

**DUBOS BROTH BASE****TM 099**

For cultivation of *Mycobacterium tuberculosis* and other *Mycobacterium* species

Composition

Ingredients	Gms/Ltr.
Di sodium phosphate	2.50
L-Asparagine	2.00
Monopotassium phosphate	1.00
Casein enzymatic hydrolysate	0.50
Polysorbate 80	0.20
Ferric ammonium citrate	0.05
Magnesium sulphate	0.01
Calcium chloride	0.0005
Zinc sulphate	0.0001
Copper sulphate	0.0001

* Dehydrated powder, hygroscopic in nature, store, in a dry place in tightly- sealed containers below 25°C and protect from direct Sunlight.

Instructions for Use

Dissolve 1.3 grams of Dubos Broth Base in 180 ml of distilled water containing 10 ml of glycerol. Sterilize by autoclaving at 121°C at 15 psi for 15 minutes. Aseptically add 20 ml of ALBUMIN GLUCOSE SUPPLEMENT (TS 178) to 180ml broth base.

Appearance: Light yellow colour, clear solution

pH (at 25°C): 6.6± 0.2

Principle

DUBOS BROTH BASE is used for cultivation of *Mycobacterium tuberculosis* and other *Mycobacterium* species. Dubos Broth is formulated as per "Dubos" et al. This medium provides dispersed growth, free of excessive clumps, which can be used to prepare a relatively uniform suspension of mycobacteria for use in bacterial studies. It is also used as a subculture and enrichment medium for the rapid cultivation of *M. tuberculosis* and other Mycobacterial species from treated clinical specimens and from direct inoculation of specimens that may yield pure cultures; e.g., spinal, pleural and peritoneal fluids. Medium composed of Casein enzymatic hydrolysate and L-Asparagine that acts as a source of nitrogen, amino acids for bacteria. A variety of inorganic salts provides essential nutrients ions for mycobacterium. Bovine albumin acts as a protective agent by binding free fatty acids that may be toxic to mycobacteria. The albumin is heat-treated to inactivate lipase, which may release fatty acids from the Polysorbate 80. Polysorbate 80, an oleic acid ester, supplies essential fatty acids for the replication of mycobacteria. Phosphate buffers maintain the pH of the medium.

Interpretation

Cultural characteristics observed after inoculating (10³CFU/ml), on aerobically incubation at 35 - 37°C and examined after 3 – 6 weeks with 5 - 10 % CO₂.

PRODUCT DATA SHEET

Microorganisms	ATCC	Growth
<i>Mycobacterium kansasii</i>	12748	Luxuriant
<i>Mycobacterium smegmatis</i>	14468	Luxuriant
<i>M. tuberculosis H37 Rv</i>	25618	Luxuriant

References

1. Dubos R. J., Fenner F. and Pierce C. H., 1950, Am. Rev. Tuberc., 61:6 6.
2. Dubos R. J. and Davis B.D., 1946, J. Exp. Med., 83:409.