



PRODUCT SPECIFICATION SHEET

Malt Extract Broth Base (DM159)

Intended Use

Malt Extract Broth Base (DM159) is recommended for detection and enumeration of yeast, mould and aciduric microorganisms.

Product Summary and Explanation

Malt Extract Broth Base has been widely used in the maintenance, isolation and identification of fungi and it is also proposed in several pharmacopoeias as a medium for the control of sterility in pharmaceutical products, though it is mostly used for comparative morphological studies.

The laboratory diagnosis of fungal infection which is almost always based upon the mycological laboratory investigation relies largely on direct as opposed to indirect methods. In addition to isolation of the organisms, direct microscopy should also, be give considerable importance. Media used for the isolation of fungi are acidic and are designed to be inhibitory to bacteria. The use of malt and malt extracts for the propagation of yeasts and moulds is quite common. In 1919, Reddish⁽¹⁾ described a culture medium prepared from malt extract that was a satisfactory substitute for wort. Thom and Church,⁽²⁾ following the formula of Reddish, used malt extract as a base from which they prepared the complete media. Malt Extract Medium is analogous to the formula of Galloway and Burgess⁽³⁾ used for the detection, isolation and enumeration of yeasts and moulds. Malt Extract Broth is recommended for the examination of yeasts and moulds in the U.S. Food and Drug Administration's Bacteriological Analytical Manual.⁽⁴⁾ For mycological counts it may be desirable to prepare more acidic medium so as to suppress bacterial growth.

Principles of the Procedure

Malt Extract Broth contains malt extract which provides the carbon, protein, nutrient and an acidic environment and nutrients favourable for growth and metabolism of yeasts and moulds. Mycological peptone rapidly gives a luxuriant growth with typical morphology and pigmentation. For mycological count, it is advisable to adjust the reaction of medium more acidic with addition of 10% lactic acid (MS045). Antibiotics may be added as sterile solutions to the molten medium immediately before dispensing into sterile tubes so as to suppress bacterial growth.

Formula / Liter

Ingredients	Gms / Liter
Malt extract	17.00
Mycological peptone	3.00
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 20 grams of the medium in one liter of distilled water and soak for 15 minutes.
2. Heat if necessary, to dissolve the medium completely.
3. Mix well and distribute into final containers.
4. Autoclave at 115°C, 10 psi pressure, for 10 minutes / validated cycle.
5. Avoid overheating.
6. If desired, adjust acidic pH using Lactic Acid Solution-10% (MS045).





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Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Amber coloured clear solution in tubes
Reaction of 2.0% Solution	pH : 5.4 ± 0.2 at 25°C
Gel Strength	Not Applicable

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
1.	<i>Aspergillus brasiliensis</i> ATCC 16404	50 - 100	good-luxuriant
2.	<i>Candida albicans</i> ATCC 10231	50 - 100	good-luxuriant
3.	<i>Saccharomyces cerevisiae</i> ATCC 9763	50 - 100	good-luxuriant

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

Test Procedure

Refer to appropriate references for specific procedures for detection and enumeration of yeast, mould and aciduric microorganisms.

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 Extract Broth Base.

Product Code : DM159

Available Pack sizes : 100gm

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. Galloway 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.





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Further Information

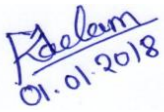


For further information please contact your local MICROMASTER Representative.



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