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M. Mileusnić[1], A. Kudelić[2], K. Wriessnig[3], F. Ottner[3], G. Durn[1]

[1]*Faculty of Mining, Geology and Petroleum Engineering, Department of Mineralogy, Petrology and Mineral Resources, Zagreb, Croatia*

[2]*Institute of Archaeology, Zagreb, Croatia*

[3]*University of Natural Resources and Life Sciences, Department of Civil Engineering and Natural Hazards, Vienna, Austria*

A Bronze Age ceramics and possible raw materials in the area of Turopolje in northwest Croatia have been studied. The main goal of this study is to determine the availability and types of raw materials, as well as to reconstruct the technological processes (preparation of raw material and firing technique) of pottery making at archaeological site Kurilovec-Belinščica (Virovitica cultural group dating from 15-12 century BC, i.e. the end of the Middle Bronze Age and the beginning of the Late Bronze Age). For this reason three clayey materials, outcropping in the vicinity of the archaeological site, were collected. Two sampling locations were found close to the settlement (both at a distance of about 600 m) and one is the clay pit, located about 4 km from the archaeological site, which is currently in exploitation for brick production. Detailed mineralogical analyses were performed for four samples of clay materials (XRD, STA; grain size analysis), 16 samples of experimental ceramics made from these materials (XRD, OM), as well as 26 samples of ancient ceramic shards (XRD, OM, STA, IR). Comparison between the data obtained from the analyses of potential raw materials and those obtained from the analyses of the experimental and archaeological ceramics will be reported. Possible archaeological implications, such as the extent of environmental influence on technological processes (availability of raw materials) and socio-economic factors (matter of choice), will be discussed as well.