Malt Extract Broth

Cat. No. 1.05397.0500
(500 g)

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.

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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.

Malt Extract Agar:
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.

Malt Extract Broth:
Typical Composition (g/litre)
Malt extract 17.0.

Preparation
Suspend 17.0 g/litre, dispense into suitable containers, autoclave under mild conditions **(10 min at 115 °C).**

pH: 4.8 ± 0.2 at 25 °C.
The prepared broth is clear and yellow.

Experimental Procedure and Evaluation
Depend on the purpose for which the media are used.
Incubation: 7 days at 28 °C aerobically (yeasts: 3 days)

Quality control of Malt Extract Agar

Test strains	*Growth*
Geotrichum candidum	**good**
Penicillium spp.	**good**
Aspergillus niger	**good**
Trichophyton ajelloi	**fair / good**

Quality control of Malt Extract Agar (spiral plating method)

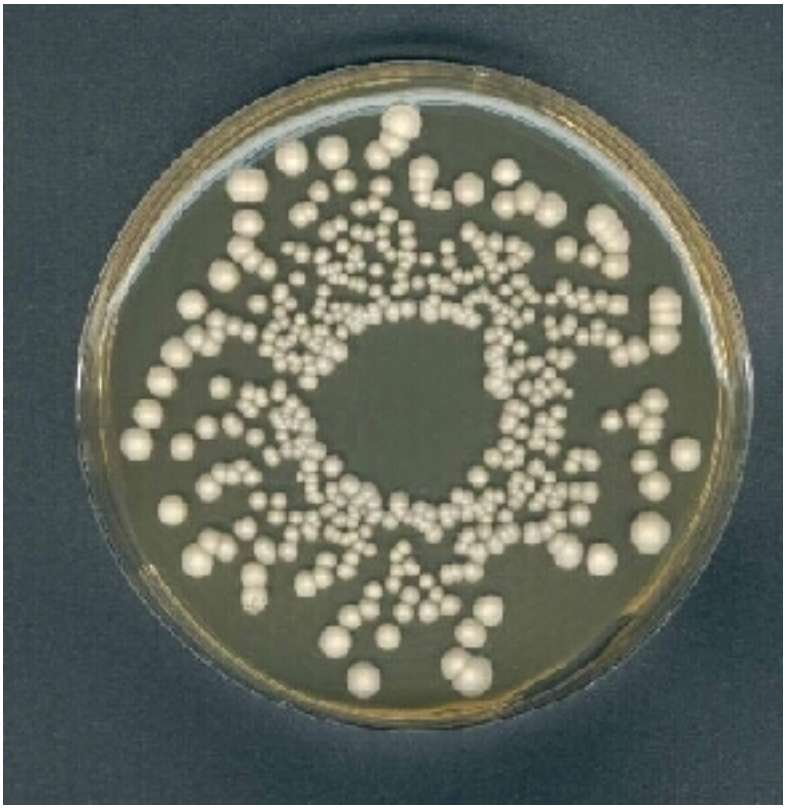
Test strains	*Inoculum (cfu/ml)*	*Recovery rate*
Candida albicans ATCC 10231	**10^3-10^5**	**≥ 70 %**
Saccharomyces cerevisiae ATCC 9763	**10^3-10^5**	**≥ 70 %**
Saccharomyces cerevisiae ATCC 9080	**10^3-10^5**	**≥ 70 %**
Rhodotorula mucilaginosa DSM 70403	**10^3-10^5**	**≥ 70 %**

Quality control of Malt Extract Broth

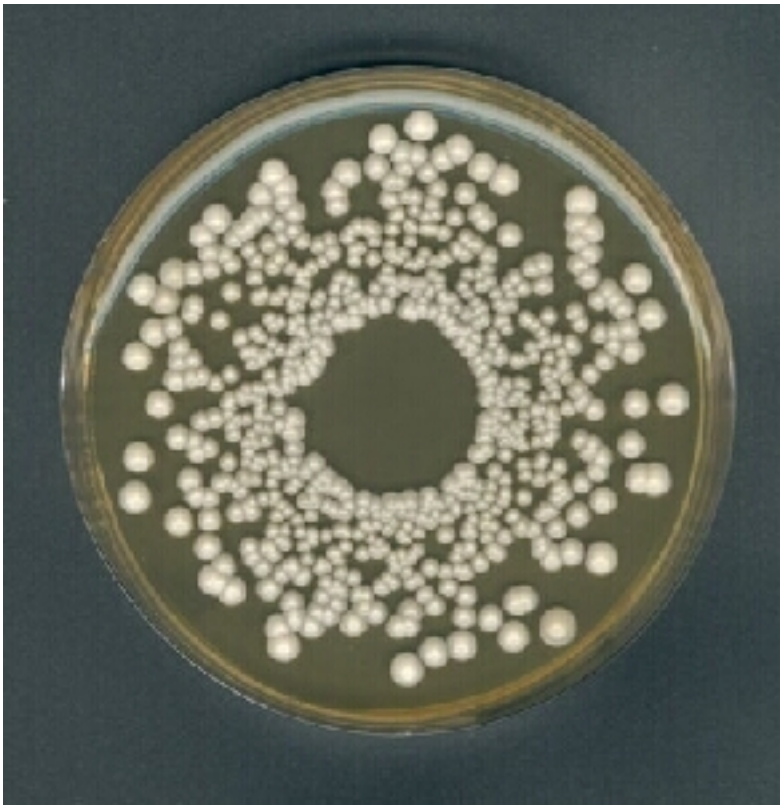
Test strains	*Growth*
Candida albicans ATCC 10231	**good / very good**
Saccharomyces cerevisiae ATCC 9763	**good / very good**
Saccharomyces cerevisiae ATCC 9080	**fair / good**
Geotrichum candidum DSM 1240	**good / very good**
Rhodotorula mucilaginosa DSM 70403	**fair / very good**
Penicillium spp.	**good / very good**
Aspergillus niger	**good / very good**
Trichophyton ajelloi	**good / very good**

Additives

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



Saccharomyces Cerevisiae ATC 19433



Malt Extract Agar - Saccharomyces cerevisiae

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