

M6907 Malt Extract Agar NutriSelect® plus

Isolation and detection of yeasts and molds.

Composition:

| Ingredients | Grams/Litre |
|-------------|-------------|
| Dextrin | 2.75 |
| Glycerol | 2.35 |
| Maltose | 12.75 |
| Peptone | 0.78 |
| Agar | 15.0 |

Final pH 4.8+/- 0.2 at 25°C

Store dehydrated powder below 30°C in a tightly closed container and the prepared medium at 2-8°C.

Appearance(color): Cream to yellow, free flowing powder
 Gelling: Firm, comparable with 1.5% Agar gel.
 Color and Clarity: Yellow coloured clear to slightly opalescent gel forms in Petri plates.

Directions:

Solve 33.6 g in 1 litre distilled water. Autoclave 15 minutes at 121°C.

Principle and Interpretation:

Malt Extract Medium is recommended for the detection, isolation and enumeration of yeasts and moulds. Malt Extract Agar has been used for many years for the detection of yeast and moulds in a wide variety of materials including dairy products and foods (1). The medium is also suitable for maintaining stock cultures of fungi.

Reddish (2) described a culture medium prepared from malt extract which was a satisfactory substitute for wort. Following the formula of Reddish, Thom and Church (4) used Malt extract as a base from which they prepared the complete media.

Peptic digest of animal tissue provide essential growth nutrients for the growth of fungi. Maltose and dextrin are the suitable carbohydrates for the growth of fungi. The low pH inhibits bacterial growth (3).

For mycological count, it is advisable to adjust the reaction of medium more acidic with addition of 10% lactic acid. Antibiotics may be added as sterile solutions to the molten medium immediately before pouring into sterile petri plates in order to suppress bacterial growth.

Cultural characteristics observed after an incubation of 40-48 hours at 25-30°C.

| Organisms (ATCC/WDCM) | Inoculum (CFU) | Growth | Recovery |
|--|----------------|--------|----------|
| <i>Aspergillus brasiliensis</i> (16404/ -) | 50-100 | ++/+++ | |
| <i>Candida albicans</i> (10231/-) | 50-100 | ++/+++ | ≥70% |
| <i>Saccharomyces cerevisiae</i> (9763/-) | 50-100 | ++/+++ | ≥70% |



References:

1. Downes F. P. and Ito K., (Ed.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed. American Public Health Association, Washington, D.C.
2. Reddish, 1919, Abst. Bact., 3:6.
3. Lennett, Balows, Hausler and Shadomy (Eds.), 1985, Manual of Clinical Microbiology, 4th ed., ASM, Washington, D.C
4. Thom and Church, 1926, The Aspergilli

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.

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