CADRIDE DISKS

- For in vitro use only -

Catalogue No. DC10

Our Cadride Disks are used in the presumptive identification of *Campylobacter* species based on its sensitivity to cadmium chloride.

The use of cadmium chloride is based on the observations of Kazmi, Robertson and Stern reported in 1985. Cadride disks are impregnated with 20-µg of cadmium chloride and *Campylobacter* species are susceptible to this concentration. *Campylobacter* species susceptibility to cadmium chloride is a stable feature unlike its sensitivity to other antimicrobial agents such as nalidixic acid and cephalothin. Nalidixic acid susceptibility is widely used as an aid in the identification of *C. jejuni* and *C. coli*, but is not a reliable method as these organisms and other *Campylobacter* species can demonstrate resistance.

Cadride disks can be used for differentiating *Campylobacter* species from other enteric pathogens such as *Salmonella* species, *Shigella* species, *Vibrio* species, *Escherichia coli* and *Yersinia enterocolitica*, all of which show resistance.

Recommended Procedure

1. Select 3 to 4 well-isolated colonies of the suspect organism derived from a pure, overnight culture plate.
2. Using a sterile swab streak the organism onto Brucella Agar with 5% laked horse blood in three directions to obtain a heavy, confluent growth.
3. Aseptically place a Cadride Disk onto the agar surface.
4. Incubate at 42°C for 48 hours in microaerophilic conditions (5-10% CO_2).
5. Examine the plate and measure the zone of inhibition around the disk.

Interpretation of Results

A zone of inhibition ≥16-mm indicates sensitivity to cadmium chloride and is presumptive of *Campylobacter* species.

A zone of inhibition <16-mm indicates resistance to cadmium chloride.

Additional biochemical and/or serological tests should be performed on isolated colonies from pure culture in order to complete identification.

- *Members of the related genus Arcobacter are also sensitive to cadmium*

Quality Control

Organism	Expected Results	
Campylobacter jejuni ATCC 33291	S	Cadmium sensitive
Escherichia coli ATCC 25922	R	Cadmium resistant

Storage and Shelf Life

Our Cadride Disks should be stored at -20°C and protected from light. Under these conditions they have a shelf life of 26 weeks from the date of manufacture.

References

1. Benjamin J, Leaper S, Owen RJ, Skirrow MB. Curr Microbial 1983; 8:231-8.
2. Kazmi SU, Robertson BS, Stern NJ. Cadmium chloride susceptibility, a characteristic of *Campylobacter* spp. J Clin Microbial 1985; 21:708-10.

3. Lennette EH, Balows A, Hausler Jr. W, Shadomy JH. Manual of Clinical Microbiology. 4th ed. Washington: ASM, 1985.

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