TPEY HiVeg™ Agar Base MV402

TPEY HiVeg Agar Base after supplementation is recommedned for the isolation and enumeration of coagulase-positive *Staphylococci* from foods.

Composition ** :

Ingredients	Grams/Litre
HiVeg hydrolysate	10.0
Yeast extract	5.0
D-Mannitol	5.0
Sodium chloride	20.0
Lithium chloride	2.0
Agar	18.0

Final pH (at 25°C) 7.2 ± 0.2
** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 60 grams in 900 ml of distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 12 lbs pressure (118°C) for 15 minutes. Cool to 50°C. Add aseptically 10 ml of 1% sterile aqueous solution of Potassium Tellurite (FD052), 100 ml Egg Yolk Emulsion (FD045) and Polymyxin B to a final concentration of 4 mg/l. Mix well and pour into sterile petri plates.
Warning : Lithium Chloride is harmful. Avoid bodily contact and inhalation of vapours. On contact with skin wash with plenty of water immediately.

Principle and Interpretation :

Tellurite Polymyxin Egg Yolk HiVeg Agar Base is the modification of Tellurite Polymyxin Egg Yolk Agar Base which was designed by Crisley et al for the detection and enumeration of coagulase-positive *Staphylococci* in food materials (1,2). This medium is prepared by using HiVeg hydrolysate which makes it free from BSE/TSE risks. This medium is also used for the recovery of coagulase-positive *Staphylococci* from foods, air, dust and soil. Coagulase-negative *Staphylococci* and other organisms are greatly suppressed on this medium.
HiVeg hydrolysate, yeast extract and mannitol serve as energy sources for coagulase-positive *Staphylococci* which adopts fermentative pathway for the utilization of carbohydrate. Lithium chloride, potassium tellurite and Polymyxin B restricts the growth of wide range of bacteria including some coagulase-negative *Staphylococci*. The coagulase-positive *Staphylococci* are differentiated by their formation of jet black or dark grey colonies and the formation of a zone of precipitated egg yolk around the colonies or a clear zone around the colonies and precipitation below the colonies. Coagulase-negative organisms may produce small black pinpoint colonies without egg yolk precipitation or clearing around the colonies. Mannitol positive and/or tellurite positive Staphylococcal strains that are coagulase negative are occasionally found. Definitive identification of *Staphylococcus auerus*, therefore, should be based primarily on the coagulase reaction, with mannitol fermentation and tellurite reduction being used only for confirmation (3).

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV402 HiVeg hydrolysate	**M402** Casein enzymic hydrolysate

Recommended for	:	Isolation and enumeration of coagulase-positive *Staphylococci* from foods.
Reconstitution	:	60.0 g/l
Quantity on preparation (500g)	:	8.33 L
pH (25°C)	:	7.2 ± 0.2
Supplement	:	Potassium Tellurite (FD052), Egg Yolk Emulsion (FD045) and Polymyxin B.
Sterilization	:	118°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.
Gelling
Firm, comparable with 1.8% Agar gel
Colour and Clarity
Basal medium yields, light amber coloured, clear to slightly opalescent gel. On addition of egg yolk emulsion and potassium tellurite, yellow coloured opaque gel forms in petri plates.
Reaction
Reaction of 6.0% w/v aqueous solution in pH 7.2 ± 0.2 at 25°C.
Cultural Response
Cultural characteristics observed after an incubation at 35 - 37°C for 18-48 hours with added sterile 1% Potassium Tellurite (FD052) and Egg Yolk Emulsion (FD045).

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of colony	Lecithinase /Halos
Bacillus subtilis (6633)	10^2-10^3	poor-fair	<20%	brown	-
Escherichia coli (25922)	10^2-10^3	inhibited	0%	-	-
Proteus mirabilis (25933)	10^2-10^3	poor-fair	<20%	brown	-
Staphylococcus aureus (25923)	10^2-10^3	luxuriant	>50%	black	+
Staphylococcus epidermidis (12228)	10^2-10^3	poor-fair	<20%	black	-
Streptococcus pyogenes (19615)	10^2-10^3	inhibited	0%	-	-

References :

1. Crisley, Angelotti and Foter, 1964, Public Health Rep., 79:369.
2. Crisley, Peeler and Angelotti, 1965, Appl. Microbiol., 13:140.
3. MacFaddin 1985, Media for isolation-cultivation-identification-maintenance medical bacteria Vol, I, Williams, & Wilkins, Baltimore, MD

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