

## **Summary**

The Mokrsko-West deposit, situated about 20 km south from Prague, is one of the most important gold deposits in the Bohemian Massif. We can find hydrothermal quartz veins in two types of host rocks: tonalite in the Central Bohemian Plutonic Complex (CBPC) and amphibolite in the Jílové Belt (JB). A several generations of the quartz veins with different mineralization were found in the deposit.

This study has several objectives. At first, it determines and compares the chemistry of quartz samples from different generations of hydrothermal veins. In addition, this work describes the distribution of the most important trace elements. Lastly, the work compares the potential differences in the chemistry of samples from the different host rocks (CBPC and JB).

With the use of the LA-ICP-MS, 16 quartz samples from the Mokrsko-West deposit were analysed. Finally, 101 analyses were realized. From the analysed trace elements, the most important were Li, Mg, Al, Ca, Fe, Cu, Zn, As, Sb and Pb. Aluminium affects the concentration of the most of analysed trace elements. Positive correlation between Al and the other metals was also found.

The samples with high Al content also showed high concentrations of other metals (Fe, Cu, Zn, Pb) and As. Samples with lower Al content showed lower concentration of other metal elements and probably belong to the older generation of the quartz veins (Q1). Samples with higher concentration of Al, metals and As, most likely belong to the younger generation of the quartz veins (Q2). These veins show relatively rich sulphide mineralization. The research doesn't prove any significant differences between the distribution of trace elements in samples from the different host rocks (CBPC and JB).