MIDDLEBROOK 7H9 BROTH BASE

INTENDED USE
Remel Middlebrook 7H9 Broth Base is a medium recommended for use in qualitative procedures for the isolation and cultivation of *Mycobacterium* species.

SUMMARY AND EXPLANATION
Middlebrook 7H9 Broth was first described by Middlebrook and Cohn in 1958 for the cultivation of mycobacteria.[1] The supplemental nutrients glycerol, albumin, and dextrose were found to support the growth of most mycobacteria. This medium has been found useful in the transfer of cultures to be tested with biochemical media.[2]

PRINCIPLE
This medium contains inorganic compounds to supply the elements potassium, sulfur, magnesium, and phosphorus which are necessary to support the growth of mycobacteria. Inorganic copper, iron, zinc, and calcium are growth stimulators. Sodium citrate, when converted to citric acid, holds certain inorganic cations in solution. The ammonium sulfate is present in the medium to supply a nitrogen source. Biotin plays an important role in carboxylation and decarboxylation reactions, while pyridoxine is a precursor of enzymatic activity. The addition of ADC Enrichment provides a carbon source of energy, and catalase minimizes toxic effects.

REAGENTS (CLASSICAL FORMULA)*

Disodium Phosphate	2.5	g	Ferric Ammonium Citrate	0.04	g
Monopotassium Phosphate	1.0	g	Copper Sulfate	1.0	mg
Monosodium Glutamate	0.5	g	Pyridoxine HCL	1.0	mg
Ammonium Sulfate	0.5	g	Zinc Sulfate	1.0	mg
Sodium Citrate	0.1	g	Biotin	0.5	mg
Magnesium Sulfate	0.05	g	Calcium Chloride	0.5	mg

pH 6.6 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PRECAUTIONS
This product is For Laboratory Use only. It is not intended for use in the diagnosis of disease or other conditions.

PREPARATION OF DEHYDRATED CULTURE MEDIUM
1. Suspend 4.7 g of medium in 900 ml of demineralized water containing 2 ml of glycerol.
2. Heat to boiling with agitation to completely dissolve.
3. Sterilize by autoclaving at 121°C for 10 minutes or following established laboratory procedures.
4. Cool to 45-50°C and aseptically add 100 ml of ADC Enrichment (REF R450591).
5. Mix thoroughly and dispense into appropriate containers.

PROCEDURE
1. Consult current editions of appropriate references for the recommended procedure for sample preparation, inoculation, testing, and interpretation.

QUALITY CONTROL
Each lot number of Middlebrook 7H9 Broth Base has been manufactured, packaged, and processed in accordance with current Good Manufacturing Practice regulations. All lot numbers have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, sample results should not be reported.

CONTROL	INCUBATION	RESULTS
Mycobacterium kansasii ATCC® 12478	CO_2, 14 days @ 33-37°C	Growth
Mycobacterium tuberculosis ATCC® 25177	CO_2, 14 days @ 33-37°C	Growth

BIBLIOGRAPHY

1. Middlebrook, G. and M.L. Cohn. 1958. Am. J. Public Health. 48:844-853.
2. Dept. of Health, Education, and Welfare. 1975. Procedures for the Isolation and Identification of Mycobacteria. Publ. No. (CDC) 75-8230. Centers for Disease Control and Prevention, Atlanta, GA.
3. Kent, P.T. and G.P. Kubica. 1985. Public Health Mycobacteriology, A Guide for the Level III Laboratory. U.S. Dept. of H.H.S. and CDC, Atlanta, GA.

Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, sample collection, storage and transportation, materials required, quality control, and limitations.

IFU 454012, Revised August 23, 2010

Printed in U.S.A.

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