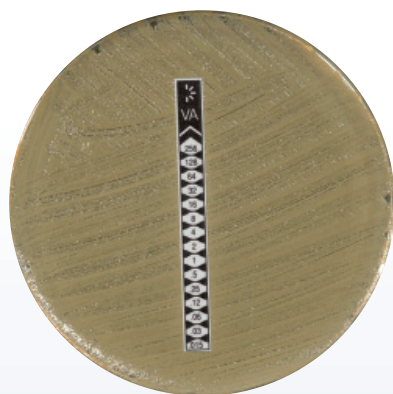




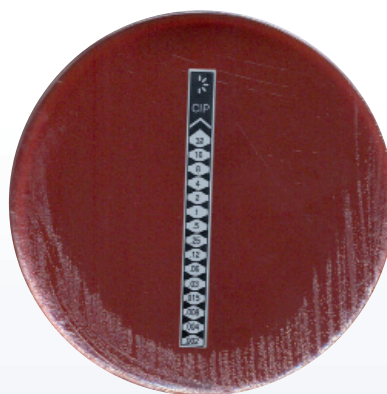
# Antimicrobial Susceptibility Testing

## M.I.C.Evaluator™ (M.I.C.E.) INTERPRETATION GUIDE

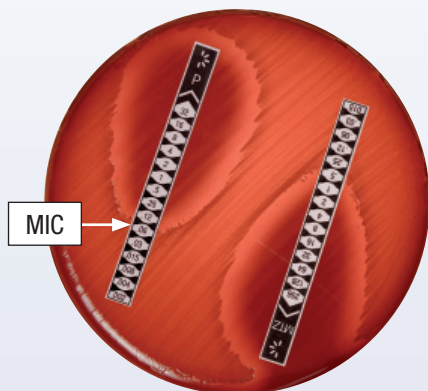
### Organism Effects



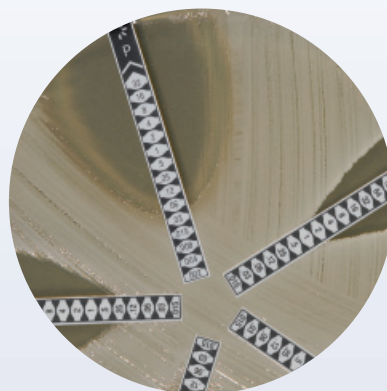
If there is no zone around the strip read the MIC as the highest value e.g. >256



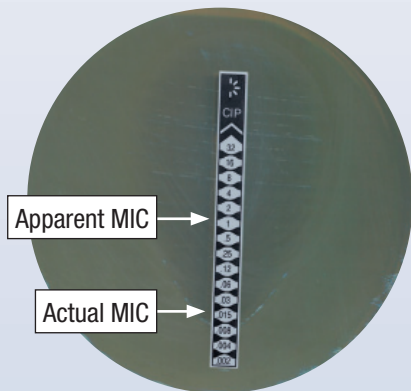
If the zone is so big that it doesn't touch the strip then read the MIC as less than the lowest value on the strip e.g. < 0.002



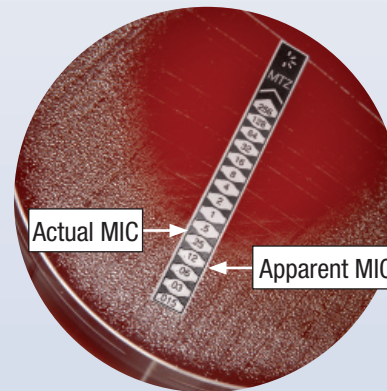
With haemolytic organisms the MIC should be read where the growth touches the strip, not where the haemolysis extends to. This is best viewed with transmitted light.



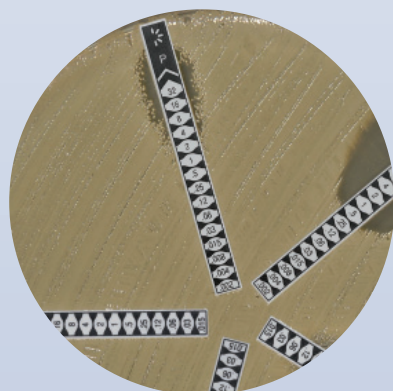
$\beta$ -lactamase activity in Staphylococci can be detected by examining the zone edge. A hazy shelving zone edge indicates a  $\beta$ -lactamase negative strain (see left); a hard edge indicates  $\beta$ -lactamase positive strain.



Ignore the swarming from *Proteus* spp.

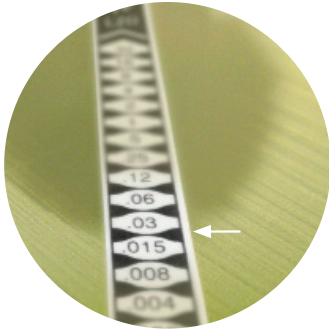


Reflected light is required to determine end points with hazy growth or pin point colonies.

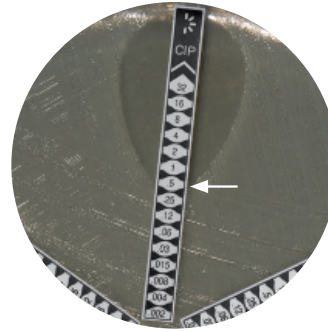


Examine the zone edge carefully for resistant organisms on the edge of the zone.

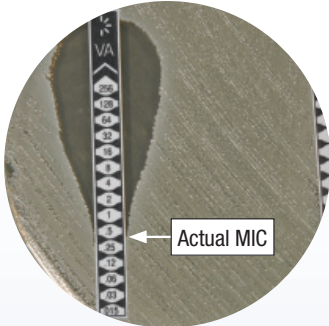
## Antibiotic Related Effects



Bacteriostatic compounds give diffuse hazy zone edges. These compounds should be read at 80% of the inhibition.



Bactericidal compounds give sharp zone edges. The MIC should be read where the growth touches the strip.

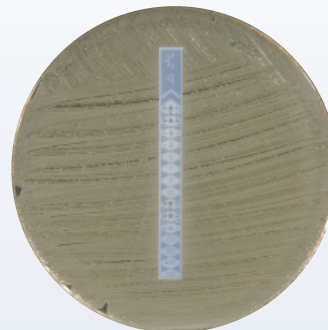


Dip effects are sometimes evident. ALWAYS read down the dip to where the growth touches the strip.



High molecular weight compounds may exhibit some diffusion anomalies. If the difference is within 1 doubling dilution, the MIC is read as the higher value. If the anomaly causes a greater than 1 doubling dilution difference then the test should be repeated.

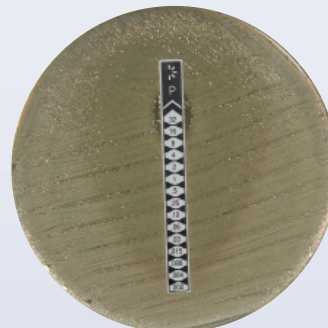
## Handling/Application Errors



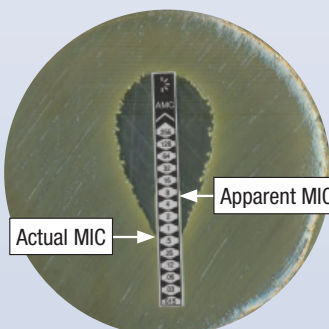
The M.I.C.E strip will not work if it is upside down. A true MIC will only be obtained if the antibiotic is in direct contact with the agar.



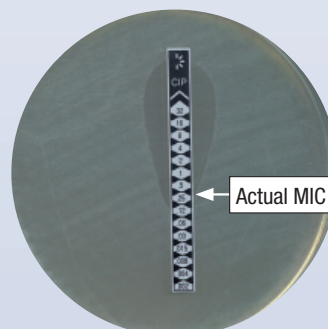
Do not move the strip if it is placed incorrectly. Antibiotic starts to release immediately so distorted zones and inaccurate MICs will be obtained.



Do not confuse contamination of the test organism with resistant subpopulations.



Tracking up the strip can occur if the plate is too wet. Ignore this thin line of growth and read the MIC where the growth would naturally touch the strip.



Occasionally the growth touches the strip at different levels. This can be caused by moving the strip during application, or imperfections in the agar causing uneven diffusion of the compound. The MIC is read as the higher value. If the difference is greater than 1 doubling dilution then repeat the test.



DEDICATED TO MICROBIOLOGY

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