



# ANTIBIOTIC DISKS (COLISTIN, KANAMYCIN, VANCOMYCIN)

- For in vitro use only -

Cat No. DC60, DK15 & DV10

Our Antibiotic Disks are intended as an aid in the preliminary grouping of anaerobes. Concentration of each disk varies as follows: Colistin 10- $\mu$ g/disk, Kanamycin 1,000- $\mu$ g/disk and Vancomycin 5- $\mu$ g/disk.

Generally, gram-positive anaerobes are susceptible to vancomycin and resistant to colistin and gram-negative anaerobes are resistant to vancomycin. These disks are especially useful in differentiating between *Bacteroides* and *Fusobacterium* species. With a few exceptions, *Bacteroides* species are resistant to kanamycin and vancomycin and show variable susceptibility to colistin, while *Fusobacterium* species are generally resistant to vancomycin and susceptible to kanamycin and colistin.

| Type of Organism            | Vancomycin<br>(5- $\mu$ g) | Kanamycin<br>(1,000- $\mu$ g) | Colistin<br>(10- $\mu$ g) |
|-----------------------------|----------------------------|-------------------------------|---------------------------|
| <i>B. fragilis</i> group    | R                          | R                             | R                         |
| <i>B. ureolyticus</i> group | R                          | S                             | S                         |
| <i>Fusobacterium</i> spp.   | R                          | S                             | S                         |
| <i>Porphyromonas</i> spp.   | S                          | R                             | S                         |
| <i>Veillonella</i> spp.     | R                          | S                             | S                         |

R = Resistant S = Susceptible

## Recommended Procedure

1. Allow disks to adjust to room temperature prior to using
2. Using a sterile swab, streak a sample of the organism onto a Blood Agar Plate in three directions to obtain a heavy, confluent growth.
3. Aseptically place one of each of the antibiotic disks, suitably separated from each other, on the agar surface.
4. Incubate anaerobically at 35°C for 48 hours.
5. Measure zones of inhibition and record results.

## Interpretation of Results

Susceptible: Zone of inhibition  $\geq$ 10-mm

Resistant: Zone of inhibition <10-mm

- Results of disk susceptibility testing cannot be used to accurately determine in vivo antibiotic treatment

## Quality Control

| Organisms                                    | Expected Results |   |   |
|--|------------------|---|---|
|  | C                | K | V |
| <i>Bacteroides fragilis</i><br>ATCC 25285    | R                | R | R |
| <i>Fusobacterium nucleatum</i><br>ATCC 25586 | S                | S | R |

S = Susceptible R = Resistant

## Storage and Shelf Life

All of our antibiotic disks should be stored at -20°C. At this temperature they have a shelf life of 52 weeks from the date of manufacture.

## Ordering Information

| Cat#    | Description                                | Format  |
|---------|--|---------|
| DC60-25 | Colistin Disks<br>[10- $\mu$ g / Disk]     | 25/vial |
| DK15-25 | Kanamycin Disks<br>[1,000- $\mu$ g / Disk] | 25/vial |
| DV10-25 | Vancomycin Disks<br>[5- $\mu$ g / Disk]    | 25/vial |

## References

1. Vargo V, Korzeniowski M, Spaulding EH. Tryptic soy bile-kanamycin test for the identification of *Bacteroides fragilis*. *Appl Microbiol* 1974; 27:480-3.
2. Sutter VL, Citron DM, Edelstein MAC et al. *Wadsworth anaerobic manual*. 4th ed. Belmont, CA: Star Publishing Company, 1985.
3. Balows A, Hausler WJ, Hermann KL et al. *Manual of clinical microbiology*. 5th ed. Washington, DC: ASM, 1991.
4. Isenberg HD, Ed. *Clinical microbiology procedures handbook, Vol 1*. Washington, DC: ASM, 1992.
5. MacFaddin JF. *Biochemical tests for identification of medical bacteria*. 3<sup>rd</sup> ed. Philadelphia, PA: Lippincott Williams & Wilkins, 2000.

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