
Geochemistry of the Devonian Basic Volcanites near Stínava (Drahany Upland, Czech Republic)

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Small bodies of volcanites (tuffs and spilites) are exposed in the complex of Devonian and Lower Carboniferous rocks forming tectonic slices in the Upper Carboniferous Culm sediments of the Drahany Upland between the villages of Ptení and Stínava (W of Prostějov, Central Moravia). The studied spilitized rocks from an abandoned iron-ore deposit near Stínava can be classified as basalts and those near Ptení as trachybasalts. The rocks have the character of transitional basalts. Mineral composition (albite, chlorite, leucoxene, epidote, carbonate, sericite) and high $\text{Na}_2\text{O}/\text{K}_2\text{O}$ ratio indicate strong alteration probably during the sea floor metamorphism and/or weak regional metamorphism.

Trace element distribution can be well correlated with within-plate alkali-basalts. REE patterns correspond with those of the Devonian volcanites of the Šternberk-Horní Benešov belt in the Nížký Jeseník Mts. However, the contents of K, Rb, Ba and Cr, Ni were found to be lower in the volcanites from the Stínava region. Geological features such as pillow lavas, a relation to marine sediments or the character of alteration might indicate ocean island environment for the origin of the basalts. Slight petrographical and chemical differences between the basalts from Stínava and Ptení may indicate different volcanic centre of origin and/or position in different tectonic slices.