

HiCrome™ Strep B Selective Agar Base / Modified

Recommended for selective isolation of Group B streptococci from clinical samples.

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Composition **		
	M1966	M1840
Ingredients	Grams/Litre	Grams/Litre
Protein hydrolysate	-	17.50
Peptone special	10.00	-
Yeast extract	4.30	-
Buffers	-	2.50
Chromogenic mixture	7.50	2.54
Phenol red	0.025	
Selective agents	-	0.11
Agar	15.00	15.00

^{**} Formula adjusted, standardized to suit performance parameters

Directions

Final pH (at 25°C)

Suspend 37.65 grams of M1840 and 36.83 grams of M1966 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.

 7.4 ± 0.2

Principle and Interpretation

Group B Streptococcus infection is a leading illness causing 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).

Protein hydrolysate, peptone special and yeast extract provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and essential nutrients for the growth of Streptococci. Buffers present provides buffering to the medium. Selective agents in the medium inhibits accompanying flora. One of the substrate in the chromogenic mixture is cleaved by beta glucosidase possesed by Group B Streptococci resulting in blue coloured colonies in M1840 and purple coloured colonies in M1966 w/ Phenol red as indicator dye. Other streptococci in (M1966) either give blue or bluish green coloured colonies with yellow background.

Type of specimen

Clinical samples

Specimen Collection and Handling

For clinical samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (5,6). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use onl y (for M1966). Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets

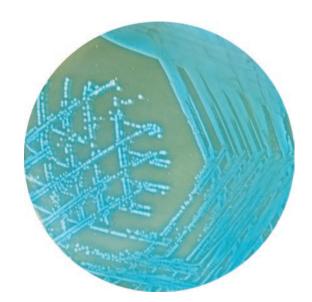
Limitations

 7.3 ± 0.2

- 1. Some species may show poor growth due to nutritional variations.
- 2. Slight colour variation may be observed depending upon the utilization of the substrate by the organism.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the recommended temperature.



M1840 HiCrome™ Strep B Selective Agar Base Streptococcus agalactiae ATCC 13813



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Quality Control

Appearance of Powder: Cream to yellow (M1840), light yellow to pink (M1966) homogeneous free flowing powder

Gelling Colour and Clarity of prepared medium

: Yellow coloured (M1840) opaque gel forms in Petri plates or red coloured (M1966) clear to slightly opalescent gel forms in Petri plates.

: Firm, comparable with 1.5% Agar gel

Reaction : Reaction of 3.77% w/v (M1840) and 3.68% w/v (M1966) aqueous solution at 25°C.

pH: 7.3 ± 0.2 .

Cultural Response

: Cultural characteristics observed with added HiCrome™ Strep B Selective Supplement (FD273), after an incubation at 35-37°C for 18 - 24 hours.

Organism (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of Colony (M1840)	Colour of Colony (M1966)
Streptococcus aga- lactiae (13813)	50-100	luxuriant	≥50%	blue	purple
Escherichia coli (25922) (00013*)	≥10³	inhibited	0%	_	_
Neisseria meningitidis (13090)	≥10³	inhibited	0%	-	_
Staphylococcus aureus subsp aureus (25923) (00034*)	≥10 ³	inhibited	0%	_	_
Enterococcus fae- calis ATCC 29212 (00087*)	50-100	luxuriant	≥50%	_	bluish green
Enterococcus faeci- um ATCC 19434 (00010*)	50-100	luxuriant	≥50%	_	green w/ yellow back- ground

Key: * = corresponding WDCM Numbers

Storage and Shelf-life

Store between 2-8°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label.

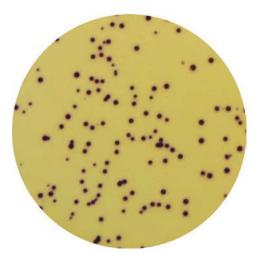
Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5, 6).

References

- Anthony BF, Okada DM, Hobel CJ. Epidemiology of group B Streptoccoccus: longitudinal observations during pegnancy. J.Infect Dis 1978; 137:524-30.
- Murray P.R., Baron J.H., Manual of Clinical Microbiology Murray P. R., Baron J. H. Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
- 3. NHS Processing swabs for Group B Streptococcal carriage Issue no.2.1,2006.
- Prevention of perinatal group B Streptococcal disease: a public health perspective. Centres for Disease control and Prevention. MMWR Recomm Rep 1996; 51:1-22.
- 5. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
- Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1



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