

TM 1369 – LACHICA'S MEDIUM BASE

INTENDED USE

For isolation and cultivation of *Aeromonas hydrophila* from foods stored under different temperature conditions.

PRODUCT SUMMARY AND EXPLANATION

Aeromonas, a heterotrophic gram-negative bacterium 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.

Lachicas Medium Base, recommended by APHA is used for the isolation and cultivation of *Aeromonas hydrophilla*. This medium is a modification of SA Agar as per Lachica, formulated by Palumbo et al, and found to be useful in studying *A. hydrophilla* 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*.

COMPOSITION

| Ingredients | Gms / Ltr |
|---------------------------|-----------|
| Beef heart, infusion from | 500.000 |
| Tryptose | 10.000 |
| Sodium chloride | 5.000 |
| Amylose azure | 3.000 |
| Agar | 15.000 |

PRINCIPLE

This medium consists of Beef heart, infusion from and Tryptose which provide the essential nitrogenous nutrients while sodium chloride maintains osmotic balance of the medium.

INSTRUCTION FOR USE

- Dissolve 43.0 grams in 1000 ml purified/distilled water.
- Heat gently to dissolve the medium completely. Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C. Aseptically add sterile rehydrated contents of 1 vial of Lachica's Supplement.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

| | |
|--------------------------------------|---|
| Appearance of Powder | : Light yellow to bluish grey homogeneous free flowing powder. |
| Appearance of prepared medium | : Dark blue coloured, clear to slightly opalescent gel forms in Petri plates. |
| pH (at 25°C) | : 7.4 ± 0.2 |

INTERPRETATION

Cultural characteristics observed with added Lachica's Supplement after incubation.



| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Recovery | Incubation Temperature | Incubation Period |
|-----------------------------|-------|-------------------|-----------|-------------|------------------------|-------------------|
| <i>Aeromonas hydrophila</i> | 7966 | 50-100 | Luxuriant | $\geq 70\%$ | 35-37 °C | 18-24 Hours |
| <i>Salmonella Typhi</i> | 6539 | $\geq 10^3$ | Inhibited | 0% | 35-37 °C | 18-24 Hours |
| <i>Escherichia coli</i> | 25922 | $\geq 10^3$ | Inhibited | 0% | 35-37 °C | 18-24 Hours |

PACKAGING:

In pack size of 100 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.










Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
4. Palumbo S. A., Maximo F., Williams, A. C., Buchanan, R. L. and Thayer D. W., 1985, Appl. Environ. Microbiol., 50:1027.
5. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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|  Good Manufacturing Practices Certified |  Best Before |  Quantity |  Catalogue Number |  Manufacturer |
|  Temperature Unit |  Lot / Batch Number |  Consults Instructions for Use |  QR Code | |

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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