

## CM 20,063 – AMPICILLIN DEXTRIN AGAR BASE

### INTENDED USE

For differential and selective isolation of *Aeromonas* species from water samples.

### PRODUCT SUMMARY AND EXPLANATION

*Aeromonas* is a genus of bacteria that is ubiquitous in the environment. It is present in all types of water worldwide, as well as in food and soil. There are approximately 16 different species in this genus, the best known of which is *Aeromonas hydrophila*. Physiologically, *Aeromonas* are similar to bacteria in the coliform group and can be isolated from similar environments. *Aeromonas* are commonly isolated from a variety of aquatic environments, including freshwater, estuarine, brackish, and salt waters. Some members of this group of bacteria have been implicated in human disease, although not all strains appear to be pathogenic to humans. *Aeromonas* species can cause various enteric symptoms in children and adults. Ampicillin Dextrin Agar Base is used for isolation and differentiation of *Aeromonas* species from other gram-negative rods such as *Pseudomonas* and *Enterobacteriaceae* from water samples by membrane filter technique.

The effectiveness of Ampicillin as selective agent has been reported by several workers. After 24 hours of growth on this agar, colonies are sprayed with Nadi reagent (1% solution of N,N,N',N'-tetramethyl-p-phenylene-diammonium dichloride). A positive Nadi reaction (dextrin degradation) is indicated by a purple colour at the periphery of the colony. Dextrin fermentation is also indicated by yellow colonies. *Aeromonas* species appear as large, convex yellow colonies with a purple periphery.

### COMPOSITION

Ingredients	Gms / Ltr
Tryptose	5.000
Dextrin	10.000
Yeast extract	2.000
Sodium chloride	3.000
Potassium chloride	2.000
Magnesium sulphate	0.200
Iron (III) chloride	0.100
Bromothymol blue	0.080
Agar	15.000

### PRINCIPLE

Tryptose and yeast extract provide nitrogenous compounds along with other essential nutrients for growth of *Aeromonas*. Sodium chloride maintains the osmotic balance of the medium. *Aeromonas* forms acid from dextrin, which is indicated by colour change from blue to yellow by the pH indicator, bromothymol blue. The selectivity of the medium is increased by the addition of Ampicillin.

### INSTRUCTION FOR USE

Dissolve 37.38 grams in 1000 ml purified / distilled water.

Heat to boiling to dissolve the medium completely.

Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

Cool to 45-50°C and aseptically add rehydrated contents of one vial of Ampicillin Dextrin Selective Supplement.

Mix well and pour into sterile Petri plates.



**QUALITY CONTROL SPECIFICATIONS**

Appearance of Powder : Light yellow to greenish yellow homogeneous free flowing powder.  
 Appearance of prepared medium : Dark green coloured clear to slightly opalescent gel forms in Petri plates.  
 pH (at 25°C) : 8.0±0.1

**INTERPRETATION**

Cultural characteristics observed after incubation with added Ampicillin Dextrin Selective Supplement.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Aeromonas hydrophila	7966	50-100	Luxuriant	>=70%	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	None-poor	0-10%	35-37°C	18-24 Hours
Staphylococcus aureus subsp. aureus	25923	>=10 <sup>4</sup>	Inhibited	0%	35-37°C	18-24 Hours

**PACKAGING:**

In pack size of 500 gm bottles.

**STORAGE**

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.










**DISPOSAL**

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

**REFERENCES**

1. Atkinson M., 1986, Culture, Vol. 7, No. 2.
2. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
3. Embrey M. A., Parkin R. T., and Balbus J. M., (Ed.), 2002, Handbook of CCL Microbes in Drinking Water, American Water Works Association: Denver, CO.
4. Havelaar A. H., During M. and Versteigh J. F. M., 1987, J. Appl. Bacteriol., 62 (3):279-87.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
7. Mouldsdale M. T. 1983, The Lancet, 1:351.
8. Moyer N. P., 1987, J. Clin. Microbiol., 25, 2044-2048.
9. Richardson C. J., Robinson J. O., Wagener L. B., Burke V. J., 1982, Antimicrob., Chemother., 9:267. 10. Rogol M., Sechler I., Grenber L., Gerichter Ch. B., 1979, J. Med. Microbiol., 12:229.



 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.  
\*For LabUse Only