RS HiVeg™ Medium Base MV576

RS (Rimler-Shotts) HiVeg Medium is used for selective isolation, cultivation and presumptive identification of *Aeromonas hydrophila*.

Composition ** :

Ingredients	Grams/Litre
Yeast extract	3.0
Maltose	3.5
L-Cysteine hydrochloride	0.3
L-Lysine hydrochloride	5.0
L-Ornithine hydrochloride	6.5
Sodium thiosulphate	6.8
Ferric ammonium citrate	0.8
Synthetic detergent No. III	1.0
Sodium chloride	5.0
Bromo thymol blue	0.03
Agar	13.5

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

Directions :

Suspend 45.43 grams in 990 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45°- 50°C and aseptically add Novobiocin Supplement (FD096). Mix well before pouring into sterile petriplates.

Principle and Interpretation :

This medium is prepared by using synthetic detergent No. III instead of sodium deoxycholate which makes the medium free of BSE/TSE risks. This medium is the modification of RS Medium developed by Rimler and Shotts for rapid isolation and identification of *Aeromonas hydrophila*(1). RS medium shows differentiation characteristics depending upon the biochemical reactions. The organisms that ferment maltose are seen as yellow colonies. The organisms that ferment maltose and are H_2S producers give yellow colour colonies with a black center. The third colonial type give greenish - yellow to green colonies which indicate decarboxylation of lysine or ornithine or both. The colonies which are greenish - yellow to green with black center indicate the decarboxylation of both amino acids and H_2S production.
The balance of ingredients provide a nutrient base and chemophysical stability for the medium. Hydrogen sulfide production depends upon the utilization of sodium thiosulphate or L- cysteine hydrolchloride, or both, with ferric ammonium citrate being utilized to help visualize. Synthetic detergent No. III and Novobiocin helps in inhibiting the gram positive organisms and *Vibrio* species. Maltose fermentation is indicated by bromo thymol blue. Incubation should be done at 37°C and the results should be seen after 20 hours but not after 24 hours, as plates observed after 26 hours demonstrate a slow reversion of the fermentation reaction toward a basic reaction.

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV576 Synthetic detergent No. III	**M576** Sodium deoxycholate

Recommended for	:	Selective isolation, cultivation and presumptive identification of *Aeromonas hydrophila*.
Reconstitution	:	45.43 g/l
Quantity on preparation (500g)	:	11.00 L
pH (25°C)	:	7.0 ± 0.2
Supplement	:	Novobiocin Supplement (FD096)
Sterilization	:	Boiling. (DO NOT AUTOCLAVE)

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

Quality Control :

Appearance of powder
Light green coloured, homogeneous, free flowing powder.
Gelling
Firm, comparable with 1.35% Agar gel.
Colour and Clarity
Dark green coloured, clear gel forms in petri plates.
Reaction
Reaction of 4.54% 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 24 hours on addition of Novobiocin supplement (FD096).

Organisms (ATCC)	Inoculum (CFU)	Recovery	Maltose fermentation	Lysine/ Ornithine*	H_2S
Aeromonas hydrophila (7966)	10^2-10^3	>50%	+	-	-
Citrobacter freundii (8090)	10^2-10^3	>50%	-	V	+
Escherichia coli (25922)	10^2-10^3	>50%	-	V	-
Proteus vulgaris (13315)	10^2-10^3	>50%	+	-	+
Salmonella serotype Typhi (6539)	10^2-10^3	>50%	+	-	-

Key : Maltose fermentation : + = yellow coloured colonies
Lysine and/or Ornithine : + = shades of greenish yellow to yellow coloured colonies
*decarboxylation
Hydrogen Sulphide (H_2S) production : + = black centered colonies
- = Negative reaction
V = Variable

References :

1. Shotts E. B. Jr. and Rimler R., 1973, Appl, Microbiol. , 26(4):550

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