HiCrome Selective Salmonella Agar Base

M1842

HiCrome Selective Salmonella Agar Base is recommended for the selective isolation of *Salmonella* species from food samples

Composition**

Ingredients	Gms / Litre
Heart Infusion powder	12.000
Yeast hydrolysate	5.000
Tryptose	5.000
Sodium cholate	3.000
Sodium taurocholate	5.000
Sodium deoxycholate	1.000
Chromogenic mixture	8.000
Agar	15.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 54.00 grams in 1000 ml distilled water. Gently heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C. Aseptically add the rehydrated contents of one vial of HiCrome Selective Salmonella Agar Supplement (FD274). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Salmonella species have been isolated from humans and almost all animals throughout the world. They cause many types of infections from mild, self-limiting gastroenteritis to life threatening typhoid fever. *Salmonella* Typhi and *Salmonella* Paratyphi A & B cause gastroenteritis, bacteremia and enteric fever, *Salmonella* Choleraesuis causes gastroenteritis and enteric fever, especially in children. *Salmonella* Typhimurium is the most frequently isolated serotype of *Salmonella* . *Salmonella* species are the major cause of food poisoning (1).

Various chromogenic media are available for the differentiation of *Salmonella* species. The original media formulated by Rambach (2) differentiates *Salmonella* based on propylene glycol utilization and presence of a chromogenic indicator. However HiCrome Selective Salmonella Agar Base uses chromogenic mixture for identification and differentiation of *Salmonella* species. Sodium cholate ,Sodium taurocholate and Sodium deoxycholate in the medium helps to restrict the growth of other organisms. Besides the selective supplement added to the medium inhibits competing microorganisms.

Heart Infusion powder, yeast hydrolysate and tryptose in the medium provides nitrogenous, carbonaceous compounds and other essential growth nutrients. Due to the presence of chromogenic mix in the medium *Salmonella* are easily distinguishable and forms purple coloured colonies while some *Enterobacteriaceae* like *Klebsiella* and *Enterobacter* forms blue to dark blue coloured colonies.

Conventional method employes the H_2S production property for *Salmonella* detection which is also exhibited by other non *Salmonella* species such as *Citrobacter* , *Proteus*, etc. Hence further biochemical confirmation is required for further identification.

This medium is specially employed for food samples where the sample is initially enriched in Salmonella Selective Enrichment Broth (M1843) and then isolated on HiCrome Selective Salmonella Agar Base. *Salmonella* species give purple coloured colonies due to the enzyme specificity.

Quality Control

Appearance

Light yellow to beige homogeneous free flowing powder

Gelling
Firm, comparable with 1.5 % Agar gel.

Colour and Clarity of prepared medium
Whitish cream coloured ,opaque gel forms in Petri plates

Reaction
Reaction of 5.4% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH
7.10-7.50

Cultural Response
Cultural characteristics observed with added HiCrome Selective Salmonella Agar Supplement (FD274), after an incubation at 35-37°C for 22-24 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Observed Lot Value	Recovery	Colour of colony
Cultural Response					
Salmonella Typhimurium ATCC 14028	50 -100	good-luxuriant	25 -100	>=50 %	purple
Salmonella Enteritidis ATCC 13076	50 -100	good-luxuriant	25 -100	>=50 %	purple
Klebsiella pneumoniae ATCC 13883	50 -100	good	20 -50	40 -50 %	blue
Enterococcus faecalis ATCC 29212	>=10^3	inhibited	0	0 %	
Staphylococcus aureus ATCC 25923	>=10^3	inhibited	0	0%	

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

Reference
1.Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2.Rambach A., 1990, Appl. Environ. Microbiol., 56:301.

Revision : 2 / 2015