Islams Medium Base for Group B Streptococci

M998

Islams Medium Base for Group B Streptococci is used for identification and cultivation of group B Streptococci from clinical specimens.

Composition**

Ingredients	Gms / Litre
Proteose peptone	23.000
Starch, soluble	5.000
Monosodium phosphate	1.482
Disodium phosphate	5.749
Agar	10.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 45.23 grams in 950 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 115°C for 10 minutes. Cool to 50°C and aseptically add 50 ml sterile inactivated horse serum (RM1239), (inactivated by heating at 56°C for 30 minutes). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Islam (1) formulated this medium to exploit the ability of most Group B Streptococci to produce orange/red-pigmented colonies when incubated under anaerobic conditions. Lancefield first noted carotenoid pigmentation, characteristic of group B Streptococci when incubated under anaerobic conditions (2). This medium also supports growth of other genital bacteria that cause neonatal infection (1) such as anaerobic *Streptococcus, Bacteroides* and *Clostridium* species.

Proteose peptone provides the necessary nutrients for the growth of Group B Streptococci. Disodium and monosodium phosphates provide buffering to the medium.

Pigmentation can be enhanced by adding trimethoprim / sulphonamides (3). No inhibition of growth occurs and the pigmentation is seen clearly over a radius of 10-20 mm. The medium must have the correct pH to ensure good pigmentation but some strains of Group B Streptococci do not produce pigmented colonies (4). Other organisms that can grow on this medium do not produce the characteristic orange-red pigment. Inoculate the specimen swab onto the surface of Islams Medium. If desired, apply a disc containing 300 or 500µg of sulphafurazole onto an area of the plate where growth can be expected to be moderately profuse. Incubate the plates anaerobically at 35°C for 24 to 48 hours.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.0% Agar gel.

Colour and Clarity of prepared medium
Yellow coloured, clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 4.5% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH
7.20-7.60

Cultural Response
M998: Cultural characteristics observed with added sterile inactivated horse serum (RM1239),after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Pigmentation
Bacteroides fragilis ATCC 25285	50-100	fair-good	40-50%	no pigmentation
Enterococcus faecalis ATCC 29212	50-100	luxuriant	>=70%	no pigmentation
Streptococcus agalactiae ATCC 13813	50-100	luxuriant	>=70%	orange/red

Storage and Shelf Life

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

Reference

1.Islam A. K. M. S., 1927, Lancet, i: 256 (letter).
2.Merrit K. and Jacobs N. J., 1978, J. Clin. Microbiol., 8:105.
3.de al Rosa M., Villareal R., Vega D., Miranda C. and Martinezbrocal A., 1983, J. Clin. Microbiol., 18:779.
4.Islam A. K. M. S., 1981, J. Clin. Pathol., 34:78.

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