

PRODUCT INFORMATION

Product Type: PETRI DISHES 90mm

Cat No. PD379 - MIDDLEBROOK 7H 11 + OADC

Intended Use:

Middlebrook 7H11 Agar is used with glycerol and OADC Enrichment for the cultivation of *Mycobacterium spp.* in a laboratory setting.

Principles and uses:

Agar Base: Middlebrook 7H11 contains a variety of inorganic salts essential for mycobacterial growth, such as monopotassium phosphate, disodium phosphate, ammonium sulfate, sodium citrate, magnesium sulfate, ferric ammonium citrate, and L-glutamic acid.

Casein Enzymic Hydrolysate: The key distinguishing feature of 7H11 (compared to 7H10) is the addition of casein hydrolysate, which stimulates the growth of fastidious and drug-resistant strains of *M. tuberculosis*.

Malachite Green: Acts as a selective agent, partially inhibiting bacteria other than mycobacteria.

Glycerol: Added as a carbon and energy source.

OADC Enrichment (added after autoclaving): Supplies oleic acid, albumin, dextrose, sodium chloride, and catalase—nutrients and protective agents vital for mycobacterial metabolism and survival.

Test Procedure

Inoculate specimen onto the medium. Incubate for up to eight weeks. Examine for growth at regular intervals. Refer to specific procedures for a complete discussion on the isolation and identification of *Mycobacterium spp.*

Results

Observe colonies that may or may not be pigmented. Colony morphology is dependent on the species isolated.

Limitations of the Procedure

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium. Further tests are necessary for confirmation of *Mycobacterium spp.*

References

1. Musser, J. M. 1995. Antimicrobial resistance in Mycobacteria: molecular genetic insights. *Clinical Microbiology Reviews*. 8:496-514.
2. Murray, P. R., E. J. Baron, M. A. Pfaller, F. C. Tenover, and R. H. Tenover (eds.). 1995. *Manual of clinical microbiology*, 6th ed. American Society for Microbiology, Washington, D.C.
3. Isenberg, H. D. (ed.). 1992. *Clinical microbiology procedures handbook*, vol. 1 American Society for Microbiology, Washington, D.C.
4. Cohn, M. L., R. F. Waggoner, and J. K. McClatchy. 1968. The 7H11 Medium for the cultivation of mycobacteria. *Am. Rev. Resp. Dis.* 98:295.

Composition:

Enzymatic Digest of Casein 1.0 g/L
Disodium Phosphate 1.5 g/L
Monopotassium Phosphate 1.5 g/L
Ammonium Sulfate 0.5 g/L
Monosodium Glutamate 0.5 g/L
Sodium Citrate 0.4 g/L
Ferric Ammonium Citrate 0.04 g/L
Magnesium Sulfate 0.05 g/L
Copper Sulfate 0.001 g/L
Pyridoxine 0.001 g/L
Zinc Sulfate 0.001 g/L
Biotin 0.0005 g/L
Malachite Green - 0.00025 g/L
Agar - 13.5 g/L
Glycerol - 5 mL

OADC Enrichment: (100 mL/L)

Sodium Chloride 8.5 g/L
Dextrose 20.0 g/L
Bovine Albumin (Fraction V) 50.0 g/L
Catalase 0.03 g/L
Oleic Acid 0.6 mL/L

Storage: 2-8 °C

Appearance: slightly hazy and pale to light amber

pH Range: 6.4 - 6.8

Package contents: 10 plates in a package

Exp. Date: Printed on label and on the item.

Required materials not supplied: Laboratory equipment as required.

Warning and Precautions:

For professional use only. Follow good microbiological lab practices while handling specimens and culture. Do not use Petri dishes if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration. Avoid freezing and overheating. The Petri Dishes may be used / inoculated up to the expiration date and incubated for the recommended incubation times. After use and prior to discarding, specimen containers and all contaminated material, including the used culture media and contaminated culture containers, must be sterilized or incinerated by validated procedures. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.

If excessive moisture is observed, invert the bottom over an off-set lid and allow to air dry in order to prevent formation of a seal between the top and bottom of the plate during incubation. Storage Instructions: On receipt, store plates in the dark at 2–8 °C. Avoid freezing and overheating. Do not open until ready to use.

Waste Disposal

After interpretation all plates should be destroyed by standard incineration methods.

Performance Testing Results:

GPT: 10-100 cfu

Inhibition: 1000 cfu

TEST	ATCC	Incubation Temp. (°C)	Incubation Cond	Reaction
<i>Mycobacterium smegmatis</i>	607	33-37 °C	Aerobic, 5-7 days	Growth
<i>Escherichia coli</i>	25922	33-37 °C	Aerobic, 5-7 days	Partially inhibited