

## 08382 Bacitracin Disks

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. The bacitracin test should be performed in conjunction with a SXT susceptibility test (Fluka 73477) as the combined results increase the sensitivity and predictive value of the bacitracin test.

### Composition:

(1 package contains 50 Disks.)

Sterile, 6mm diameter filter paper disks impregnated with 0.04 Units of Bacitracin.

### Storage:

Store in the freezer below  $-18^{\circ}\text{C}$  in the containers provided. Allow to equilibrate to room temperature before opening then return to freezer storage immediately after use.

### Directions:

Prepare Blood Agar (Fluka 70133) 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  $35-37^{\circ}\text{C}$  in 5-10%  $\text{CO}_2$  for 18-24 hours till growth appears. Observe for the zone of inhibition around the disk.

### Interpretation of results:

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 can be performed.

### Quality control:

The list below illustrates a range of performance control strains in routine use (Blood Agar plate at  $35-37^{\circ}\text{C}$  for 18-24 hours):

Test Organisms (ATCC)	Diameter of zone of inhibition
<i>Streptococcus pyrogenes</i> (19615)	15 mm
<i>Streptococcus agalactiae</i> (27956)	< 14 mm

### References:

1. E.M. Barnes, G.C. Mead, C.S. Impey, B.W. Adams, The effect of dietary bacitracin on the incidence of *Streptococcus faecalis* subspecies liquefaciens and related streptococci in the intestines of young chicks. *Brit Poult Sci* 19: 713-723. (1978)
2. E.J. Baron, S.M. Finegold, Bailey and Scott's diagnostic microbiology, 8<sup>th</sup> ed. St. Louis: Mosby (1990)
3. A. Balows, W.J. Hausler, K.L. Herman, et al., Manual of clinical microbiology, 5<sup>th</sup> ed. Washington, DC: ASM (1991)
4. MacFaddin J.F., Biochemical tests for the identification of medical bacteria., 3rd ed. Philadelphia: Lippincott Williams & Wilkins (2000)