

Product Data Sheet

AEROMONAS ISOLATION MEDIUM BASE

Product No. GB-DCM-00016-1A

INTENDED USE

For selective & differential isolation of *Aeromonas hydrophila* from clinical & environmental samples.

Product Description

Aeromonas species occur widely in soil and water where these species cause disease in fish and amphibians. Also found in untreated and chlorinated drinking water, raw food and raw milk. It is observed that the major cause of gastrointestinal infections by *Aeromonas* species is because of ingesting infected water. This medium therefore, may be considered as a useful diagnostic aid for investigating diarrhoeal disease. *Aeromonas* medium was found to be superior over some other formulae for detection of *Aeromonas* species in tap water, bottled water and foods including meat, poultry, fish and seafood. *Aeromonas* Isolation Medium is based on the formulation of Ryan. It is a modification of XLD Medium, which supports the growth of *Aeromonas*, *Plesiomonas*, *Proteus*, as well as *Enterobacteriaceae* so the medium is used as universal medium in the investigation of enteric disease. The selectivity of the medium is increased by the addition of Ampicillin. The effectiveness of Ampicillin as a selective agent has been reported by several workers. It was noted that the recovery of *Aeromonas* species was very low from fresh foods of animal origin when cultivated on clinical media. Also difficulties were encountered in distinguishing the *Aeromonas hydrophila* group from the background microflora. Polumbo et.al formulated Starch Ampicillin Agar with starch hydrolysis as the differential trait and ampicillin to suppress the background microflora.

PRINCIPLE

Peptone special and yeast extract provide essential nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other essential growth nutrients. The salts provide the essential minerals and electrolytes. Sodium chloride maintains osmotic equilibrium. Lactose, sorbose, inositol and xylose are sources of carbon and energy. Ampicillin, bile salts and sodium thioglycollate makes the medium selective. Bromothymol blue and thymol blue acts as indicators giving the characteristic colony colour.

INSTRUCTION FOR USE

- Dissolve 28.15 grams in 500 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Mix well and pour into sterile Petri plates.
- DO NOT AUTOCLAVE.
- Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of *Aeromonas* Selective Supplement.



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| Ingredients | Gms / Ltr |
|--------------------------|------------------|
| Peptone, special | 5.000 |
| Yeast extract | 3.000 |
| L-Lysine hydrochloride | 3.500 |
| L-Arginine hydrochloride | 2.000 |
| Inositol | 2.500 |
| Lactose | 1.500 |
| Sorbose | 3.000 |
| Xylose | 3.750 |
| Bile salts | 3.000 |
| Sodium thiosulphate | 10.670 |
| Sodium chloride | 5.000 |
| Ferric ammonium citrate | 0.800 |
| Bromo thymol blue | 0.040 |
| Thymol blue | 0.040 |
| Agar | 12.500 |

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.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Light yellow to light tan homogeneous free flowing powder.
Appearance of prepared medium: Dark green coloured clear to slightly opalescent gel forms in Petri plates. P H (at 25°C): 8.0±0.2

| Microorganism | ATCC | Inoculum (CFU) | Growth | Recovery | Colony characteristics | Incubation Temperature | Incubation Period |
|------------------------|-------|----------------|----------------|-------------|-------------------------------------|------------------------|-------------------|
| Aeromonas hydrophila | 7966 | 50-100 | luxuriant | $\geq 70\%$ | Dark green, opaque with dark centre | 35-37°C | 18-24 Hours |
| Escherichia coli | 25922 | $\geq 10^4$ | Inhibited | 0% | - | 35-37°C | 18-24 Hours |
| Pseudomonas aeruginosa | 27853 | 50-100 | Good-luxuriant | $\geq 50\%$ | Dark green, opaque with dark centre | 35-37°C | 18-24 Hours |
| Salmonella Typhi | 6539 | $\geq 10^4$ | Inhibited | 0% | - | 35-37°C | 18-24 Hours |
| Shigella flexneri | 12022 | $\geq 10^4$ | Inhibited | 0% | - | 35-37°C | 18-24 Hours |

DISPOSAL

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

This product is for research use only.