccharomyces cerevisiae ATCC 9763	50-100	luxuriant	>=50%

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Use before expiry date on the label.
Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

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1. Murray P. R., Baron E. J., Jorgensen J. H., Pfaller M. A., Yolken R. H., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.
2. Koneman E. W., Allen S. D., Janda W. M., Schreckenberger P. C. and Winn W. C. Jr., 1997, Colour Atlas and Textbook of Diagnostic Microbiology, 5th Ed., Lippincott- Raven Publishers, Philadelphia, Pa.

4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

2. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.