Aeromonas Isolation Medium Base

**Intended use**
Recommended for selective and differential isolation of *Aeromonas hydrophila* from clinical and environmental specimens.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptone, special</td>
<td>5.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>3.000</td>
</tr>
<tr>
<td>L-Lysine hydrochloride</td>
<td>3.500</td>
</tr>
<tr>
<td>L-Arginine hydrochloride</td>
<td>2.000</td>
</tr>
<tr>
<td>Inositol</td>
<td>2.500</td>
</tr>
<tr>
<td>Lactose</td>
<td>1.500</td>
</tr>
<tr>
<td>Sorbose</td>
<td>3.000</td>
</tr>
<tr>
<td>Xylose</td>
<td>3.750</td>
</tr>
<tr>
<td>Bile salts</td>
<td>3.000</td>
</tr>
<tr>
<td>Sodium thiosulphate</td>
<td>10.670</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Ferric ammonium citrate</td>
<td>0.800</td>
</tr>
<tr>
<td>Bromo thymol blue</td>
<td>0.040</td>
</tr>
<tr>
<td>Thymol blue</td>
<td>0.040</td>
</tr>
<tr>
<td>Agar</td>
<td>12.500</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>8.0±0.2</td>
</tr>
</tbody>
</table>

**Directions**
Suspend 28.15 grams in 500 ml purified / distilled water. Heat to boiling to dissolve the medium completely. **DO NOT AUTOCLAVE.** Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Aeromonas Selective Supplement (FD039). Mix well and pour into sterile Petri plates.

**Principle And Interpretation**
*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 (3,18). It is observed that the major cause of gastrointestinal infections by *Aeromonas* species (3,4) is because of ingesting infected water (6,7). This medium therefore, may be considered as a useful diagnostic aid for investigating diarrhoeal disease (1,12). 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 (5,8,19). Aeromonas Isolation Medium is based on the formulation of Ryan (16). 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 (FD039). The effectiveness of Ampicillin as a selective agent has been reported by several workers (1,11,14,15). 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 (SA) Agar with starch hydrolysis as the differential trait and ampicillin to suppress the background microflora (13).

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.

**Type of specimen**
Clinical samples - faeces; food samples; water samples

Please refer disclaimer Overleaf.
**Technical Data**

**Quality Control**

**Appearance**
Light yellow to light tan homogeneous free flowing powder

**Gelling**
Firm, comparable with 1.25% Agar gel.

**Colour and Clarity of prepared medium**
Dark green coloured clear to slightly opalescent gel forms in Petri plates.

**Reaction**
Reaction of 5.63% w/v aqueous solution at 25°C. pH : 8.0±0.2

**pH**
7.80-8.20

**Cultural Response**
Cultural characteristics observed with added Aeromanas Selective Supplement (FD039) after an incubation at 35-37°C for 18-24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
<th>Colony characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Aeromonas hydrophila</em> ATCC 7966 (00063*)</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=50%</td>
<td>dark green, opaque with dark centre</td>
</tr>
<tr>
<td><em>Escherichia coli</em> ATCC 25922 (00013*)</td>
<td>&gt;=10⁴</td>
<td>inhibited</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td><em>Pseudomonas aeruginosa</em> ATCC 27853 (00025*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=50%</td>
<td>blue/grey, translucent pinpoint</td>
</tr>
<tr>
<td><em>Salmonella Typhi</em> ATCC 6539</td>
<td>&gt;=10⁴</td>
<td>inhibited</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td><em>Shigella flexneri</em> ATCC 12022 (00126*)</td>
<td>&gt;=10⁴</td>
<td>inhibited</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

Key : (*) Corresponding WDCM numbers.

**Storage and Shelf Life**

Store between 10-30°C in a tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label. Product performance is best if used within stated expiry period.

**Disposal**

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory technique (18,19)
Reference


Revision : 03 / 2019

In vitro diagnostic medical device

CE Marking

Storage temperature 30°C

Do not use if package is damaged

HiMedia Laboratories Pvt. Limited,
23 Vadhani Industrial Estate,
LBS Marg,Mumbai-86,MS,India

CE Partner 4U ,Esdoornlaan 13, 3951 DB Maarn The Netherlands,
www.cepartner 4u.eu

Disclaimer :
User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.