TM 2167 – LOWENSTEIN JENSEN MEDIUM BASE (L. J. MEDIUM) (as per IP) (DOUBLE PACK)

INTENDED USE

For isolation and cultivation *of Mycobacterium* species.

PRODUCT SUMMARY AND EXPLANATION

Solid media used for isolation and cultivation of Mycobacteria are either egg-based or agar-based. Egg-based media contain whole eggs or egg yolk, potato flour, salts and glycerol and are solidified by inspissation. Of the egg-based media, Lowenstein Jensen Medium is most commonly used.

L.J. Medium was originally formulated by Lowenstein, containing congo red and malachite green dyes. Jensen modified Lowensteins medium by altering the citrate and phosphate contents, eliminating the congo red dye and by increasing the malachite green concentration. Gruft further modified L. J. Medium with the addition of two antimicrobics to increase selectivity. This medium supports the growth of a wide variety of Mycobacteria and can also be used for niacin testing. This medium is recommended by Indian Pharmocopoeia.

COMPOSITION

Ingredients	Gms / Ltr
Part I	
L-Asparagine	3.600
Potassium dihydrogen phosphate	2.400
Magnesium sulphate	0.240
Magnesium citrate	0.600
Part II	
Malachite green	0.400

PRINCIPLE

This medium contains Malachite green which prevents growth of the majority of contaminants surviving decontamination of the specimen. Do not add glycerol to the medium if bovine or other glycerophobic strains are to be cultured. Malachite green serves as an inhibitor and also as pH indicator. Formation of blue zone indicates a decrease in pH by gram-positive contaminants (e.g. Streptococci) and yellow zones of dye destruction by gram-negative bacilli. Proteolytic contaminants cause localized or complete digestion of medium.

INSTRUCTION FOR USE

- Dissolve 6.84 grams of Part I in 600 ml distilled water containing glycerol.
- Sterilize by heating at 121°C for 25 minutes.
- Dissolve 0.4 grams of Part II in 20 ml sterile distilled water under aseptic precautions, allowing the dye to dissolve by incubating for 1 to 2 hours at 37°C. Shake the solution before use.
- Meanwhile prepare 1000 ml of egg emulsion solution collected aseptically. To this add Part I and Part II solution aseptically.
- Distribute 5 ml aliquot into 25 ml McCartney bottles and screw the caps tightly. Lay the bottles horizontally. Coagulate and inspissate the medium in an inspissator or hot air oven at 85°C for 60 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Part A: White to off-white homogeneous free flowing powder. Part B: Greenish blue homogeneous free flowing crystals

Appearance of prepared medium : The mixture of sterile basal medium and whole egg emulsion, when inspissated, coagulates to yield pale bluish green coloured, opaque smooth slants.

pH (at 25°C) : 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed in presence of 5-10% CO_2, with added egg emulsion base after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colony Characteristic	Incubation Temperature	Incubation Period
Mycobacterium avium	25291	50-100	Good-luxuriant	Smooth, non-pigmented colonies	35-37°C	2-4 Weeks
Mycobacterium gordonae	14470	50-100	Good-luxuriant	Smooth, yellow, orange colonies	35-37°C	2-4 Weeks
Mycobacterium kansasii	12478	50-100	Good-luxuriant	Photochromogenic, smooth to rough	35-37°C	2-4 Weeks
Mycobacterium smegmatis	14468	50-100	Good-luxuriant	Wrinkled, creamy white colonies	35-37°C	2-4 Weeks
M. tuberculosis H37RV	25618	50-100	Good-luxuriant	Granular, rough, warty, dry friable colonies	35-37°C	2-4 Weeks

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

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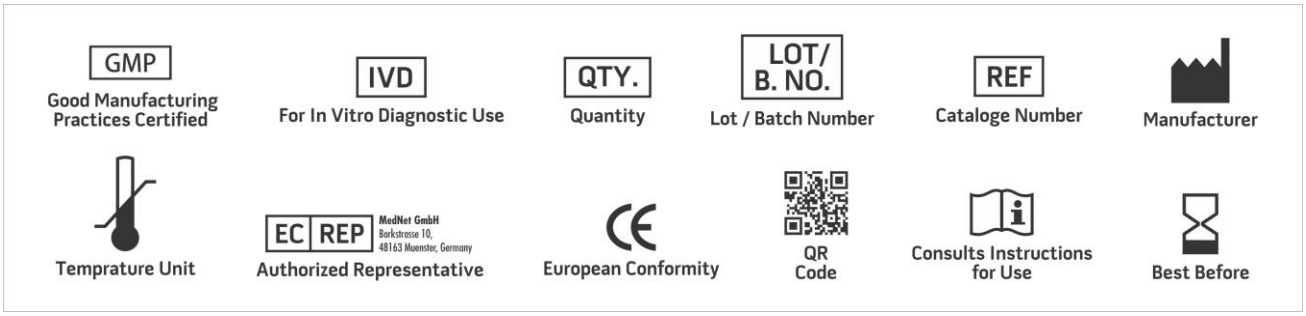

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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