

## LOWENSTEIN JENSEN MEDIUM

Medium for mycobacteria isolation from clinical sample or pure culture.

### TYPICAL FORMULA (g/600 ml)

Magnesium Sulphate	0.24
Asparagine	3.6
Monopotassium Phosphate	2.4
Magnesium Citrate	0.6
Potato Flour	30.0
Malachite Green	0.4
Final pH = 7.0 ± 0.2 at 25 °C.	

### DIRECTIONS

Suspend 37.2 g of powder in 600 ml of distilled or deionized water. Add 12 ml of Glycerol supplement (code 80021) and heat until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50 °C and add 1000 ml of a uniform suspension of fresh eggs, collected and suspended under aseptic conditions. Dispense into sterile tubes. Coagulate the medium in an inspissator heating at 85 °C for 45 minutes in a slanted position.

### DESCRIPTION

LOWENSTEIN JENSEN MEDIUM is used for the cultivation of *Mycobacteria* from both clinical specimen and pure culture.

### TECHNIQUE

The tubes are inoculated in duplicate, streaking the material to be examined onto the surface of the medium. Incubate at 36 ± 1 °C for 2 to 12 weeks in a carbon dioxide enriched atmosphere, in darkness, with the caps loosened.

### QUALITY CONTROL

#### Dehydrated medium

Appearance: free flowing, homogeneous.

Color: medium to dark green-blue.

#### Prepared medium

Appearance: opaque, smooth slant.

Color: pale green.

Incubation conditions: 36 ± 1 °C for up to 2 weeks.

Microorganism	ATCC	Growth
<i>Escherichia coli</i>	25922	partial inhibition
<i>Mycobacterium intracellulare</i>	13950	good
<i>Mycobacterium tuberculosis</i>	25177	good
<i>Mycobacterium fortuitum</i>	6841	good

### PERFORMANCE AND LIMITATIONS

Negative culture results do not rule out an active mycobacterial infection.

Some factors responsible for unsuccessful cultures are:

- The specimen was not representative of the infectious material, i.e. saliva instead of sputum.
- The mycobacteria were destroyed during digestion and decontamination of the specimen.
- Gross contamination interfere with the growth of mycobacteria.
- Proper aerobic and increased CO<sub>2</sub> conditions were not respected during incubation.

### STORAGE

The powder is very hygroscopic: store the powder at 10-30 °C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident.

Store prepared tubes at 2-8 °C.

### REFERENCES

1. Nolte, F.S., and B. Methcock. (1995) .Mycobacterium, p. 400-437.
2. Musser, J.M. (1995). Antimicrobial resistance in mycobacteria: molecular genetic insights. Clinical Microbiology Reviews 8: 496-514.



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**PRESENTATION**

<b>Product</b>	<b>REF</b>	$\Sigma$
LOWENSTEIN JENSEN MEDIUM (8.0 l)	610026	500 g
LOWENSTEIN JENSEN MEDIUM (1.6 l)	620026	100 g
GLYCEROL supplement	80021	4 x 50 ml

**TABLE OF SYMBOLS**

<b>LOT</b> Batch code	 Caution, consult accompanying documents	 Manufacturer	$\Sigma$ Contains sufficient for <n> tests	<b>IVD</b> <i>In Vitro</i> Diagnostic Medical Device
<b>REF</b> Catalogue number	 Fragile, handle with care	 Use by	 Temperature limitation	 Keep away from heat source



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