PETROGRAPHIC CHARACTERISTICS OF THE MAGMATIC ROCKS OF DILJ MT. (SOUTHERN PART OF THE PANNONIAN BASIN, CROATIA)

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Dilj Mt. (Croatia) is situated in the southernmost part of the Pannonian Basin. During the 20th century several researchers worked in this area (e.g. KOCH, 1917; ŠPARICA & CRNKO, 1973 and MALEZ & TAKŠIĆ, 1977). According to the Basic Geological Map 1:100 000 (ŠPARICA, 1986) albite rhyolites and metaandesites occur as an elongated, partially disintegrated body, with tectonic and/or covered contact with Middle and Upper Miocene and Early Pliocene sedimentary deposits. PAMIĆ & ŠPARICA (1988) presented a petrological study of volcanic rocks from the area assuming their Badenian age. BELAK *et al.* (1991) described the appearance of Badenian rhyolitic volcanoclastic rocks from middle parts of Dilj Mt. Detailed geological mapping in 1:50 000 scale on Dilj Mt., beside acid and intermediate volcanic rocks, revealed basic varieties of magmatic rocks.

This work presents basic results regarding magmatic rocks of Dilj Mt. in general. The most frequent igneous rocks on Dilj Mt. are acid volcanic rocks while the basic rocks present sporadically. HORVAT *et al.* (2011) gave preliminary petrographical and geochemical report about the acid volcanism. Basic magmatic rocks are represented by volcanic rocks and vein or dyke (?) of hypabyssal rocks. The contact between the basic hypabyssal and acid volcanic rocks is sharp and does not show chilled ("frozen") margins. Basalt fragments are detected with fragments of Upper Cretaceous bioclastic limestones (Scaglia type) in tectonic breccias. Furthermore, field investigations have not confirmed an active igneous contact of acid and intermediate volcanites with surrounding Badenian sediments. All of the above, as well as finding of centimetre to decimetre pebbles of acid volcanites within the Badenian and Sarmatian deposits (KOVAČIĆ *et al.,* 2011) suggest that the studied magmatic rocks of Dilj Mt. are most probably older than Badenian.

Acid and intermediate volcanic rocks, rhyolites and andesites, are light green to green-gray in colour. They are microcrystalline with aphyric to porphyritic texture. The structure is homogeneous or vesicular. The main composition is uniform and consists of: quartz + albite and/or peristerite + K-feldspar ± pyroxene + secondary minerals (chlorite, epidote, illite, calcite). Feldspars occur as phenocrysts (up to 2.5 mm) and as groundmass microlites (0.1 to 0.4 mm). They are affected by sericitization and chloritization. The groundmass is cryptocrystalline, holocrystalline or hypocrystalline. Microlites are sometimes radially arranged. Polymorphic modifications of SiO_2 filled up vesicles.

Mafic magmatic rocks are basalts and microgabbros (dolerites). Basalts have relict-ophitic and arborescent textures and homogeneous structure. Prismatic plagioclase grains are uniform in size (0.7 mm). The groundmass is a mixture of very fine-grained mineral crystals (pyroxene (?), chlorite and epidote) and volcanic glass. Cracks are filled with calcite. Microgabbro has a grained texture and homogeneous structure. The main mineral constituents are coarse grained prismatic basic (?) plagioclase grains moderately sericitized and chloritized and affected by albitization along the edges. Among them there are relatively large (1.1 to 1.9 mm) hypidiomorphic primary (?) amphiboles represented by pale green chloritized hornblende.

The investigated rocks with the SiO_2 content ranging from 73.32 to 76.62 wt.% and from 55.46 to 63.29 wt.%, according to PEACOCK (1931) and WINCHESTER & FLOYD (1977), are classified as middle- to high-Si rhyolites to rhyodacites and trachyandesites, respectively. However, according to the relationship of Nb/Y vs. $Zr/TiO_2 \times 0.0001$ some samples are classified as subalkalic basalts, while the hypabyssal samples in the TAS diagram for plutonic rocks (WILSON, 1989) are positioned in the gabbro field.

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