Staphylococcus HiVeg Agar No.110

MV521

Staphylococcus Agar No.110 is used as a selective medium for the isolation and testing of pathogenic Staphylococci.

Composition**

Ingredients	Gms / Litre
HiVeg hydrolysate	10.000
Veg peptone	30.000
Lactose	2.000
D-Mannitol	10.000
Sodium chloride	75.000
Dipotassium phosphate	5.000
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 149.5 grams in 1000 ml of distilled water. Mix thoroughly. Heat, to boiling, to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Resuspend the precipitate by gentle agitation to avoid bubbles and pour the plates while the medium is hot. Alternatively, cool the medium to 45 - 50°C and add blood or egg yolk if desired. This medium may also be used without sterilization; it should be boiled for 5 minutes and used at once.

Principle And Interpretation

Staphylococcus HiVeg Agar No.110 is a modification of Staphylococcus Agar No.110. It is prepared by replacing animal based peptones with veg peptones and it is free from BSE/TSE risk.Staphylococci are widespread in nature though they are mainly found living on the skin, skin glands and mucous membrane of mammals and birds. These organisms are also associated with staphylococcal food poisoning. Staphylococcus Agar No. 110 (2, 3, 1) also known as Stone Gelatin Agar (4) is used for the selective isolation of pathogenic Staphylococci on the basis of pigment production, mannitol fermentation and gelatin liquefaction. These properties are few of the characteristics of pathogenic Staphylococci (5, 6).

Staphylococcus Agar No. 110 is recommended by APHA (7) and AOAC (8). The medium can be used with Egg Yolk Emulsion (FD045) to study the egg yolk reactions (9).

HiVeg hydrolysate and yeast extract serve as sources of carbon, nitrogen and other essential nutrients and growth factors including vitamins. D-Mannitol is the fermentable carbohydrate with lactose being an additional source of carbon. Sodium chloride maintains the osmotic equilibrium while phosphate buffers the medium.

Mannitol fermentation can be visualized as yellow colouration by addition of a few drops of bromothymol blue to the areas of the plates where colonies have been removed.

.*Enterococcus faecalis* may grow on this medium as small colonies with slight mannitol fermentation (1).

Quality Control

Appearance

Cream to light yellow, may have slight green tinge homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light amber coloured opalescent gel forms in Petri plates.

Reaction

Reaction of 14.95% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH
6.80-7.20

Cultural Response
MV521: Cultural characteristics observed after an incubation at 35-37°C for 48 hours .

Organism	Growth	Mannitol fermentation	Pigment Production
Escherichia coli ATCC 25922	inhibited		
Enterococcus faecalis ATCC 29212	none-poor	Variable reaction	Negative
Staphylococcus aureus ATCC 25923	luxuriant	Positive reaction	Positive
Staphylococcus epidermidis ATCC 12228	luxuriant	Variable reaction	Negative

Storage and Shelf Life
Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Reference
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