



ANTIMICROBIAL SUSCEPTIBILITY
SYSTEMS

Technical Information

Metronidazole MT 4 mcg

Product Code: SD1099

Application: Metronidazole MT 4 mcg discs are used for antimicrobial susceptibility testing of anaerobic organisms.

Composition**

*Ingredients	Concentration
Metronidazole	4 mcg/disc

Susceptibility Test Procedure:

1. Prepare tubes with 5 ml of Sterile Fluid Thioglycollate Medium (DM1009)
2. Inoculate 4-5 similar colonies with a wire, needle or loop to 5 ml Tryptone Soya Broth (DM1011) and incubate at 35-37°C for 2-8 hours until light to moderate turbidity develops. Compare the inoculum turbidity with that of standard 0.5 McFarland (prepared by mixing 0.5 ml of 1.175% barium chloride and 99.5 ml of 0.36N sulfuric acid). Dilute the inoculum or incubate further as necessary to attain comparative turbidity. Alternatively, the inoculum can be standardized by other appropriate optical method (0.08 - 0.13 OD turbid suspension at 625 nm)
3. Add 10µl of the culture to the tubes.
4. Aseptically incorporate the discs in the medium.
5. Incubate immediately at 35 ± 2°C under anaerobic conditions and examine after 24 hours or longer, if necessary. 6. Record the results on the basis of appearance of growth.

Principle

Brewer (1) formulated Fluid Thioglycollate Medium for rapid cultivation of aerobes as well as anaerobes including microaerophiles by adding a reducing agent and small amount of agar. *Clostridium* grow in this medium even under aerobic conditions (2). Hence the medium can be used for testing antibiotic susceptibility for *Clostridium* spp. Adding different number of discs in a fixed volume of media will give a gradation in growth depending on the sensitivity of the culture. A positive control tube without any antibiotic disc should be kept for checking the growth promoting properties of the medium.

Interpretation:

Interpret the results on the basis of growth obtained when compared to positive control tubes. Lesser the growth more effective is the antibiotic concentration.

Quality Control

Appearance: Filter paper discs of 6mm diameter with printed "MT 4" on centre of each side of the disc.

Cultural response: Susceptibility test is carried by incorporating Metronidazole discs (SD1099) in Fluid Thioglycollate Medium (DM1009). Incubated anaerobically at 35°C for 24 hours and results are recorded on the basis of appearance of growth using *Cl.perfringens* ATCC 12924 as a test organism

No.of discs	Growth
0	Luxuriant
1	Good
3	Poor-good
5	Poor
7	Inhibited

Further Reading

1. Brewer, 1940, J. Am. Med. Assoc., 115:598
2. Quastel and Stephenson, 1926, J.Biochem., 20:1125



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Storage and Shelf Life

Discs should always be stored at -20°C to +8°C under dry conditions, along with the dessicator provided in individual pack. Use before expiry date on the label.

Disclaimer

- User must ensure suitability of the product(s) in their application prior to use.
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