

# Levine EMB Agar

## Introduction

Levine EMB (eosin methylene blue) agar is an example of a selective and differential medium. This means that only some bacteria will grow on this agar and that the appearance of those that do grow will be different. In particular, EMB agar inhibits the growth of Gram-positive bacteria and helps differentiate some of the Gram-negative rods.

## Procedure

1. Obtain a deep of EMB agar, melt it and prepare a Petri plate.
2. After the agar has solidified, using an inoculating loop and your assigned organism, streak the plate for the isolation of colonies.
3. Incubate the plate upside down for at least 48 hours.
4. After the incubation period, record any color changes.

## Interpretation

EMB agar contains lactose and the dyes eosin and methylene blue. The fermentation of lactose by some Gram-negative rods produces acidic products that react with the dyes to produce colored colonies.

*Escherichia coli* colonies produce a green, metallic sheen.

*Enterobacter aerogenes* colonies are a pink/buff color with darker centers.

*Pseudomonas aeruginosa* colonies are colorless indicating no fermentation.