PRODUCT SPECIFICATION SHEET

Malt Extract Agar Base (w/ Mycological Peptone) (DM348)

Intended Use
Malt Extract Agar Base (w/ Mycological Peptone) (DM348) is recommended for detection, isolation and enumeration of yeast and mould.

Product Summary and Explanation
As opposed to indirect methods, the laboratory diagnosis of fungal infection relies largely on direct methods. Malt and malt extracts are very commonly used for the propagation of yeasts and moulds. In 1919, Reddish[1] described a culture medium prepared from malt extract that was a satisfactory substitute for wort. Thom and Church, following the formula of Reddish, used malt extract as a base to prepare the complete medium.[2] Malt Extract Medium is similar to the formula of Galloway and Burgess[3] used for the detection, isolation and enumeration of yeasts and moulds.

Principles of the Procedure
Malt Extract Agar contains mycological peptone rapidly gives a luxuriant growth with typical morphology and pigmentation. Malt extract provides an acidic environment and nutrients favourable for growth and metabolism of yeasts and moulds. The acidic pH of Malt Extract Agar and Broth allows for the optimal growth of molds and yeasts while restricting bacterial growth. 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[4] in order to suppress bacterial growth.

Formula / Liter

Ingredients	Gms / Liter
Malt extract	30.00
Mycological peptone	5.00
Agar	15.00
Final pH: 5.4 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions
1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions
1. Suspend 50 grams of the medium in one litre of distilled water and soak for 15 minutes.
2. Sterilize by autoclaving at 115°C for 10 minutes.
3. Mix well before dispensing. Avoid overheating.
4. If desired, to adjust acidic pH use 10% Lactic Acid (MS045).

Quality Control Specifications

Dehydrated Appearance	Cream to beige homogeneous free flowing powder
Prepared Medium	Amber coloured clear to slightly opalescent gel forms in Petri plates
Reaction of 5.0 % solution	pH 5.4 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response: Cultural characteristics observed after an incubation at 25-30°C for 48-72 hours.

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Recovery
1.	*Aspergillus brasiliensis ATCC 16404*	50-100	good-luxuriant	--
2.	*Candida albicans ATCC 10231*	50-100	good-luxuriant	>=70%
3.	*Saccharomyces cerevisiae ATCC 9763*	50-100	good-luxuriant	>=70%

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure
Refer to appropriate references for standard test procedures.

Results
Refer to appropriate references and standard test procedures for interpretation of results.

Storage
Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration
Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure
1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging
Product Name : Malt Extract Agar Base (w/ Mycological Peptone)
Product Code : DM348
Available Pack sizes : 100gm / 500gm

References
1. Reddish A., 1919, Abstr. Bacteriol., 3:6.
2. Thom, C., and M. B. Church. 1926. The Aspergilli. Williams and Wilkins Co., Baltimore, MD.
3. Gallowey L. D. and Burgess R., 1952, Applied Mycology and Bacteriology, 3rd Ed., Leonard Hill, London, pg. 54 and 57.
4. FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, DC.

Further Information
For further information please contact your local MICROMASTER Representative.

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