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Železářská struska z polykulturní archeologické lokality Boršice v podhůří Chřibů

Iron slag from polycultural archaeological site Boršice (Chřiby Mts., Czech Republic)

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Abstract

A piece of iron slag was found on an archaeological site near Boršice on the SE margin of the Chřiby Mts., Czech Republic, which is known by occurrence of artifacts from the Early Neolithic (5700 - 5000 BC), Bronze and Early Medieval Ages. We present results of laboratory investigation of this slag. It is composed mainly of fayalite laths, which belong to two generations, less occur glass phase, wüstite and leucite, exceptionally also metallic iron. The composition of fayalite displays unified chemical trend and ranges in rather narrow span ($Fa_{93.7-96.3}DCS_{1.1-5.8}Fo_{0.0-5.0}Te_{0.0-0.2}$). The glass phase contains in addition to common compounds (Si, Fe, Al, alkalis) also elevated contents of P and Ca. The microstructure of the studied slag as well as chemistry of individual phases are very homogeneous across the whole sample. We interpret this slag as an iron smelting slag, originated during production of iron from ores using the direct method. The used ore was in all probability a *limonite* bog ore, whereas the use of local fresh and/or weathered pelosiderites is not probable on the basis of the recorded phase composition and chemical compositions of individual phases.

Key words: *Chřiby Mts., iron smelting slag, fayalite, wüstite, leucite, glass, limonite bog ore*

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