

ABSTRACT

The aim of this work is antibiotic susceptibility testing, especially the method of Etest. Etest is a widespread technique due to its simplicity and accuracy in both research and clinical conditions. Understanding the method and its influencing factors is necessary for accurate reading of the MIC (minimum inhibitory concentration) and understanding of bacteria-antibiotic interactions. The purpose of the study was to demonstrate connections between antibiotic action mechanism and zone of inhibition shape. Also, to point out the obstacles that might complicate results interpretation. The pictures of Etest results from research papers were compared to the models of antibiotic diffusion. The zone of inhibition shape is affected by the diffusion rate, molecular characteristics of antibiotic, by the bacterial strain performances and by the specific bacteria-antibiotic interactions.