



Vibrio 0129 Differential Disc (150mcg)

DD048

For differentiation of *Vibrio* species based on sensitivity to Vibriostatic agent O129.

Directions

With a sterile swab, streak the pure, fresh culture of the test organism from sample on a non-selective Blood Agar Plate (containing 0.5% NaCl). Aseptically place both Vibrio 0129 differential disc [10 mcg,(DD047) and 150 mcg (DD048)] on the swabbed plates. Incubate at 35 – 37°C for 24 hours. Observe for zones of inhibition.

Principle And Interpretation

Shewan and Hodgkiss recognized the sensitivity of *Vibrio* to the vibrio-static agent 0129 (2,4-diamino-6,7-di-isopropyl-pteridine phosphate)(1). 0129 was found to be useful in the differentiation of *Vibrio* from other gram-negative bacteria especially *Aeromonas*, which are characteristically resistant to 0129(2). Even among the genus *Vibrio*, different species show different sensitivities to 0129(3); hence two different concentration discs are to be simultaneously tested to determine the degree of sensitivity of the species. 0129 discs of two concentrations are available: 10-µg and 150-µg. Methods for standardized disc antimicrobial susceptibility testing are employed, with any zone of inhibition around 0129 disks being regarded as sensitive. Medium to be used should be supplemented with 0.5% Sodium Chloride, as sodium ions stimulate the growth of all *Vibrio* species and are required by most.

Interpret the results as follows

Sensitive - Zone of inhibition around both 10µg(DD047)and 150µg(DD048)disc.

Resistant - No zone of inhibition around both the disc (DD047) and (DD048) Partially sensitive - Zone of inhibition around 150µg(DD048)disc and no zone around 10µg(DD047)disc.

Quality Control

Appearance

Vibrio O129 differential filter paper discs of 6 mm diameter containing 150mcg concentration.

Cultural response

Cultural response observed on seeded non-selective Blood Agar Plates, with placed Vibrio O129 discs of 10 mcg (DD047) & 150 mcg (DD048),after incubation at 35-37°C for 24 hours.

Organism	Results
<i>Vibrio parahaemolyticus</i> ATCC 17802	Partially sensitive
<i>Aeromonas hydrophila</i> ATCC 7966	Resistant

Storage and Shelf Life

Store between 2-8°C.For prolonged use store at -20°C. Use before expiry date on label.

Reference

- 1.Shewan JM, Hodgkiss W. Nature 1954; 63:208-9.
- 2.Isenberg HD, Ed. Clinical microbiology procedures handbook, Vol 1. Washington, DC: ASM, 1994.
- 3.Murray PR, Baron EJ, Pfaller MA, Tenover FC, Tenover RH, Eds. Manual of clinical microbiology. 7th ed. ASM, 1999.
- 4.MacFaddin JF. Biochemical tests for the identification of medical bacteria, 3rd ed. Williams & Wilkins, 2000.

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