

Lowenstein-Jensen Medium



Medium used for the isolation and cultivation of Mycobacterium species.

*Equally use with MFDS (MB-L1026K).

• CONTENTS (Liter)

Asparagine	3.6 g
Monopotassium Phosphate	2.4 g
Magnesium Sulfate	0.24 g
Magnesium Citrate	0.6 g
Potato Flour	30.0 g
Malachite Green	0.4 g

• PROCEDURE

Suspend 37.24 G of powder in 588 mL of distilled or deionized water. Add 12 mL of Glycerol supplement (MB-G1821). Heat until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Aseptically add 1000 mL of Egg-Homogenate (MB-E1810). Mix well. Pour into tubes. Arrange tubes in a slanted position. Coagulate the medium at 85°C for 45 minutes in a slanted position.

• INTERPRETATION

Lowenstein-Jensen Medium is a medium used for the isolation and cultivation of Mycobacterium species. Asparagine and potato flour provide nitrogen and vitamins. Monopotassium phosphate and magnesium sulfate enhance the growth of microorganisms and act as the buffering agents. Magnesium citrate and malachite green are the selective agents to inhibit growth of contaminants.

• TECHNIC

Inoculate the specimen using a sterile needle to the middle of the medium and slant surface of the medium. Inoculate the tube to stab the bottom and spreading the specimen on the slant surface using a sterile needle. Incubate at 35 ± 2°C up to 8 weeks under microaerobic condition. Slightly loosen the caps. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: blue-green

Prepared medium

Appearance: opaque

Color: bluish green

Incubation conditions: 35 ± 2°C / up to 8 weeks under microaerobic condition / loosen the caps

Microorganism	ATCC	Inoculum CFU	Growth
<i>Mycobacterium smegmatis</i>	607	heavy	good
<i>Escherichia coli</i>	25922	10 ³	partially inhibited

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at 2 - 8°C.

• REFERENCES

1. Lowenstein, E., (1931). Zentralb. Bacteriol., Parasitenkd. Infektionskr. Abt. I. Orig. 120, 127.
2. Jensen, K.A., (1932). Zentralb. Bacteriol. Parasitenkd. Infektionskr. Hyg. Abt. I. Orig. 125, 222.
3. Nolte, F.S., and B. Methcock. (1995) .Mycobacterium, p. 400-437.
4. Musser, J.M. (1995). Antimicrobial resistance in mycobacteria: molecular genetic insights. Clinical Microbiology Reviews 8: 496-514.
5. Refer to the MFDS.

• PACKAGE

Cat. No : MB-L1026 Lowenstein-Jensen Medium	500 G
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