PRODUCT SPECIFICATION SHEET

AC Agar (DM002)

Intended Use
AC Agar (DM002) is recommended for cultivation of a wide variety of microorganisms particularly for sterility testing.

Product Summary and Explanation
AC Medium possesses growth-promoting properties for a wide variety of microorganisms. Several early studies performed have reported the usefulness of using this medium on the wide variety of organisms.[1-3] AC Medium is suitable for use in the detection of obligately aerobic contaminants in biologicals and other products. AC Medium is also useful in the isolation and cultivation of many common pathogenic and saprophytic aerobes.[4] This medium can also be used for sterility testing of biological products and solutions that do not contain mercurial preservatives. Fluid Thioglycollate Medium should be employed for the sterility testing of solutions containing mercurial preservatives. Some of the media containing sodium thioglycollate exhibit toxicity for some organisms. Christensen[5] and Malin and Finn[6] reported that AC Medium does not exhibit the toxicity shown by media containing sodium thioglycollate. AC Agar was used by Kolb and Schneither[7] to test the viability of *Bacillus anthracis* after exposure to methyl bromide to test the efficiency of methyl bromide as a germicidal and sporicidal agent.

Principles of the Procedure
AC Agar contains proteose peptone, beef extract, yeast extract and malt extract which provide the carbon and nitrogen sources in addition to being a source of vitamins and cofactors that are required for good growth of a wide variety of organisms. Dextrose serves as the fermentable carbohydrate and source of energy. Ascorbic acid in the media helps to improve the clarity of the medium.

Formula / Liter

Ingredients	Gms / Liter
Proteose peptone	20.00
Beef extract	3.00
Yeast extract	3.00
Malt extract	3.00
Dextrose	5.00
Ascorbic acid	0.20
Agar	1.00
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 35.20 grams of the medium in one liter of distilled water.
2. Heat to boiling, to dissolve the medium completely.
3. Mix well and distribute into final containers to give the desired depth.
4. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Medium amber coloured clear to slightly opalescent solution
Reaction of 3.52% Solution	pH : 7.2 ± 0.2 at 25°C
Gel Strength	Semisolid, comparable with 0.1% Agar gel

Expected Cultural Response: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours (*Clostridium* species incubated anaerobically).

Sr. No.	Organisms	Results to be achieved	
		Inoculum (CFU)	Growth
1.	*Clostridium perfringens ATCC 12919*	50 -100	good-luxuriant
2.	*Escherichia coli ATCC 25922*	50 -100	good-luxuriant
3.	*Neisseria meningitidis ATCC 13090*	50 -100	good-luxuriant
4.	*Staphylococcus aureus ATCC 25923*	50 -100	good-luxuriant
5.	*Streptococcus mitis ATCC 9811*	50 -100	good-luxuriant
6.	*Streptococcus pneumonia ATCC 6303*	50 -100	good-luxuriant

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 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. If the medium is not used on same day, it is advisable to drive off dissolved gases by boiling or steaming in the autoclave and cool without agitation.
2. While reheating prepared media to drive off dissolved gases, do not overheat because this may result in decreased growth.
3. Consult appropriate texts for detailed information and recommended procedures.

Packaging
Product Name : AC Agar
Product Code : DM002
Available Pack sizes : 500gm

References

1. Reed and Orr. 1943. J. Bacteriol. *45*:309.
2. Schneiter, Dunn and Caminita. 1945. Public Health Rep. *60*:789.
3. Kolb and Schneiter. 1950. J. Bacteriol. *59*:401.
4. MacFaddin. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol. 1. Williams & Wilkins, Baltimore, Md.
5. Christensen. 1944. Paper read at New York Meeting. American Public Health Association.
6. Malin and Finn. 1951. J. Bacteriol. *62*:349.
7. Kolb and Schneiter, 1950, J. Bacteriol., 59:401.

Further Information
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