

Technical Information

Proskauer Beck medium

Product Code: DM 2697

Application: - Proskauer Beck medium is used for the cultivation and maintenance of *M.tuberculosis*.

Composition**

Ingredients	Gms / Litre
Asparagine	5.000
Potassium dihydrogen phosphate	5.000
Magnesium citrate	2.500
Magnesium sulphate,heptahydrate	0.600
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Proskauer and Beck medium is an inorganic chemically defined medium containing asparagine as nitrogen source and glycerol as energy source (1). This medium supports growth of *M. tuberculosis*. It was reported that chemically modified defined growth medium like Proskauer and Beck medium provides more consistent cellular fatty acid profiles than lipid rich L. J. medium (2). With added ferrous chloride (0.0046 g /litr) and ZnSO₄ .7H₂O (0.001 g/litr) (referred as Modified Proskauer and Beck medium) this medium is recommended by AOAC for testing Tuberculocidal activity of disinfectants (3).

Methodology

Suspend 12.79 grams of dehydrated powder media in 1000 ml distilled water containing 20 ml glycerol. Distribute in tubes or flasks. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Appearance

White to cream homogeneous free flowing powder.

Colour and Clarity

Colourless to pale yellow coloured, clear solution, without any precipitate in tubes.

Reaction

Reaction of 1.28% w/v aqueous solution containing 2% glycerol at 25 °C pH : 7.4±0.2

pH Range

7.20-7.60

Cultural Response

DM 2697: Cultural characteristics observed after an incubation at 35-37°C for 2-4weeks with 5-10% CO₂.

Organism	Inoculum (CFU)	Growth
<i>Mycobacterium tuberculosis</i> H37RV ATCC 25618	50-100	good-luxuriant
<i>Mycobacterium kansasii</i> ATCC 12478	50-100	good-luxuriant



Dehydrated Culture Media
Bases / Media Supplements

<i>Mycobacterium gordonae</i> ATCC 14470	50-100	good-luxuriant
<i>Mycobacterium avium</i> ATCC 25291	50-100	good-luxuriant
<i>Mycobacterium smegmatis</i> ATCC 14468	50-100	good-luxuriant

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Proskauer, B. and Beck, M. 1898, Z. Hyg. Infektionskrankh., Vol. 18, p128 .
2. L. Larsson, E. Jantzen and J. Johnsson, Oct. 1985. European Journal of Clinical Microbiology & Infectious Diseases, Vol. 4, No.5, p. 483.
3. Official Methods of Analysis of AOAC International 2000, 17th edition. Vol. I Chapter 6., Disinfectants, Editor. Emma Singleton .Subchapter 3: Other Tests 6.3.06 AOAC Official method 965.12 Tuberculoid Activity of disinfectants. Official Method p.14.

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