

Abstract

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Name of diploma thesis: Evaluation of activity of potential antibacterial substances through the use of microdilution broth method

Background

Aim of this diploma work was research of activity of potential antimicrobial substances. Research of antibacterial substances is one of the most important factors in pharmaceutical industry. The main reason is being the never stopping growth of bacterial resistance.

Methods

The microdilution broth method was used to test the substances. This method was used because of low difficulty and low cost. All the steps including the final analysis were done by hand.

Results

The substances were divided into groups depending on their chemical structure. The most effective was the salicylanilide derivatives group. The other groups inhibited growth of bacteria very little or were non-functional. In case of every bacterial strain, all substances which were effective were analysed.

Conclusion

Depending on the results, the most sensitive and the most resistant bacterial strains were chosen. The most sensitive reaction on tested substances had bacterial strain *Staphylococcus aureus*. The *Klebsiella pneumoniae* strain was showing the most resistance. Reasons of effectiveness or non-effectiveness of all groups of substances are discussed in the discussion chapter.