

Abstract

This thesis is aimed at the qualitative and quantitative analysis of natural and anthropogenic factors influencing chemical composition of underground waters of the crystalline hydrogeologic massifs. Both study areas (Šumava and Krušné hory mountains) are composed of metamorphic rocks as well as igneous granites. In these rocks the fissure aquifer have been developed.

The sampling was done at 104 mountain wells. The periodical water withdrawals were done during two-year period of 2000 – 2002. Physical and chemical parameters, main cations and anions and trace elements were determined.

The results of the work show, that the underground waters of crystalline rocks of Šumava and Krušné hory mountains are classed as the upper hydrochemical type Ca^{2+} - HCO_3^- with low values of total dissolved solids and CO_2 content. The mean pH value of studied waters lies in the field of subacid waters.

The main differences between study areas have been found at the type of anthropogenic factors affecting the chemical composition of the underground waters. It was also found, that in Krušné hory area are taking effect such anthropogenic factors, that are more dangerous for human health.