

Assessment of New Antibiotic (Min. Inhibitory Concn) MIC

It is the lowest conc. of Antimicrobial Compound found to inhibit the growth of a particular Test Microorg.

[DEPTH OF BIOLOGY]

- It May applied to Assess New Disinfect. Antisept. Preservative & Antibiotics.

$\Rightarrow$ Unit $\equiv$ $\mu\text{g/ml}$ or units/ml

[DEPTH OF BIOLOGY]

Two Method

① Liq-dilution Method (Test tube Method) $\Rightarrow$

Take 10 Clean Test tube & add (0.5, 1, 1.5, 2
----- 5.0) ml respectively of test Chemical.

[DEPTH OF BIOLOGY]

Take another test tube, one is un-inoculated / without chemical & Test Microorg. & other is Control test tube used to check the suitability of the medium for growth of microorg. without chemical.

Now add 5ml double strength Medium in all Test tube.

Make up req. vol. (upto 10ml by sterile H₂O).

Incubate 37°C for 2-3 days [DEPTH OF BIOLOGY]

After Incubation, all test tube are examined for the growth in the form of turbidity.

Now M.I.C is Calculated.

[Turbidity $\downarrow$ $\rightarrow$ then the M.I.C] Min. Inhibitory Conc.

② Solid Dilution Method $\Rightarrow$

[DEPTH OF BIOLOGY]

Test Chemical is first Mixed into Molten Agar, then poured into petri Plates.

After solidification the Inoculation is spread on the surface of Agar medium.

Incubate at 37°C for 2-3 days.

& the MIC of test Chemical is calculated.

After Incubation all plates are observed for growth of Inoculum.