



## Lachica's Medium Base

M1244

### Intended Use:

Recommended for isolation and cultivation of *Aeromonas hydrophila* from food stored under different temperature conditions.

### Composition\*\*

Ingredients	Gms / Litre
HM infusion B from #	500.000
Tryptose	10.000
Sodium chloride	5.000
Amylose azure	3.000
Agar	15.000
Final pH ( at 25°C)	7.4±0.2

\*\*Formula adjusted, standardized to suit performance parameters

# Equivalent to Beef heart, infusion from

### Directions

Suspend 43 grams in 1000 ml purified / distilled water. Heat gently to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Aseptically add sterile rehydrated contents of 1 vial of Lachicas Supplement (FD209). Mix well and pour into sterile Petri plates.

### Principle And Interpretation

*Aeromonas*, a heterotrophic gram-negative bacterium (1) is found worldwide in all types of water, food and soil. Wound infections caused by *Aeromonas* usually occur when abraded mucosal surface come into contact with contaminated water, soil or marine products (fish fins or hooks) during recreational or occupational activities (1).

Lachicas Medium Base, recommended by APHA is used for the isolation and cultivation of *Aeromonas hydrophila* (2). This medium is a modification of SA Agar as per Lachica, formulated by Palumbo et al (3), and found to be useful in studying *A. hydrophila* in foods held under different temperature conditions. Lachicas Medium is therefore also known as Modified SA Agar where SA stands for Starch and Ampicillin respectively. The original SA Medium is a differential medium, which utilizes starch hydrolysis as the differential trait and ampicillin to suppress the accompanying microflora.

In Modified SA Agar i. e. Lachicas Medium the starch has been replaced with amylose azure. This gives better and faster growth of *A. hydrophila*. *A. hydrophila* colonies are surrounded by a light halo on blue background and the external addition of iodine to the plate is not necessary. HM infusion B and tryptose provide the essential nitrogenous nutrients while sodium chloride maintains osmotic balance of the medium.

### Type of specimen

Food samples

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## Quality Control

### Appearance

Light yellow to bluish grey homogeneous free flowing powder

### Gelling

Firm, comparable with 1.5% Agar gel

### Colour and Clarity of prepared medium

Dark blue coloured, clear to slightly opalescent gel forms in Petri plates

### Reaction

Reaction of 4.3% w/v aqueous solution at 25°C. pH : 7.4±0.2

### pH

7.20-7.60

### Cultural Response

Cultural characteristics observed with added Lachica's Supplement (FD209), after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
<i>Aeromonas hydrophila</i> ATCC 7966	50-100	luxuriant	≥50%
<i>Salmonella</i> Typhi ATCC 6539	≥10 <sup>4</sup>	inhibited	0%
<i>Escherichia coli</i> ATCC 25922	≥10 <sup>4</sup>	inhibited	0%

## Reference

1. Murray P. R., Baron J. H., Pfaller M. A., Tenover J. C. and Tenover F. C., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2. Palumbo S. A., Maxino F., Williams, A. C., Buchanan, R. L. and Thayer D. W., 1985, Appl. Environ. Microbiol., 50:1027.
3. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.

Revision : 1 / 2011

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