ABSTRACT

The aim of this thesis is briefly summarize the application of magnetic susceptibility in study of soil pollution. The manuscript is based on scientific articles focusing on the above mentioned subject. In each chapter I deal with magnetic properties of rocks and minerals, in particular the magnetic susceptibility. Magnetic susceptibility in a weak magnetic field is one of the most important parameters, which indicates a change in the concentration of ferimagnetics in soils and sediments *(Kapička et al., 2004).* Main magnetic minerals are described with respect to their occurrence in soils and anthropogenic origin. Both field and laboratory instruments for the measurement of magnetic susceptibility are also described.

In the final chapter I deal with two case studies, where magnetic susceptibility measurements were used in environmental study. I compare two different geographical areas in terms of pollution, relatively clean Krkonoše Mountains National Park and industrially polluted Upper Silesia.

Keywords: antropogenic ferimagnetics, magnetic susceptibility, magnetic minerals