

# STREP GROUP B BROTH

- For in vitro use only -

Catalogue No. TS95

Our Strep Group B Broth is used for the selective enrichment of group B streptococci from clinical specimens.

Group B streptococci (GBS) are a major cause of neonatal infectious disease including sepsis, meningitis and respiratory distress. Woman colonized with GBS usually infects infants during birth. Strep Group B Broth is a selective and effective medium for the isolation of group B streptococci as reported by Fenton and Harper, and as recommended by the Centers of Disease Control and Prevention. Taking a specimen swab and culturing it in the broth can easily identify woman colonized with GBS. Detection of group B streptococci in the genital tracts of pregnant women can identify infants at risk for infection and guide intrapartum administration of antibiotics.

Strep Group B Broth is essentially Todd-Hewitt Broth supplemented with the selective agents colistin and nalidixic acid. Todd-Hewitt Broth was designed as an enrichment broth for streptococci; colistin and nalidixic acid are added to inhibit competing, gram-negative organisms commonly found in mixed culture specimens.

## Formulation per Litre of Medium

Infusion from beef heart .....	3.1 g
Peptone .....	20.0 g
Yeast extract .....	10.0 g
Dextrose .....	2.0 g
Sodium chloride .....	2.0 g
Sodium phosphate (dibasic) .....	0.4 g
Sodium carbonate .....	2.5 g
Colistin sulfate .....	10.0 mg
Nalidixic acid .....	15.0 mg

pH 7.6 ± 0.2

## Recommended Procedure

1. Sweep a single swab over the skin from the vaginal introitus to the anus. A vaginal or

rectal swab can also be used. The specimen swab should be collected at 35 to 37 weeks of gestation.

2. Place the swab in a suitable transport medium such as Amies medium and transport back to the laboratory for immediate testing.
3. When the specimen is ready to be processed, place the swab into Strep Group B Broth.
4. Incubate tubes in a reduced atmosphere (5% CO<sub>2</sub>) with loose caps for 18 to 24 hours at 35°C.
5. Subculture the broth onto a non-selective medium such as Sheep Blood Agar.
6. Incubate plates in a reduced atmosphere (5% CO<sub>2</sub>) for 18 to 24 hours at 35°C.
7. Inspect and identify organisms suggestive of group B streptococci. For definitive results use group B streptococcal antigen detection methods.

## Interpretation of Results

Strep Group B Broth is intended only for use as an enrichment step for isolating group B streptococci. After incubation the broth should be sub-cultured onto a non-selective medium to isolate potential group B streptococci. This will allow for additional biochemical and/or serological tests to be performed on isolated colonies.

- *Direct testing of the broth for group B streptococci may be an option for some commercial antigen agglutination kits*
- *Other streptococci, such as group A streptococci, may also grow in this medium*

## Quality Control

After checking the medium for correct pH, colour, depth, and sterility, the following organisms are used to determine the performance of the completed medium.

Organism	Expected Results
<i>Streptococcus agalactiae</i> ATCC 12386	Growth
<i>Streptococcus pyogenes</i> ATCC 19615	Growth
<i>Escherichia coli</i> ATCC 25922	Inhibition

7. CDC. Prevention of perinatal group B streptococcal disease: a public health perspective. Morbid Mortal Weekly Rep 1996; 45(RR-7):1-24.
8. Murray PR, Baron EJ, Pfaller MA, Tenover FC, Tenover RH. Manual of Clinical Microbiology. 7th ed. Washington: ASM, 1999.

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### Storage and Shelf Life

Our Strep Group B Broth should be stored in an upright position at 4°C to 8°C and protected from light. Under these conditions the medium has a shelf life of 12 weeks from the date of manufacture.

### References

1. Baker CJ, Clark DJ, Barrett FF. Selective broth medium for isolation of group B streptococci. App Micro 1972; 26:884-5.
2. Szilagyi G, Mayer E, Eidelman AI. Rapid isolation and identification of group B streptococci from selective broth medium by slide co-agglutination test. J Clin Micro 1978; 8:410-2.
3. Fenton LJ, Harper MH. Evaluation of colistin and nalidixic acid in Todd-Hewitt broth for selective isolation of group B streptococci. J Clin Micro 1979; 9:167-9.
4. Jones DE, Kanarek KS, Lim DV. Group B streptococcal colonization patterns in mothers and their infants. J Clin Micro 1984; 20:438-40.
5. Lim DV, Morales WJ, Walsh AF. Lim group B strep broth and coagglutination for rapid identification of group B streptococci in preterm pregnant women. J Clin Micro 1987; 25:452-3.
6. Yancy MK, Schuchat A, Brown LK, Ventura VL, Markenson GR. The accuracy of late antenatal screening cultures in predicting genital group B streptococcal colonization at delivery. Obstet Gynecol 1996; 88:811-5.