

## TBL 046 - BACITRACIN DISCS

### INTENDED USE

For identification of *Streptococcus pyogenes*

### PRODUCT SUMMARY AND PRINCIPLE

Bacitracin Disks are used in the presumptive identification of group A  $\beta$ -hemolytic streptococci and allow for differentiation of group A  $\beta$ -hemolytic streptococci from other  $\beta$ -hemolytic streptococci. Group A streptococci have been shown to be more sensitive to bacitracin than beta-haemolytic strains of other groups allowing bacitracin to be used as a rapid diagnostic agent for presumptive identification of Group A streptococci. *S. pyogenes* is a beta-haemolytic species of Gram positive bacteria that is responsible for a wide range of both invasive and non-invasive infections. *S. pyogenes* is the most common bacterial cause of acute pharyngitis, accounting for 15-30% of cases in children and 5-10% of cases in adults. Bacitracin discs can save considerable time, labour and materials if used as a screening test before serological grouping. Levinson and Frank, who employed Bacitracin impregnated filter paper discs for this purpose, observed that many sensitive beta-haemolytic streptococci were of Group A. Steamer et al compared Bacitracin disc, fluorescent antibody technique and Lancefield precipitin technique and found that the Bacitracin disc technique was most convenient for routine clinical laboratory. Bacitracin sensitivity test along with Furacin and Optochin tests are useful for distinguishing *Aerococcus viridans* and *S. milleri* from enterococci and *Streptococcus mitis*.

### INSTRUCTION FOR USE

Prepare Blood Agar (TM 473) plates and inoculate the plates with suspect organism by surface spreading technique to obtain confluent growth. Place the Bacitracin Disks aseptically onto the inoculated surface and press gently. Invert the plates and incubate at 35-37°C in 5-10% CO<sub>2</sub> for 18-24 hours till growth appears. Observe for the zone of inhibition around the disc.

A zone of inhibition greater than or equal to 14 mm indicates susceptibility to bacitracin and is presumptive of group A streptococci. For further confirmation serological grouping should be performed

### QUALITY CONTROL SPECIFICATIONS

**Appearance** : Filter paper discs of 6 mm diameter.

### INTERPRETATION

Average diameter of zone of inhibition for *S. pyogenes* observed on Tryptose Blood Agar (TM 473) after an incubation at 35-37°C for 18-24 hours..

Microorganism	ATCC	Zone of inhibition (mm)
<i>Streptococcus pyogenes</i>	19615	15 -20 mm

### PACKAGING:



In pack size of 50 Discs/vl.

### STORAGE

Store at 2 - 8°C. Use before expiry date on the label.

### REFERENCES

1. Maxted W. R., 1953, J. Clin. Path., 6:234. 2. Levinson M. L. and Frank P.F., 1955, J. Bact., 69:234. 3. Streamer C.W et al, 1962, Am. J. Dis. Children, 104:157. 4. Guthof O., 1960, Ztschr. F hyg. U. Infektionskr., 146:425



**NOTE:** Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

**\*For Lab Use Only**  
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