

ABSTRACT

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

The aim of this thesis is to evaluate activity of potential antibacterial substances synthesized at the Department of Inorganic and Organic Chemistry, Faculty of Pharmacy in Hradec Králové.

For testing of the antimicrobial activity was used microdilution broth method. This method is suitable for the quantitative determination of antimicrobial susceptibility. The substances were tested at eight bacterial strains, which consisted of Gram positive and Gram negative bacteria including resistant agents of serious nosocomial infections.

52 tested substances were divided into 6 groups based on a common structure. The most effective group was evaluated by a group of N-benzyl-3-chloro-pyrazin-2-carboxamide and the most effective substance of all tested was 3-chloro-N- (3,4-dichlorobenzyl) pyrazine-2-carboxamide belonging to this group. Most sensitive to the tested substances showed *Staphylococcus aureus* and *Staphylococcus epidermidis*.