70145 Malt Extract Agar

Malt Extract Agar is recommended for the detection, isolation and enumeration of fungi, particularly yeasts and moulds, in various materials and for the cultivation of the strains for microbiological vitamin assays.

Composition:

Ingredients	Grams/Litre
Malt extract	30.0
Mycological peptone	5.0
Agar	15.0
Final pH 5.4+/-0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions :

Suspend 50 g in 1 litre of distilled water and bring to the boil to dissolve. Sterilize by autoclaving at 115°C for 10 minutes. For mycological count, it is recommended to adjust the pH more acidic with addition of 10% lactic acid, 5 % tartaric acid. Further antibiotics may be added to the acidified agar. Alternatively, only antibiotics may be applied to the molten agar. Add additives immediately before pouring into the sterile petri plates (45-50°C) in order to suppress the bacterial growth. For fungi a pH value of 3.5 is recommended, but this depends on the microorganisms.

Principle and Interpretation:

Malt extract contains polysaccharides which are used as energy source. It makes the medium acidic as well. Mycological peptone serves as a nitrogen source. Agar is the solidifying agent rapidly yielding a luxuriant growth with typical morphology and pigmentation.
Lactic acid, tartaric acid or antibiotics suppress bacterial growth and make the medium more selective.
Reiss recommends a modified malt extract medium for the selective cultivation of Aspergillus flavus. According to Rapp, addition of certain indicator dyes to malt extract agar allows differentiation of yeast and bacterial colonies.

Cultural characteristics after 48-72 hours at 25-30°C.

Organisms (ATCC)	Growth
Aspergillus niger (16404)	+++
Candida albicans (10231)	+++
Saccharomyces cerevisae (9763)	+++

References:

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2. T. Börjesson, et al., Volatile metabolites and other indicators of P. aurantiogriseum - growth on different substrates, Appl. Environ. Microbiol. 56, 3705 (1990)
3. Rapp M., Indikatorzusätze zur Keimidentifizierung auf Würze- und Malzextraktagar, Milchwiss., 29, 341 (1974)
4. Reiss J., Ein selektives Kulturmedium für den Nachweis von Aspergillus flavus in verschimmeltem Brot, Zbl. Bakt. Hyg. I. Abt. Orig. A 220, 564
5. Gallowey L.D. and Burgess R., Applied Mycology and Bacteriology, 3rd ed., Leonard Hill, London, pg. 54 and 57 (1952)
6. Harrigan W.F. and Mc Cane MB., Laboratory Methods in Food and Dairy Microbiology, Academic Press, N.Y (1976)

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.