



PRODUCT SPECIFICATION SHEET

Lethen Agar, Modified (Modified Lethen Agar) (DM724)

Intended Use

Lethen Agar, Modified (Modified Lethen Agar) (DM724) is recommended for determining the number of bacteria present in cosmetics and other materials.

Product Summary and Explanation

To neutralize the antimicrobial action of the quaternary ammonium compounds, Weber and Black recommended the use of lecithin and polysorbates.⁽¹⁾ Further, the methodology was accepted by AOAC for the antimicrobial assays and extended their use to all the cationic detergents.⁽²⁾ Additionally, FDA incorporated it as pre-enrichment medium for every microbial examination of cosmetics.^(3,4) Lethen Agar, Modified is formulated as described in the U.S. Food and Drug Administration (FDA) *Bacteriological Analytical Manual*.⁽⁵⁾ This medium was originally recommended by APHA for use in microbial testing of water and is used to partially inactivate the preservatives in cosmetics being analyzed for the microbial content. This medium was originally recommended by APHA for use in microbial testing of water.⁽⁶⁾

Principles of the Procedure

Lethen Agar, Modified (Modified Lethen Agar) contains peptic digest of animal tissue, casein enzymic hydrolysate and beef extract provide nitrogenous nutrients, carbon compounds and trace elements required for good growth of a wide variety of bacteria and fungi. Vitamins and cofactors, required for growth as well as additional sources of nitrogen and carbon, are provided by yeast extract. Sodium chloride maintains the osmotic balance of the medium. Incorporation of lecithin and polysorbate 80 to the medium enables the recovery of bacteria from materials containing residues of disinfectant compounds or preservatives used in cosmetics. Polysorbate 80 is added to nullify phenolic compounds, hexachlorophene, formalin and along with lecithin neutralizes ethyl alcohol. Lecithin also neutralizes quaternary ammonium compounds present in the cosmetics.

Formula / Liter

Ingredients	Gms / Liter
Peptic digest of animal tissue	10.00
Casein enzymic hydrolysate	10.00
Beef extract	3.00
Yeast extract	2.00
Sodium chloride	5.00
Lecithin	1.00
Polysorbate 80	7.00
Dextrose	1.00
Sodium bisulphite	0.10
Agar	15.00
Final pH: 7.2 ± 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 54.1 grams of the medium in one liter of distilled water.
2. Heat to boiling to dissolve the medium completely.
3. Autoclave at 15 lbs pressure (121°C) for 15 minutes.
4. Mix well and dispense as desired.





PRODUCT SPECIFICATION SHEET

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 5.4% 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>Escherichia coli ATCC 25922</i>	50 -100	good-luxuriant	≥70%
2.	<i>Staphylococcus aureus ATCC 25923</i>	50 -100	good-luxuriant	≥70%
3.	<i>Staphylococcus aureus ATCC 6538</i>	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 test procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 2 - 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 : Letheen Agar, Modified (Modified Letheen Agar)

Product Code : DM724

Available Pack sizes : 500gm

References

1. Weber and Black, 1948, Soap Sanitary Chem., 24:134-139.
2. Dunningan A. P., 1968, Drug Cosmet. Ind., 102:43.
3. Smart R. and Spooner D. F., 1972, J. Soc. Cosmet. Chem., 23:721.
4. Wilson L. A. and Ahearn D. G., 1977, Am. J. Ophthalmol., 84:112.
5. Madden J. M. and Dallas W. S., 1984, Bacteriological Analytical Manual, 6th Ed., AOAC, Arlington, Va.





PRODUCT SPECIFICATION SHEET

6. APHA, 1960, Standard Methods for the Examination of Water and Wastewater, 11th Ed., American Public Health Association, New York.

Further Information

For further information please contact your local MICROMASTER Representative.



MICROMASTER LABORATORIES PRIVATE LIMITED

DM724PSS, QAD/FR/024, Rev.00/01.01.2018

Unit 38/39, Kalpataru Industrial Estate,

Off G.B. Road, Near 'R-Mall', Thane (W) - 400607. M.S. INDIA.

Ph: +91-22-25895505, 4760, 4681. Cell: 9320126789.

Email: micromaster@micromasterlab.com

sales@micromasterlab.com

	Checked By	Approved By
 01.01.2018	 01.01.2018	 01.01.2018
Microbiologist	Head Quality Control	Head Quality Assurance





PRODUCT SPECIFICATION SHEET

Disclaimer :

All Products conform exclusively to the information contained in this and other related Micromaster Publications. Users must ensure that the product(s) is appropriate for their application, prior to use. The information published in this publication is based on research and development work carried out in our laboratory and is to the best of our knowledge true and accurate. Micromaster Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are intended for laboratory, diagnostic, research or further manufacturing use only and not for human or animal or therapeutic use, unless otherwise specified. Statements included herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.

