

O3506 Oatmeal agar NutriSelect® Basic

Cultivation of fungi, particularly macrospore formation

Composition:

Ingredients	Grams/Litre
Oatmeal	60.0
Agar	12.5

Final pH 6.0 +/- 0.2 at 25°C

Store dehydrated powder below 30°C in a tightly closed container and the prepared medium at 2-8°C. Protect from moisture and light by keeping container in a low humidity environment. Use before expiry date on the label.

Appearance(color): Cream to yellow, free flowing powder
 Gelling: Firm, comparable with 1.25% Agar gel
 Color and Clarity: Brownish yellow coloured opaque gel with some suspended particles forms in Petri plates

Directions:

Solve 72.5 g in 1 litre distilled water. Autoclave 15 minutes at 121°C.

Principle and Interpretation:

Fungi are multicellular heterotrophic members of the plant kingdom that lack roots and stems and are referred to as thallophytes. Fungi, just like animals, obtain their carbon and energy from other organisms. They are larger than the bacteria and more complex & advanced in their morphology. Identification and classification of fungi is primarily based on the morphologic differences in their reproductive structures(2).

Fungi are extremely successful organisms, as evidenced by their ubiquity in nature. Of the estimated 250,000 species, fewer than 150 are known primary pathogens of humans(1). Differences between fungal groups are used to discriminate species using morphological differences in sexual structures and reproductive strategies. Fungi reproduce sexually or asexually or by both means. Sexual reproduction is associated with the formation of specialized structures anastomosis 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). Fungi *imperfecti* and *deuteromycota* lack an observable sexual cycle. The spores are produced directly or from the mycelium. Medical important fungi mainly falls under this group. Oat meal is a source of nitrogen, carbon, protein and nutrients necessary for the growth of fungi.

Cultural characteristics observed after an incubation of 18-48 hrs at 25 - 30°C

Organisms (ATCC/WDCM)	Inoculum (CFU)	Growth	Recovery
<i>Aspergillus brasiliensis</i> (16404/ 00013)	50-100	+++	
<i>Candida albicans</i> (10231/00054)	50-100	+++	≥50%
<i>Saccharomyces cerevisiae</i> (9763/00058)	50-100	+++	≥50%



References:

1. Dixon, Rhodes and Fromtling. 1999. In Murray, Baron, Pfaller, Tenover and Tenover (ed.). Manual of clinical microbiology, 7th ed. American Society for Microbiology, 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.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

