

NOVOBIOCIN DISKS

- For in vitro use only -

Catalogue No. DN75

Our Novobiocin Disks (5-µg) are used to differentiate *Staphylococcus saprophyticus* from other clinically significant coagulase-negative staphylococci on the basis of novobiocin resistance.

Novobiocin resistance is intrinsic to *S.* saprophyticus and some other staphylococci, but it is uncommon in other clinically relevant *Staphylococcus* species, such as *S. epidermidis*. Therefore coagulase-negative staphylococci that are resistant to novobiocin are presumptively identified as *Staphylococcus saprophyticus*.

Recommended Procedure A (Rapid)

- 1. Inoculate two tubes of Tryptic Soy Broth (Dalynn Catalogue No. TT80) lightly with the test organism. There should not be any visible turbidity.
- 2. Add a Novobiocin Disk to one of the tubes and shake for approximately 10 seconds.
- 3. Incubate both tubes at 35°C for up to five hours or until the control tube (no disk) reaches the turbidity of a McFarland Standard 0.5.
- 4. Observe the tube containing the disk for turbidity.

Interpretation of Results

The presence of turbidity in the tube containing the disk indicates resistance to novobiocin and hence a positive result for this test.

The absence of turbidity in the tube containing the disk indicates sensitivity to novobiocin and hence a negative result for this test.

Recommended Procedure B (Preferred)

- 1. Obtain a pure, overnight culture of the test organism and make an inoculum suspension equivalent to a 0.5 McFarland standard.
- 2. Using a sterile swab, streak a sample of the organism onto a Mueller Hinton Plate in three directions to obtain a heavy, confluent growth.
- 3. Aseptically place a Novobiocin Disk onto the surface of the medium and tamp it down gently.
- 4. Incubate at 35°C for 18 to 24 hours.
- 5. Measure the zone of inhibition around the disk to the nearest millimeter.

Interpretation of Results

A zone of inhibition \leq 15-mm indicates resistance to novobiocin.

A zone of inhibition >15-mm indicates sensitivity to novobiocin.

• Although there are other novobiocin-resistant, coagulase-negative staphylococci, S. saprophyticus is of the most clinical importance

Quality Control

<u>Organism</u>	Expected Results	
Staphylococcus saprophyticus ATCC 13518	R	Novobiocin resistant
<i>Staphylococcus epidermidis</i> ATCC 14990	S	Novobiocin sensitive

Storage and Shelf Life

Our Novobiocin Disks should be stored in an upright position at -20°C. At this temperature they have a shelf life of 52 weeks from the date of manufacture.

References

- 1. Almeida RJ, Jorgensen JH. Use of Mueller-Hinton agar to determine novobiocin susceptibility of coagulase-negative staphylococci. J Clin Microbiol 1982; 16:1155-6.
- Baron EJ, Finegold SM. Bailey and Scott's diagnostic microbiology. 8th ed. St Louis: Mosby, 1990.
- Isenberg HD, Ed. Clinical microbiology procedures handbook, Vol 1. Washington, DC: ASM, 1992.
- 4. Murray PR, Baron E, Pfaller M, Tenover F, Yolken R. Manual of Clinical Microbiology. 7th ed. Washington: ASM, 1999.

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