PRODUCT SPECIFICATION SHEET

Bennet's Agar (DM1324)

Intended Use
Bennet's Agar (DM1324) is recommended for cultivation and enhancement of sporulation in *Nocardia* and *Streptomyces*.

Product Summary and Explanation
Nocardia is a genus of weakly staining Gram-positive, catalase-positive, rod-shaped bacteria. *Nocardia* are found worldwide in soil that is rich with organic matter. Most *Nocardia* infections are acquired by inhalation of the bacteria or through traumatic introduction. *Nocardia* are opportunistic pathogens, causing disease primarily among the young, the elderly, and those with a weak immune system. *Nocardia* typically induce a pyogenic response with abscess formation. *Nocardia* cause disease in every region of the body. However, the regions of the body most affected are lungs, skin, eyes, and muscle.[1] *Streptomycetes* are found predominantly in soil and in decaying vegetation, and most produce spores. *Streptomyces* are most commonly limited to causing actinomycotic mycetoma.[2] Areas of the body more prone to formation of mycetomas are those that are frequently traumatized or that come into contact with soil. Information on the occurrence, distribution, number and activity of *Nocardiaceae* family members have been yielded by the developments in cultivation and selective isolation procedures.[3] Jones[4] described Bennets Agar for cultivation of *Nocardia*.

Principles of the Procedure
Bennet's Agar contains beef extract, yeast extract and casein enzymic hydrolysate which are sources of nitrogen, carbon, vitamins and other essential growth factors. Dextrose is a carbon and energy source.

Formula / Liter

Ingredients	Gms / Liter
Yeast extract	1.00
Beef extract	1.00
Casein enzymic hydrolysate	2.00
Dextrose	10.00
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 29 grams of the medium in one liter of 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. Mix well and pour into sterile Petri plates.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Light yellow coloured, clear to slightly opalescent gel forms in Petri plates
Reaction of 2.9% Solution	pH : 7.3 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response: Cultural characteristics observed after an incubation at 25-30°C for 24-48 hours.

Sr. No.	Organisms	Results to be achieved	
		Inoculum (CFU)	Growth
1.	*Streptomyces griseus ATCC 10137*	50 -100	good-luxuriant
2.	*Streptomyces lavendulae ATCC 8664*	50 -100	good-luxuriant

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 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. 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 : Bennet's Agar
Product Code : DM1324
Available Pack sizes : 500gm

References
1. Murray P. R., Baron E. J., Jorgensen J. H, Pfaller M. A., Yolken R. H ., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.
2. Mahgoub E.S., 1990, Principles and Practice of Infectious Disease, 3rd Ed., Churchill Livingstone, New York.
3. Goodfellow M. and A.G. ODonnell, 1989, In: S. Baumberg, M. Rodes andI. Hunter (Ed) Microbial Products: New Approaches. Cambridge University Press, Cambridge. 343-383.
4. Jones K.L., 1949, J. Bacteriol. 57:141-145.

Further Information
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