

Specification

Sterile enrichment solution for the isolation and cultivation of Mycobacteria

Presentation

10 Prepared bottle
Bottle 125 ml
with: 100 ± 3 ml

Packaging Details

1 box with 10 bottles 125 ml. Injectable cap: Plastic screw inner cap. The use of syringes needles with a diameter greater than 0.8 mm is not recommended.

Shelf Life

12 months

Storage

2-8 °C

Composition

Composition (g/l):

Sodium chloride..... 8.50
Bovine albumin (Fraction V)..... 50.00
Dextrose.....20.00
Catalase..... 0.03

Description /Technique

Description:

Middlebrook Broth (Cat. 2042), with ADC Enrichment Supplement, is used to isolate a wide variety of Mycobacteria, including *M. tuberculosis*, but with the exception of *M. bovis*, which is inhibited by glycerol.

This supplement provides essential substances for the growth of mycobacteria. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Albumin neutralizes toxic products that form during the development of the organisms. Catalase catalyzes the decomposition of hydrogen peroxide to water and oxygen. Dextrose is the fermentable carbohydrate providing carbon and energy.

Technique:

Add aseptically to 900 ml of Middlebrook Broth (Cat. 2042), autoclaved and cooled to 45-50 °C, 2 ml of glycerol and 0,5 g of Tween 80 . Mix well and distribute into sterile containers.

Instructions for use:

- Take the inoculum with a sterile loop.
- Submerge the handle into the medium and shake gently.
- Incubate at 35 ± 2 °C under 10% of CO₂, and observed after 21 days.

Quality control

Physical/Chemical control

Color : Yellowish pH: at 25°C

Microbiological control

Add 50 ml (ADC) to 450 ml Middlebrook broth, dosage in tubes.

Prepare Tubes - Inoculate 10²-10⁴ CFU (specificity)

Microaerophila. Incubation at 35-37 °C, 7 days for a maximum of 21 days

Microorganism

Mycobacterium tuberculosis ATCC® 25177

Growth

Good

Sterility Control

Incubation 7 days at 32.5 ± 2 °C and 7 days at 22.5 ± 2 °C: NO GROWTH.

Bibliography

- CERNOCH, P.L., R.K. ENNS, M.A. SAUBOLLE & R.J. WALLACE, Jr. (1994) Laboratory Diagnosis of the Mycobacterioses. Cumitech 16A. ASM Press, Washington DC., USA
- COHN, M.L., R.F. WAGGONER & J.K. McCLATCHY (1968) The 7H11 Medium for the cultivation of mycobacteria. Am. Rev. Respir. Dis. 98:295-296
- DUBOS, R.J. & G. MIDDLEBROOK (1947) Media for tubercle bacilli. Am. Rev. Tuberc. 56:334-345
- MITCHISON, D.A., B.W. ALLEN, L. CARROLL, J.M. DICKINSON & V.R. ABER (1972) A selective oleic acid albumin agar medium for tubercle bacilli J. Med. Microbiol. 5:165-175
- PFYFFER, G.E., B.A. BROWN-ELLIOTT & R.J. WALLACE, Jr. (2003) Mycobacterium: General Characteristics, Isolation, and Staining Procedures in Manual of Clinical Microbiology, edited by P.R. Murray, 8th edition, Vol. 1, Chap 36.
- MacFADDIN, J.F. (1985) Media for Isolation, Cultivation, Identification and Maintenance of Bacteria. Vol I. William & Wilkins. Baltimore MD. USA
- MIDDLEBROOK, G. & M.L. COHN (1958) Bacteriology of tuberculosis: Laboratory methods. Am. J. Public Health, 48:844
- MIDDLEBROOK, G., M.L. COHN, W.B. DYE, W.B. RUSSELL Jr. & D. LEVY (1960) Microbiologic procedures of value in tuberculosis. Acta Tubercul. Scand. 38(1):6