

CM 20890 – L.J. MEDIUM MODIFIED

INTENDED USE

Used for the isolation of Mycobacterium species from mixed flora.

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 Lowenstein's medium by altering the citrate and phosphate contents, eliminating the congo red dye and by increasing the malachite green concentration. This medium supports the growth of a wide variety of Mycobacteria and can also be used for niacin testing.

COMPOSITION

Ingredients	Gms / Ltr
L-Asparagine	3.600
Potassium dihydrogen phosphate	2.400
Magnesium sulphate	0.240
Sodium citrate	0.600
Potato flour	30.000
Malachite green	0.400

PRINCIPLE

This medium contains Malachite green which serves as an inhibitor and also as pH indicator. Lincomycin, Cycloheximide and Nalidixic acid along with malachite green prevents growth of the majority of contaminants surviving decontamination of the specimen while encouraging earliest possible growth of Mycobacteria. Do not add glycerol to the medium if bovine or other glycerophobic strains are to be cultured. Formation of blue zone indicates a decrease in pH by gram-positive contaminants and yellow zones of dye destruction by gram-negative bacilli. Proteolytic contaminants cause localized or complete digestion of medium. LCN Supplement contains cycloheximide, lincomycin and nalidixic acid. Cycloheximide suppresses the growth of saprophytic organisms, Lincomycin inhibits gram positive organisms while nalidixic acid inhibits gram negative organisms in clinical samples.

INSTRUCTION FOR USE

Dissolve 37.24 grams in 600 ml purified / distilled water containing 12 ml glycerol (for bovine bacteria or other glycerophobic organisms additions of glycerol is not desirable).

Heat if necessary to dissolve the medium completely.

Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

Meanwhile prepare 1000 ml of whole egg emulsion collected aseptically. Aseptically add and mix egg emulsion base and LCN Supplement gently to obtain uniform mixture.

Distribute in sterile screw capped tubes. Arrange tubes in a slanted position. Coagulate and inspissate the medium in an inspissator water bath or autoclave at 85°C for 45 minutes.

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder	: Greenish blue to peacock blue homogeneous.
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% CO₂, with added egg emulsion base after incubation.

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

PACKAGING:

In pack size of 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.

REFERENCES

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5. Jensen K. A., 1932, Zentralb. Bakteriell. Parasitenkd. Infektionskr. Hyg. Abt. I Orig., 125:222.
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8. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative MedNet GmbH Birkstrasse 10, 48163 Münster, Germany	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

*For LabUse Only