

SUMMARY

In the NW part of Bohemian massif occur small bodies of mafic intrusive rocks. These rocks are called redwitzites and they include various rock types from diorites to quartz gabbros. They are always close to granites OIC (old intrusive complex). They are probably precursors of Late Variscan granitoid magmatism.

Small body of redwitzites is situated near Abertamy (7 km NW of Jáchymov) in the western part of Krušné hory Mts. This body is inhomogeneous; it is formed by two types of mafic rocks. Both rocks distinguish in mineralogy and chemistry. First type, biotitic gabronorite, forms the western part of the body, another type, biotitic – hornblende quartz gabrodiorite, forms the NE part. The expressive sign of Abertamy redwitzites are flakes of brown biotite which can be as large as 2 cm. They are often poikilitic. Gabronorite is a fine-grained green-grey rock consisting of orthopyroxene, biotite, feldspar, quartz and hornblende. Most of the mafic minerals are altered to uralite. Accessories are represented by apatite, zircon, monazite, allanite and sphene. From the chemical point of view is gabronorite enriched in compatible elements (Mn, Fe, Mg, Ni, Cr, Sc, V, Ca, Co, Zn, Cu).

Gabrodiorite is medium-grained rock and it is colored light gray. Its composition is similar to the gabronorite. It does not include orthopyroxene, but it has more amounts of quartz and K – feldspar. Likewise granites is gabrodiorite enriched in incompatible elements (Cs, Rb, K, Ba, Pb, Sr, Eu, U, Ta, Nb, Th, REE).

Both mafic rocks have low content of SiO₂ (47,7 – 52,2 hm. %), relatively high content of total Fe and MgO and they have small amount of alkaline. LREE prevail over HREE, the Eu anomaly is not apparent or it is lightly positive.

Redwitzites from Abertamy originated by fractional crystallization of mixed magma. This magma originated by mixing of mafic mantle magma and felsic crustal magma in ratio 8:2. The age of studied rocks was determined by Pb – evaporation of single zircons. The age of gabrodiorite ($322,6 \pm 2,0$ Ma) is similar to the age of granites OIC ($322,8 \pm 3,5$ Ma). It manifests the contemporary existence of mafic and granitic magma.