

SUMMARY

Six methods have been used to study micas from České středohoří mts.: X-ray diffractometry (transmission and reflection), ICP MS, electron microprobe, Mössbauer spectroscopy and termogravimetry. The measurements of trace elements and REE's revealed very low tendency by normalization on chondrite reservoir and primitive mantle. Micas show high contents of TiO₂ (9,47 wt.%) and BaO (up to 2,1 wt.%) in separated grains from rock. The micas classifications were determined by Tischendorf (2007) and Rieder (1998) as Fe-phlogopites. X-ray powder diffraction revealed cell dimensions and a common polytype 1M with space group *C2/m*. By Mössbauer spectroscopy have been studied the rates of Fe²⁺/Fe³⁺ and they were 1,08 – 1,86 (except rock sample, which were 9:1). Termogravimetric measurement until 1450°C revealed weight jump from 1120°C to 1270°C.