OXALIS Diagnostics Pvt. Ltd.

Technical Data

Lowenstein Jenson Medium Base. 100 g / 500 g

Recommended for isolation, cultivation and differentiation of mycobacteria especially M. tuberculosis

Product Presentation:

Cat No.	Product description	Pack Size
11120010100	Lowenstein Jenson Medium Base.	100 Gram
11120010500	Lowenstein Jenson Medium Base.	500 Gram

Principle

Lowenstein-Jensen medium base, is used for isolation of acid-fast microorganisms like Mycobacterium species. The base medium is composed of L-asparagine, monopotassium phosphate, magnesium sulphate, magnesium citrate, potato starch soluble and malachite green. L-asparagine is source of nitrogen. Mono-potassium phosphate and magnesium sulfate enhance organism growth and act as buffers. Potato starch is source of carbon and absorb toxic metabolites, malachite green is used to prevent the growth of most contaminants and encourages the growth of mycobacteria. For better result the media can be fortified with egg suspension, glycerol, sodium chloride, penicillin and nalidixic acid alone or in combination, Egg suspension, which provides fatty acids and protein required for the metabolism of mycobacteria. Glycerol serves as carbon source. Sodium chloride helps to differentiate rapid-growing mycobacteria from slow growers. Penicillin and nalidixic acid are added to decrease contamination.
Do not add glycerol to the medium if bovine or other glycerophobic strains are to be cultured.

Composition

Ingredients	Grams / Litre
L-Asparagine	3.60
Monopotassium Phosphate	2.40
Magnesium Sulphate	0.24
Magnesium Citrate	0.60
Potato Starch Soluble	30.00
Malachite Green	0.40

*Formula adjusted, standardized to suit performance parameters

Specimen Collection and Handling

Ensure that all samples are properly labeled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Specimens types

Pharmaceutical samples, clinical and non-clinical samples etc.

Directions

- ✓ Suspend 37.30 g of powder in 600 mL distilled water containing 12 mL glycerol. Mix thoroughly.
- ✓ Boil to dissolve the medium completely. Avoid Overheating.

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- ✓ Sterilize by autoclaving 121°C for 15 minutes or as per validated cycle.
- ✓ Prepare 1000 ml of a uniform suspension of fresh eggs under aseptic conditions.
- ✓ Swirl gently to avoid introducing air into the suspension.
- ✓ Aseptically mix the 1000 ml of egg suspension with 600 ml of the sterile Lowenstein-Jensen Medium base cooled to 50 – 60°C, avoiding air bubbles.
- ✓ Dispense the finished medium into sterile screw-cap test tubes. Place the tubes in a slanted position and heat at 85°C for 45 minutes to coagulate the medium.

Storage and Stability

- ✓ Store Dehydrated culture media in cool, dry place at 10°C-30°C away from direct light.
- ✓ Store prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Quality Control

Dehydrated Appearance: Blue to greenish blue powder.

Appearance of ready medium after addition of egg suspension: The mixture of sterile basal medium and whole egg emulsion, coagulates to yield pale bluish green colored, opaque smooth slant.

Growth Promotion Test: Growth is observed after an incubation at 35°C -37°C for 2-4 weeks in presence of Co2.

Cultural Response :

Organism	Type Culture	Growth	Colony Characteristics	Incubation Temperature	Incubation Period
Mycobacterium tuberculosis (H37Rv strain)	ATCC 25618	Good	Granular, rough, worthy, dry, friable colonies	35°C -37°C	2-4 Weeks
Mycobacterium avium	MTCC 1723	Good	Smooth, non-pigmented colonies	35°C -37°C	2-4 Weeks

Interpretation of Results

- ✓ Examination of slant for growth after completion of incubation period.

Warranty

- ✓ This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Disposal

Disposal of infectious material and material that comes in to contact with clinical sample must be decontaminated and dispose of by autoclaving or incineration or established laboratory procedures.
User must be ensuring safe disposal of used or unusable preparation of the products.

Reference

1. Murray P. R., Baron E. J., Jorgensen J. H., Pfaller M. A., Yolken R. H., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.
2. Lowenstein E., 1931, Zentralbl. Bakteriol. Parasitenkd. Infektionskr. Hyg. Abt. 1 Orig., 120:127.
3. Jensen K. A., 1932, Zentralb. Bakteriol. Parasitenkd. Infektionskr. Hyg. Abt. I Orig., 125:222

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