Modified Duncan Strong (DS) HiVeg™ Medium MV1237

Modified Duncan Strong (DS) HiVeg Medium is used for isolation and differentiation of *Clostridium perfringens* from other *Clostridia* from foods on the basis of raffinose fermentation.

Composition ** :

Ingredients	Grams/Litre
HiVeg peptone No. 3	15.0
Yeast extract	4.0
Sodium thioglycollate	1.0
Disodium phosphate	10.0
Raffinose	4.0

Final pH (at 25°C) 7.8 ± 0.2
** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 34 grams in 1000 ml distilled water and mix thoroughly. Heat, if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Dispense into sterile tubes. Check one or two tubes for measuring the pH.

Principle and Interpretation :

Modified Duncan Strong (DS) HiVeg Medium is prepared using HiVeg peptone No.3 in place of Proteose peptone, making the medium free of BSE/TSE risks. This medium is the modification of Modified Duncan Strong (DS) Medium which is prepared as per the formulation suggested by Duncan and Strong (1) and is recommended by APHA (2) for the isolation and differentiation of *Clostridium perfringens* from other *Clostridia* from foods on the basis of raffinose fermentation and also for rapid detection of *Clostridium perfringens* enterotoxin (3). HiVeg peptone No.3 and yeast extract provide nitrogenous compounds and other nutrients for the growth. Sodium thioglycollate helps to create anaerobic conditions suitable for *Clostridial* growth. Disodium phosphate acts as a buffering agent. Raffinose in the medium is fermented by *Clostridium perfringens* to produce acid within 72 hours, but not by culturally similar species like *Clostridium baratii*, *Clostridium celatum* etc.

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV1237 HiVeg peptone No.3	**M1237** Proteose peptone

Recommended for	:	Isolation and differentiation of *Clostridium perfringens* from other *Clostridia* from foods on the basis of raffinose fermentation.
Reconstitution	:	34.0 g/l
Quantity on preparation (500g)	:	14.70 L
pH (25°C)	:	7.8 ± 0.2
Supplement	:	None
Sterilization	:	121°C / 15 minutes.

Storage : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

Quality Control :

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

Colour and Clarity
Yellow coloured, clear solution without any precipitate.

Reaction
Reaction of 3.4% w/v aqueous solution is pH 7.8 ± 0.2 at 25°C.

Cultural Response
Cultural characteristics observed after an incubation at 35 - 37°C for 48 - 72 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Raffinose fermentation
Clostridium perfringens (12924)	10^2-10^3	good-luxuriant	+
Clostridium sporogenes (11437)	10^2-10^3	good-luxuriant	-

References :

1. Duncan C. and Strong D., 1969, Appl. Microbiol., 16:82.
2. Labbe R.G. and Rey D.K., 1979, Appl. Microbiol., 13:559.
3. Frances Pouch Downes and Keith Ito (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.