Príčiny sfarbenia limnosilicitov z lokality Banské v Slanských vrchoch (východné Slovensko)

Causes of colouration of limnosilicites from the occurrence Banské (Slanské vrchy Mts., Eastern Slovakia)

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Abstract

The article presents new knowledge on a study of silica rock (limnosilicite) with electron microscopy on the locality Banské in the Slanské vrchy Mts., Eastern Slovakia. We studied five colour varieties of silicites - black, light brown, dark brown, gray and white color, and the cause of these colour variations. Chemical composition of black, grey and white silicite is characterized by high dominance of Si, only black one contains 0.07 wt.% Fe_2O_3. Brown varieties contain up to 2.68 wt.% Fe_2O_3. White and grey colour of limnosilicite is the same original colour in which quartz and chalcedony crystallize. Black colour of limnosilicite is probably caused by submicroscopic carbonized organic rests. Brown colour is caused by the presence of iron hydrooxides, which have been formed by the decomposition of pyrite. Pyrite occurs mainly in the form of framboids that are the product of sulphur bacteria activity.

Key words: *limnosilicites, framboidal pyrite, Banské, Slanské vrchy Mts., Slovak Republic*