

## SA HiVeg™ Agar Base

MV1177

SA HiVeg Agar Base with Ampicillin Supplement is used for isolation and cultivation of *Aeromonas hydrophila* from foods.

**Composition \*\* :**

| Ingredients       | Grams/Litre |
|-------------------|-------------|
| HiVeg hydrolysate | 10.0        |
| Sodium chloride   | 5.0         |
| Starch, soluble   | 10.0        |
| Phenol red        | 0.025       |
| Agar              | 15.0        |

Final pH (at 25°C) 7.4 ± 0.2

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

**Directions :**

Suspend 40 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45° - 50°C. Aseptically add rehydrated contents of 1 vial of Ampicillin Supplement (FD082). Mix well before pouring into sterile petri plates.

**Principle and Interpretation :**

Starch Ampicillin (SA) HiVeg Agar Base is the modification of SA Agar Base which is formulated as described by Palumbo et al (1) and recommended by APHA (2) for isolation and cultivation of *Aeromonas hydrophila* from foods. This medium is prepared by using vegetable peptone and hence the medium is BSE/TSE risk free. Very few bacteria in food are capable of hydrolyzing starch. Starch hydrolysis is a differentiating characteristic of *Aeromonas hydrophila*. Typical colonies of *Aeromonas hydrophila* are yellow to honey coloured surrounded by a clear zone of hydrolyzed starch against black background.

HiVeg hydrolysate provides essential growth nutrients. Sodium chloride maintains osmotic equilibrium. Ampicillin suppresses the contaminating microflora.

SA HiVeg Agar Base is used for quantitative detection of *Aeromonas hydrophila*, *Aeromonas sobria* and *Aeromonas caviae* in fresh foods of animal origin and fresh vegetable (3) *Aeromonas sobria* and *Aeromonas caviae* are further identified by biochemical tests. Starch hydrolysis is determined by flooding the plate with 5 ml Lugol's Iodine solution.

**Product Profile :**

| Vegetable based (Code MV)Ⓞ            |   | Animal based (Code M)  |  |
|---------------------------------------|---|--|--|
| MV1177<br>HiVeg hydrolysate           |   | M1177<br>Casein enzymic hydrolysate                                  |  |
| <b>Recommended for</b>                | : | Isolation and cultivation of <i>Aeromonas hydrophila</i> from foods. |  |
| <b>Reconstitution</b>                 | : | 40.0 g/l   |  |
| <b>Quantity on preparation (500g)</b> | : | 12.5 L   |  |
| <b>pH (25°C)</b>                      | : | 7.4 ± 0.2  |  |
| <b>Supplement</b>                     | : | Ampicillin Supplement (FD082)  |  |
| <b>Sterilization</b>                  | : | 121°C / 15 minutes   |  |
| <b>Storage</b>                        | : | Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.                    |  |

**Quality Control :****Appearance of powder**

Light pink coloured, homogeneous, free flowing powder.

**Gelling**

Firm, comparable with 1.5% Agar gel.

**Colour and Clarity**

Red coloured, clear to slightly opalescent gel forms in petri plates.

**Reaction**

Reaction of 4.0 % w/v aqueous solution is pH 7.4 ± 0.2 at 25°C.

**Cultural Response**

Cultural characteristics observed after an incubation at 30°C for 24 - 48 hours.

| Organisms (ATCC)                     | Inoculum (CFU)                   | Growth    | Starch hydrolysis |
|--------------------------------------|----------------------------------|-----------|-------------------|
| <i>Aeromonas hydrophila</i> (7966)   | 10 <sup>2</sup> -10 <sup>3</sup> | luxuriant | +                 |
| <i>Escherichia coli</i> (25922)      | 10 <sup>2</sup> -10 <sup>3</sup> | poor-fair | -                 |
| <i>Staphylococcus aureus</i> (25923) | 10 <sup>2</sup> -10 <sup>3</sup> | inhibited | -                 |

Key : + = positive reaction, clearing around the colony  
- = negative reaction, no clearing around the colony

**References :**

- Palumbo S., et al, 1985, Appl. Environ. Microbiol., 50:1027.
- Frances Pouch Downes and Keith Ito (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4<sup>th</sup> ed., APHA, Washington, D.C.
- Stern NJ, Drazek ES and Joseph SW 1987, J. Food Protect, 50:66.