

Kirchner Medium Base

LQ105

Intended Use:

Recommended for cultivation of *Mycobacterium tuberculosis* with added Poctri supplement (containing Polymyxin B, Amphotericin B, Carbenicillin & Trimethoprim).

Composition**

Ingredients	g / L
Disodium hydrogen phosphate	3.000
Potassium dihydrogen phosphate	4.000
Magnesium sulphate	0.600
Sodium citrate	2.500
L-Asparagine	5.000
Horse serum	100.000 ml
Glycerol	200.000 ml

Poctri supplement (FD241)

*Ingredients	Concentration
Polymyxin B	200,000Un
Amphotericin B	0.00004mg
Carbenicillin	0.0002mg
Trimethoprim lactate	0.00008mg

**Formula adjusted, standardized to suit performance parameters

Directions

Label the ready to use LQ105 bottle. Inoculate the sample and Incubate at specified temperature and time.

Principle And Interpretation

Mycobacterium tuberculosis is an acid-fast gram-positive aerobic bacteria involved in most cases of tuberculosis. Humans are the only reservoir for the bacterium. Many non-pathogenic Mycobacteria are components of the normal flora of humans, found most often in dry and oily locales. Kirschner Medium was first developed by Kirschner based on the formulation of Longs Medium (1) and further modified with addition of glycerol and enrichments for the cultivation of *M.tuberculosis*.

It is widely used for antibacterial test, for antituberculosis agents and sometimes in differential culture of *M.tuberculosis* from unhealthy materials. Broth medium can give results in a week or two; hence broth medium is widely used in cases where rapid results are needed. Kirschner medium contains two phosphates, a sulphate and citrate, which buffer the medium. Hence the medium can be directly inoculated without any prior neutralization. L-asparagine in the medium supports the growth of *M.tuberculosis*, as it is a good nutrient for the organism. Horse serum also promotes the growth of the organism. At first stage after inoculation of *M. tuberculosis*, granular colonies are observed at the bottom of the tube and as the incubation proceeds bacterial film will be formed on the surface, rendering the medium transparent. Poctri supplement acts as selective supplement for *M. tuberculosis*.

Type of specimen

Clinical samples : CSF, pus, Sputum

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling

specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Clear, colourless to pale yellow coloured liquid

Quantity

4ml of medium in bottles.

Sterility Check

Passes release criteria

Cultural response

Cultural characteristics observed after 10-12 days at 35-37°C, with 5-10% CO₂ (Observe for the growth every third day till 8th week)

Organism	Inoculum	Growth
<i>M. tuberculosis</i> H37Rv ATCC 25618	Standardized inoculum giving approximately 1000000 cfu/ml	Luxuriant

Storage and Shelf Life

Store between 2-8°C. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1. Baker F.J. and Breach M.R., 1980, Medical Microbiological Techniques Butterworths and Co. Ltd.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. 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.

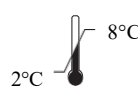
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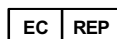
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Plot No.C-40, Road No.21Y,
MIDC, Wagle Industrial Area,
Thane (W) -400604, MS, India



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Storage temperature



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**Do not use if
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