

AST plate zone counting

Antibiotic susceptibility testing (AST) is a disk diffusion test commonly used in the pharmaceutical industry and in veterinary medicine. This test is used to determine the sensitivity or the resistance of a specific antibiotic to provide patient specific treatment.

Applications

This technique is commonly found in clinical microbiology laboratories where zone inhibition is used to determine whether a patient will respond to a particular antibiotic treatment.

Visualization

Plates are illuminated either from below or using reflected and/or transmitted light.

The ProtoCOL uses a unique combination of red, green and blue light to illuminate plates.

	Lighting	Background
Light colonies	Reflected light	Black
Dark colonies	Reflected light and illumination from below	White

Table 1 - Recommended lighting and background selection for counting colonies on the ProtoCOL system

N.B. If there is writing on the bottom of the plate then using a black background is preferable

Counting

With ProtoCOL software it is possible to accurately identify zones and measure the diameter of the marked zones generating zone size results. The zone of inhibition in the disk diffusion test is inversely related to minimum inhibitory concentration (MIC).

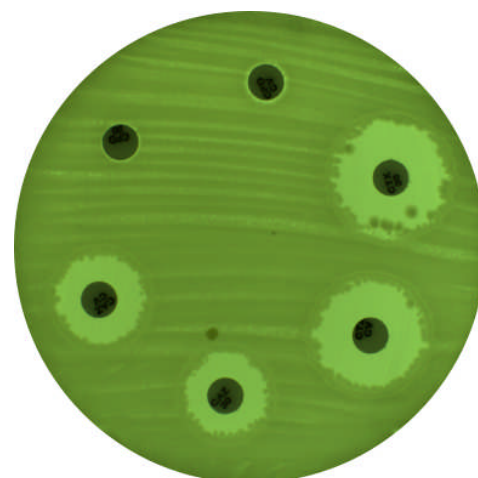


Figure 1 - AST plate

Antibiotic disks were plated on to Mueller Hinton broth agar and incubated for 18-24hrs at 37°C. This plate was imaged using reflected light and illumination from below and a white background.

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