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Malt Extract Agar

For the detection, isolation and enumeration of fungi, particularly yeasts and moulds, in various materials and for the cultivation of test strains for the microbiological vitamin assays.

Mode of Action

If fungal counts are to be performed, the pH value of the culture medium should be adjusted to 3.5 to suppress the growth of the bacterial flora.

REISS (1972) recommends a modified malt extract agar for the selective cultivation of Aspergillus flavus. According to RAPP (1974), addition of certain indicator dyes to malt extract agar allows differentiation of yeast and bacterial colonies.

Typical Composition (g/litre)

Malt extract 30.0; peptone from soymeal 3.0; agar-agar 15.0:

Preparation

Suspend 48 g/litre, autoclave under mild conditions (10 min at 121°C).

■ **Do not overheat.**

pH: 5.6 ± 0.2 at 25 °C.

The plates are clear and yellowish-brown.

If the pH has to be lowered, liquefy the sterile culture medium and adjust the pH with filter-sterilized 10 % lactic acid solution or 5 % tartaric acid solution. Avoid subsequent heating.

Experimental Procedure and Evaluation

Depend on the purpose for which the media are used.

Incubation: 7 days at 28 °C aerobically (yeasts: 3 days)

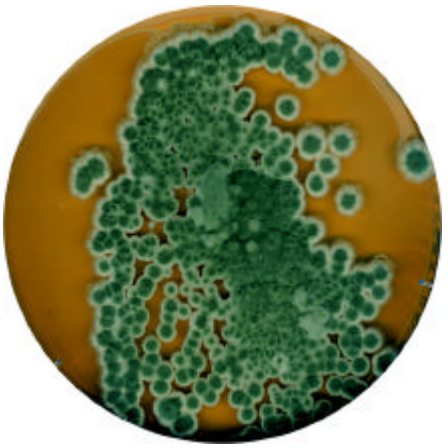
Literature

RAPP, M.: Indikatorzusätze zur Keimdifferenzierung auf Würze- und Malzextrakt-Agar. - **Milchwiss., 29**; 341-344 (1974)

REISS, J.: Ein selektives Kulturmedium für den Nachweis von Aspergillus flavus in verschimmeltem Brot. - **Zbl. Bakt. Hyg. I. Abt. Orig. A 220**; 564-566

Ordering Information

Product	Merck Cat. No.	Pack size
Malt Extract Agar	1.05398.0500	500 g
L(+)-Tartaric acid	1.00804.0250	250 g
Lactic acid about 90 % purified	1.00366.0500	500 ml



Penicillium commune ATCC 10428

Quality control of Malt Extract Agar

Test strains	Growth
Geotrichum candidum DSMZ 1240	good / very good
Penicillium commune ATCC 10428	good / very good
Aspergillus niger ATCC 16404	good / very good
Trichophyton ajelloi ATCC 28454	fair / good

Quality control of Malt Extract Agar (spiral plating method)

Test strains	Inoculum (cfu/ml)	Recovery rate
Candida albicans ATCC 10231	10^3-10^5	≥ 70 %
Saccharomyces cerevisiae ATCC 9763	10^3-10^5	≥ 70 %
Saccharomyces cerevisiae ATCC 9080	10^3-10^5	≥ 70 %
Rhodotorula mucilaginosa DSMZ 70403	10^3-10^5	≥ 70 %