# SPS HiVeg™ Agar, Modified MV898

SPS HiVeg Agar, Modified is used for the selective isolation and enumeration of *Clostridium perfringens* from foods.

## Composition ** :

| Ingredients | Grams/Litre |
|---|---|
| HiVeg hydrolysate | 15.0 |
| Yeast extract | 10.0 |
| Ferric citrate | 0.5 |
| Sodium sulphite | 0.5 |
| Sodium thioglycollate | 0.1 |
| Polysorbate 80 | 0.05 |
| Sulphadiazine | 0.12 |
| Polymyxin B sulphate | 0.01 |
| Agar | 15.0 |

Final pH (at 25°C ) 7.0 ± 0.2
** Formula adjusted, standardized to suit performance parameters.

## Directions :

Suspend 41.28 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 50°C and pour in sterile petri plates containing inoculum. Allow to solidify and if desired, pour the cover layer using about 5 ml sterile medium. Incubate anaerobically.

## Principle and Interpretation :

SPS HiVeg Agar, Modified is prepared by using HiVeg hydrolysate which is free of BSE/TSE risks. SPS HiVeg Agar, Modified is the modification of SPS (Sulphite Polymyxin Sulphadiazine) Agar developed by Angelotti et al (1) which is based on the medium described by Mossel et al (2, 3) for selective isolation and enumeration of *Clostridium perfringens* from foods.

HiVeg hydrolysate and yeast extract supply nitrogenous compounds, vitamin B complex and other essential growth nutrients to the growing *Clostridium perfringens*. This organism reduces sulphite to sulphide which reacts with ferric citrate to form a black precipitate of iron sulphide and hence the colonies appear black. Sorbitan monooleate (Polysorbate 80) supplies fatty acids to the organisms. Polymyxin B and Sulphadiazine inhibit a wide variety of gram-positive and gram-negative bacteria. Sodium thioglycollate is a reducing agent. Few organisms found in food other than *Clostridium perfringens* also form black colonies on this medium. Some strains of *Clostridium perfringens* fail to grow on this medium.

**Product Profile :**

| **Vegetable based** (Code MV)◉ | **Animal based** (Code M) |
|---|---|
| **MV898** HiVeg hydrolysate | **M898** Casein enzymic hydrolysate |

| | | |
|---|---|---|
| **Recommended for** | : | Selective isolation and enumeration of *Clostridium perfringens* from foods. |
| **Reconstitution** | : | 41.28 g/l |
| **Quantity on preparation (500g)** | : | 12.11 L |
| **pH (25°C)** | : | 7.0 ± 0.2 |
| **Supplement** | : | None |
| **Sterilization** | : | 121°C / 15 minutes |

**Storage :** Dry Medium and Prepared Medium 2 - 8°C.

## Quality Control :

**Appearance of powder**
Yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

**Gelling**
Firm, comparable with 1.5% Agar gel.

**Colour and Clarity**
Medium amber coloured, slightly opalescent gel forms in petri plates.

**Reaction**
Reaction of 4.13% w/v aqueous solution is pH 7.0 ± 0.2 at 25°C.

**Cultural Response**
Cultural characteristics observed after an incubation at 35-37°C for 18 - 48 hours under anaerobic conditions.

| Organisms (ATCC) | Inoculum (CFU) | Growth | Colour of colony |
|---|---|---|---|
| *Clostridium perfringens* (12924) | $10^2$-$10^3$ | good - luxuriant | black |
| *Clostridium sporogenes* (11437) | $10^2$-$10^3$ | poor - good | black |
| *Escherichia coli* (25922) | $10^2$-$10^3$ | inhibited | - |
| *Staphylococcus aureus* (25923) | $10^2$-$10^3$ | poor - good | white |

## References :

1. Angelotti, et al, 1962, Appl. Microbiol., 10:193.
2. Mossel, et al, 1956, J. Appl. Microbiol., 19:142.
3. Mossel, 1959, J. Sci. Food Agric., 19:662.

◉ Prepared from GMO free Vegetable proteins replacing Animal based peptones. Freedom from BSE/TSE worries.

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