

PRODUCT SPECIFICATION SHEET

Beef Extract Agar (DM1473)

Intended Use

Beef Extract Agar (DM1473) is recommended for routine cultivation of non-fastidious bacteria.

Product Summary and Explanation

Majority of organisms to be studied in medical bacteriology are either pathogens or commensals of the human body, and to facilitate suitable growth an artificial culture medium should provide nutrients and a pH (about 7.2) approximating to those of the tissues and body fluids. Many of these nutrients are supplied by aqueous extracts of beef and peptone, which is a product of the digestion of protein for routine purposes.⁽¹⁾ Beef Extract is recommended for use where uniform composition of media is important.

Beef Extract Agar can be used as a general-purpose nutrient medium and is also recommended for preparation of pure culture of *Candida* species for carrying out fermentation studies.⁽²⁾

Principles of the Procedure

Beef Extract Agar is a non-selective nutrient medium and contains beef extract and peptic digest of animal tissue as a source of nitrogen and carbon. Sodium chloride is a source of electrolytes and helps to maintain the osmotic balance of the medium.

Formula / Liter

Ingredients	Gms / Liter
Peptic digest of animal tissue	10.00
Beef extract	3.00
Sodium chloride	5.00
Agar	15.00
Final pH: 7.6 ± 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 33 grams of the medium in one liter of distilled water.
2. Heat to boiling, to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile Petri plates.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Yellow coloured, clear to slightly opalescent gel forms in Petri plates
Reaction of 14.9% Solution	pH : 7.2 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response : Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Recovery
1.	<i>Candida albicans</i> ATCC 10231	50-100	good-luxuriant	≥70%
2.	<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	≥70%
3.	<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	good-luxuriant	≥70%

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4.	<i>Salmonella Typhi</i> ATCC 6539	50-100	good-luxuriant	>=70%
5.	<i>Staphylococcus aureus</i> ATCC 25923	50-100	good-luxuriant	>=70%

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

Test Procedure

Refer appropriate references for specific test procedures.

Results

Refer appropriate references and 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 : Beef Extract Agar

Product Code : DM1473

Available Pack sizes : 100gm / 500gm

References

1. Collee J. G., Fraser A. G., Marimon B. P., Simmons A., (Eds.) ,1996, Mackie and McCartney Practical Medical Microbiology, 14th Ed., Churchill Livingstone.
2. Finegold S. M. and Baron E. J., (Ed.), Bailey and Scott's Diagnostic Microbiology, 1986, 7th Edition, The C.V. Mosby Company, St. Louis.

Further Information

For further information please contact your local MICROMASTER Representative.



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