



PRODUCT SPECIFICATION SHEET

Asparagine Broth (Coccidioidin Histoplasmin Broth) (DM316)

Intended Use

Asparagine Broth (Coccidioidin Histoplasmin Broth) (DM316) is used for immunodiagnostic work involving preparation of Coccidioidin and Histoplasmin antigens.

Product Summary and Explanation

Histoplasma capsulatum, a dimorphic fungus causes histoplasmosis, a systemic fungal disease. *H. capsulatum* is an obligate intracellular organism residing in macrophages of the reticuloendothelial system. *Coccidioides immitis*, the causative agent of coccidioidomycosis (Valley fever) is endemic in hot regions with dry climate and alkaline soil. The need to design this medium is for production of these antigens to counteract fungal disease Histoplasmosis and Coccidioidomycosis which are very common in AIDS patients.⁽¹⁾

Asparagine Broth is a chemically defined medium used for the preparation of Coccidioidin and Histoplasmin antigens for immunodiagnostic work. *Histoplasma capsulatum* or *Coccidioides immitis* are cultured in this medium for 1-3 months at 37°C till the static phase is obtained. At this stage, cells are autolyzed and a mixture of antigen haptens is prepared. A substance that is capable of reacting with a specific antibody but cannot induce the formation of antibodies unless bound to a carrier protein or other molecule, also called incomplete antigen, partial antigen. Cell free filtrate from this medium is sterilized by filtration and used as the antigen.^(2,3) Preparation, standardization and administration of histoplasmin and the interpretation of delayed cutaneous hypersensitivity tests are identical to those for Coccidioidin.⁽⁴⁾

Principles of the Procedure

Asparagine Broth contains asparagines which favors the synthesis of antigens from *Histoplasma* and *Coccidioides*. Ammonium chloride, magnesium sulphate, dipotassium phosphate, sodium citrate and ferric citrate buffer the medium as well as provide the essential components for the growth of fungus. Dextrose and slightly acidic pH of the medium helps for the luxuriant growth of the fungi.

Formula / Liter

Ingredients	Gms / Liter
L-Asparagine	7.00
Ammonium chloride	7.00
Dipotassium phosphate	1.31
Sodium citrate	0.90
Magnesium sulphate	1.50
Ferric citrate	0.30
Dextrose	10.00
Final pH: 6.8 ± 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.





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Directions

1. Suspend 28.01 grams of the medium in one liter of distilled water containing 25 ml glycerol.
2. Mix thoroughly and then dispense in a wide bottom flask, to give a depth of 1 to 1.5 inches.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.

Quality Control Specifications

Dehydrated Appearance	Off-white to yellow homogeneous free flowing powder
Prepared Medium	Yellow coloured clear solution with brownish precipitate
Reaction of 2.8% w/v aqueous solution containing 2.5 ml glycerol	pH : 6.8 ± 0.2 at 25°C
Gel Strength	Not Applicable

Expected Cultural Response: Cultural characteristics observed with added glycerol, after an incubation at 35-37°C for 1 week.

Sr. No.	Organisms	Results to be achieved	
		Inoculum (CFU)	Growth
1.	<i>Coccidioides immitis</i>	50-100	good-luxuriant
2.	<i>Histoplasma capsulatum ATCC 10230</i>	50-100	good-luxuriant

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 10 - 8°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 : Asparagine Broth (Coccidioidin Histoplasmin Broth)

Product Code : DM316

Available Pack sizes : 500gm





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References

1. Jone P. G., Cohen R. L., Bates D. H., et al., 1983, Six Transm. Dis, 10: 202-204.
2. Smith C. E., Pappagianis D., Levine H. B., and Saito M., 1961, Bact. Rev., 25:310.
3. Emmons C. W., Olson B. J., and Eldridge W. W., 1945, Pub. Hlth. Rept., 60:1383.
4. Emmons W. W., Binford C. H., Utz J. P., and Kwon-Chung K. J., (Eds.), 1977, Medical Mycology, 3rd Ed., Lea and Febiger, Philadelphia.

Further Information

For further information please contact your local MICROMASTER Representative.



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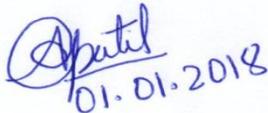
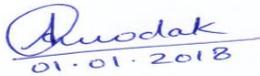
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