Determination of major and trace elements in natural silicate minerals using LA-ICP-MS

Nina Grdenová

Major elements (Al, Si, K, Fe), as well as trace elements (Ga, Ge, In, Sn, Tl) were determined in whole rock samples and in major rock-forming minerals, such as quartz, feldspars, micas and amphiboles. The prime interest was observation of twins Al/Ga and Si/Ge, which should be the indicator of different magmatic (e.g. source of the parental melt and the degree of its fractionation) and hydrothermal processes (e.g. greisenization). The second one was determination of differences in contents of these elements among individual mineral species - differences based on crystal structure.