

CORRELATION AND MAGMA TYPES OF THE MIOCENE SILICIC PYROCLASTIC FORMATIONS IN THE BÜKKALJA REGION, HUNGARY: A ZIRCON MORPHOLOGY STUDY

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During the Miocene, repeated explosive eruptions of silicic magmas occurred in the Pannonian Basin, simultaneously with the main period of basin formation. Unfortunately, the majority of the volcanic products are covered by post-Miocene sediments that make the study of these volcanic rocks difficult. Traditionally, the Miocene silicic pyroclastic rocks of the Pannonian Basin have been divided into three horizons based on primarily stratigraphic observations. Nevertheless, we still do not know the mechanism of the eruptions, the source areas of the explosive events, the source of the magmas and the geodynamic relationship of these major volcanic events.

The Bükkalja region provides an excellent area to study these volcanic products, since they have several outcrops here. Recent investigations (SZAKÁCS *et al.*, 1998; MÁRTON & PÉCSKAY, 1998) have pointed out that each of the three horizons are represented in this area. However, correlation of the magmas are still a subject of debate.

Zircon is an important accessory mineral in silicic rocks. Morphology of this mineral depends upon the type of magma (calc-alkaline, alkaline or peralkaline). This lead PUPIN (1980) to introduce a method to distinguish different granitic magmas, based on the morphology of their zircon population. We apply this method for silicic volcanic rocks in the Bükkalja area with an attempt to see similarities and/or differences among the previously distinguished Miocene pyroclastic horizons.

References

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