PRODUCT SPECIFICATION SHEET

Malt Agar (DM157)

Intended Use
Malt Agar is recommended for detection and isolation of yeast and mould from dairy products, foods and other material. It is also used for stock culture maintenance of yeast and moulds.

Product Summary and Explanation
Media based on malt extract may be considered as general growth substrates due to their richness and nutrient balance. They are very suitable for the cultivation of fastidious microorganisms. With acidic pH, they are used for the isolation, cultivation and maintenance of yeast and moulds. Malt media for yeasts and moulds have been widely used for many years. In 1919, Reddish[1] prepared a satisfactory substitute for beer wort from malt extract. Thom and Church used Reddish's medium for their studies of *Aspergilli*.[2] Malt Agar was employed by Fullmer and Grimes during studies of yeasts on synthetic media.[3] Malt Agar is included in Official Methods of Analysis of AOAC International.[4] It is recommended by APHA[5] for use in both antibiotic and acidified standard methods for yeast and mould counts in food. This medium is also used for maintaining stock cultures of fungi.

Principles of the Procedure
Malt Agar contains malt extract, which provides carbon, protein and nutrient sources required for the growth of microorganisms. The acidified medium inhibits the growth of bacteria and allows optimal growth of yeasts and moulds.

Formula / Liter

Ingredients	Gms / Liter
Malt extract	30.00
Agar	15.00
Final pH: 5.5 ± 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.
3. Heating process during rehydration and sterilization should be for shorter period as excessive heat causes partial hydrolysis of the agar, which results in inability to gel properly when cooled. Additional 5 grams of agar may be added if desired.

Directions
1. Suspend 45 grams of the medium in one liter of distilled water.
2. Heat to boiling to dissolve the medium completely.
3. Sterilize by autoclaving at 118°C for 15 minutes.
4. AVOID OVERHEATING, as it will result in a softer and darker agar.

Quality Control Specifications

Dehydrated Appearance	Cream to brownish yellow homogeneous free flowing powder
Prepared Medium	Light amber coloured clear to slightly opalescent gel forms in tubes or Petri plates
Reaction of 4.5% Solution	pH : 5.5 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

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Expected Cultural Response: Cultural characteristics observed after an incubation at 25 - 30°C for 40 - 48 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 specific procedures.

Results
Refer to appropriate references and procedures for 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 Agar.
Product Code : DM157
Available Pack sizes : 500gm

References

1. Reddish, 1919, Abstr. Bacteriol., 3:6.
2. Thom and Church. 1926. The aspergilli. Williams & Wilkins, Baltimore, Md.
3. Fulmer and Grimes. 1923. J. Bacteriol. *8*:585.
4. Williams, (Ed.), 2005, Official Methods of Analysis of the Association of Official Analytical Chemists, 19th Ed., AOAC, Washington, D.C.
5. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed.,APHA, Washington, D.C.

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

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	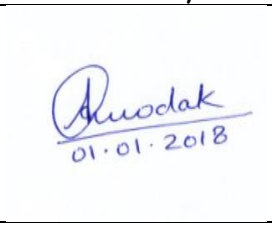	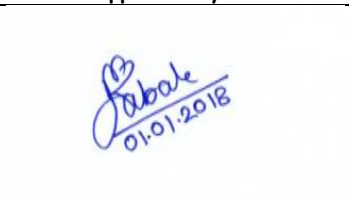
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