

# PRODUCT SPECIFICATION SHEET



## AC Broth (DM003)

### Intended Use

AC Broth (DM003) is recommended for cultivation of a wide variety of microorganisms, sterility testing of solutions and biological products without mercurial preservatives.

### Product Summary and Explanation

AC Broth 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.<sup>(1-3)</sup> AC Broth is suitable for use in the detection of obligately aerobic contaminants in biologicals and other products. AC Broth is also useful in the isolation and cultivation of many common pathogenic and saprophytic aerobes.<sup>(4)</sup> 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<sup>(5)</sup> and Malin and Finn<sup>(6)</sup> reported that AC Medium does not exhibit the toxicity shown by media containing sodium thioglycollate.

### Principles of the Procedure

AC broth 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
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 34.20 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 3.42% Solution	pH : 7.2 ± 0.2 at 25°C
Gel Strength	Not Applicable



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

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

**Product Code :** DM003

**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.

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### Further Information

For further information please contact your local MICROMASTER Representative.



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