

CLAY MINERALS WITHIN THE CARBONATE SEQUENCES IN TINJAN AREA (ISTRIA, CROATIA)

BARUDŽIJA, U., TADEJ, N., ALJINOVIĆ, D., VRKLJAN, M.

Faculty of Mining, Geology and Petroleum Engineering, University of Zagreb [Rudarsko-geološko-naftni fakultet, Sveučilište u Zagrebu],
Pierottijeva 6, Zagreb, 10000, Croatia

E-mail: ubarud@rgn.hr

Clayey limestones in the Upper Albian shallow-marine carbonate sequences from Tinjan area in Istria (Croatia) were investigated. Two layers of clayey limestone (70–90wt% of calcite) overlay the sequences containing carbonate breccias, interlaminated pelsparites-ostracodal micrites and cyanobacterial limestones as well as “quartz diagenetic sediments” (Barudžija, 2003). Insoluble residues of clayey limestones predominantly contain illite and/or mixed layer illite-smectite dominated by illite layers, illite-smectite with higher amount of smectite layers than previous and randomly interstratified minerals. Some of other phyllosilicates, probably smectites, are also present. Insoluble residues also contain quartz (10–20wt%), feldspars (up to 5wt%) and amorphous material.

Since the appearance of the layers with clayey limestones in Upper Albian sequences in Istria is closely connected with the appearance of “quartz diagenetic sediments” (Durn et al., 2003), this mineral assemblage can be indicative of the origin of their parent material.

References

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