

# ABSTRACT

Charles University

Faculty of Pharmacy in Hradec Králové

Department of Pharmaceutical Chemistry and Pharmaceutical Analysis

Title of diploma thesis: Amidoxime derivatives as synthetic intermediates and potential drugs

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In the theoretical part of this diploma thesis, biological effects of *N*-hydroxykarbimidoylchlorides and amino derivatives are summarized. In addition, biologically active compounds which are synthesized from *N*-hydroxykarbimidoylchlorides, in particular the compounds containing isoxazole.

In the experimental part, the procedures used for the synthesis of amidoxime derivatives are described. Initial compounds for the synthesis of *N*-hydroxykarbimidoylchlorides were the corresponding alkylated amidoximes available at the Department of Pharmaceutical Chemistry and Pharmaceutical Analysis or prepared by radical alkylation of pyrazinecarbonitrile followed by conversion to amidoxime. From the *N*-hydroxykarbimidoylchloride, an amino derivative was subsequently prepared.

All prepared compounds were characterized by melting point, NMR and IR spectra. The purity of the substances was checked by TLC and elemental analysis.

The prepared derivatives were tested *in vitro* for their antibacterial, antimycobacterial and antifungal activity.