



PRODUCT SPECIFICATION SHEET

Chocolate Agar Base (DM314)

Intended Use

Chocolate Agar Base (DM314) is recommended for isolation of *Neisseria gonorrhoeae* from chronic and acute cases of gonococcal infections.

Product Summary and Explanation

Neisseria gonorrhoeae is a gram-negative bacteria and the causative agent of sexually transmitted infection gonorrhoea, however it is also occasionally found in the throat. *N. gonorrhoeae* can also cause conjunctivitis, pharyngitis, proctitis or urethritis and orchitis. The cultivation medium for gonococci should ideally be a rich nutrients base with blood, either partially lysed or completely lysed. Gonorrhoea can be diagnosed and controlled with the help of improved laboratory methods for detecting, isolating and studying *N. gonorrhoeae*. Chocolate Agar Base, with the addition of supplements, gives excellent growth of the gonococcus without overgrowth by contaminating organisms. *G.C. Agar* (DM116) can also be used in place of Chocolate Agar Base, which gives slightly better results than Chocolate Agar.⁽¹⁾ Ruys and Jens⁽²⁾ stimulated an interest in the cultural procedure for the diagnosis of gonococcal infection, McLeod and co-workers⁽³⁾, Thompson⁽⁴⁾, Leahy and Carpenter⁽⁵⁾, Carpenter, Leahy and Wilson⁽⁶⁾ and Carpenter⁽⁷⁾, who clearly demonstrated the superiority of this method over the microscopic technique. Chocolate Agar Base with addition of supplement not only supports the growth of the gonococcus in pure culture but also permits its development from the mixed flora encountered in chronic gonococcal infections. Carpenter⁽⁸⁾ reported that this medium and Haemoglobin (MSO88) is useful for cultural detection of the gonococcus.

Principles of the Procedure

Chocolate Agar Base contains proteose peptone which provides nitrogen, vitamins and amino acids. Dextrose is the carbon and energy source. Sodium chloride maintains osmotic balance. Dipotassium phosphate acts as a buffering agent. Hemoglobin added provides hemin (X factor) required for growth of *Haemophilus* and enhanced growth of *Neisseria*.

Formula / Liter

Ingredients	Gms / Liter
Proteose peptone	20.00
Dextrose	0.50
Sodium chloride	5.00
Disodium phosphate	5.00
Agar	15.00
Final pH: 7.3 ± 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 45.5 grams in 445 ml 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. Cool to 45-50°C. Aseptically add equal amount of sterile 2% Haemoglobin Powder (MSO88). Also add the contents of one vial of Yeast Autolysate Growth Supplement (MSO37) or Vitamino Growth Supplement (MSO89) reconstituted as directed.
5. Mix well before pouring. When single strength medium is desired, suspend 45.5 grams in 1000 ml distilled water.

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Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Basal medium: Light amber coloured clear to slightly opalescent gel After addition of haemoglobin : Chocolate brown coloured opaque gel forms in Petri plates
Reaction of 4.5% Solution	pH : 7.3 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response: Cultural characteristics observed with added 2% Haemoglobin Powder (MS088), Yeast Autolysate Growth Supplement (MS037) or Vitamino Growth Supplement (MS089), after an incubation at 35-37°C for 40-48 hours.

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Recovery
1.	<i>Neisseria gonorrhoeae</i> ATCC 19424	50 -100	good-luxuriant	≥70%
2.	<i>Neisseria meningitidis</i> ATCC 13090	50 -100	good-luxuriant	≥70%
3.	<i>Streptococcus pneumonia</i> ATCC 6303	50 -100	good-luxuriant	≥70%
4.	<i>Streptococcus pyogenes</i> ATCC 19615	50 -100	good-luxuriant	≥70%
5.	<i>Haemophilus influenzae</i> ATCC 19418	50 -100	good-luxuriant	≥70%

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



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1. *Neisseria gonorrhoeae* ATCC 19424

Test Procedure

Refer to appropriate references for test procedures.

Results

Refer to appropriate references and 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.



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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 : Chocolate Agar Base

Product Code : DM314

Available Pack sizes : 100 gm / 500gm

References

1. Carpenter C. M., Bucca M. A., Buck T. C., Casman E. P., Vhrstensen C. W., Crowe E., Drew R., Hill J., Lankford L. E., Morton H. E., Peizer L. R., Shaw C. J., and Thayer J. D., 1949, Am. J. Syphil. Gonorrh. Venereal Diseases, 33:164
2. Muench. Wochschr., 80:846:1933
3. McLeod J. W., Cootes J. C., Happold F. C., Priestely D. P., Wheatley B., 1934, J. Path. Bacteriol., 39:221.
4. J.Infectious Diseases, 61:129:1937
5. Am. J. Syphilis, 20:347:1936
6. Am. J. Syphilis, 22:55:1938
7. Seventh Annual Year book (1936-37) P.133, suppl., Am. J. Pub.Health,27: no.3 : 1937
8. Bull. Genitoinfectious diseases, Mass. State Health Dept., 2:1:1938.

Further Information

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