

This thesis provides an overview of mercury distribution in the forest soils located in vicinity of historical and current mercury emission sources. The sites were chosen around Bohemian Karst due to presence of emission source, i.e. iron production processes, cement plants, lime processing plants. The chosen sites were near municipalities of Králův Dvůr, Radotín and Hrádek u Rokycan. From these sites the soils samples were collected from organic and mineral horizons. Average mercury concentration in organic horizons was 288 $\mu\text{g.kg}^{-1}$, organo-mineral horizons A contained 241 $\mu\text{g.kg}^{-1}$, anthropogenic horizons M 287 $\mu\text{g.kg}^{-1}$ and horizons B 56 $\mu\text{g.kg}^{-1}$ only. The relations among mercury and soil components were tested. Strong link between mercury, soil organic matter (SOM) and sulfur was found. The result indicated that the origin of mercury in soil samples was atmospheric deposition rather than bedrock. High concentrations of oxalate extractable aluminum, iron and manganese in mineral horizons have been explained as the cause of bedrock weathering.