



HiCrome Strep B Selective Agar Base,Modified

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HiCrome Strep B Selective Agar Base,Modified is recommended for selective isolation of Group B streptococci.

Composition**

Ingredients	Gms / Litre
Peptone special	10.000
Yeast extract	4.300
Chromogenic mixture	7.500
Phenol red	0.025
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 36.83 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C and aseptically add the rehydrated contents of one vial of HiCrome Strep B Selective Supplement (FD273). Mix well and pour in sterile Petri plates.

Principle And Interpretation

Group B *Streptococcus* is a leading infection causing illness and death in newborns. Group B streptococci can also cause serious diseases in pregnant women, the elderly, and adults with other illnesses. GBS normally reside in the vagina of women and rectum of men and women (1). In newborns, group B strep is the most common cause of sepsis (infection of the bloodstream) and meningitis (infection of the lining and fluid surrounding the brain) and a common cause of pneumonia. In adults, group B strep can rarely lead to serious bloodstream infections, urinary tract infections, skin infections, and pneumonia, especially in people with weak immune systems. Heavy colonization of the maternal genital tract is associated with colonization of infants and risk of neonatal disease (2).

The sample collection is usually done by collection of vaginal and rectal swab between 35 and 37 weeks of pregnancy. The swab is then processed on HiCrome Strep B Selective Agar Base. For the conventional methods optimum recovery is however achieved by selective enrichment into Todd Hewitt broth with colistin and nalidixic acid and then subculture on Blood Agar (3,4).

Peptone special and yeast extract provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and essential nutrients for the growth of Streptococci. One of the chromogenic substrate is utilized by Group B Streptococci resulting in purple coloured colonies, while the other Streptococci either give blue or bluish green coloured colonies with yellow background. Phenol red is the indicator dye.

Quality Control

Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Red coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 3.68 w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics observed with added Hicrome Strep B Selective Supplement (FD273), after an incubation at 35-37°C for 24 - 48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Cultural Response				
<i>Escherichia coli</i> ATCC 25922	$\geq 10^3$	inhibited	0%	
<i>Staphylococcus aureus</i> ATCC 25923	$\geq 10^3$	inhibited	0%	
<i>Streptococcus agalactiae</i> ATCC 13813	50-100	luxuriant	$\geq 50\%$	purple
<i>Enterococcus faecalis</i> ATCC 29212	50-100	luxuriant	$\geq 50\%$	bluish green
<i>Enterococcus faecium</i> ATCC 19434	50-100	luxuriant	$\geq 50\%$	green w/yellow background

Storage and Shelf Life

Store dehydrated and prepared medium at 2-8°C. Use before expiry date on the label.

Reference

1. Anthony BF, Okada DM, Hobel CJ. Epidemiology of group B Streptococcus: longitudinal observations during pregnancy. J. Infect Dis 1978; 137:524-30.
2. Murray P.R., Baron J.H., Manual of Clinical Microbiology Murray P. R., Baron J. H., Tenover F. C., Tenover F. C. and Tenover F. C., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
3. Prevention of perinatal group B Streptococcal disease: a public health perspective . Centres for Disease control and Prevention. MMWR Recomm Rep 1996; 51:1-22
4. NHS Processing swabs for Group B Streptococcal carriage Issue no.2.1,2006

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