

## Ceramic petrography and Late Bronze Age ceramic material. Case study from Niemczanska site, Wrocław, Poland and reflections on the ceramic petrography condition in Poland

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Niemczańska site is situated in Wrocław, within the north part of the Lower Silesia in Poland. The region contains a number of archaeological sites from different prehistoric and historical periods. Research on the Late Bronze Age Lusatian Culture settlement site on the Niemczanska street have taken place between 2003 and 2005. The site provided rich ceramic material with over 4000 fragments of pottery vessels, few stone artifacts and numerous archaeological objects such as houses, production, storage and waste pits remains (Fig. 1.).

Ceramic analyses consisted of research on its structure, technology of production and purpose of utility. Within set obtained during excavations, several types were designated basing on diversity in elements mentioned above. Majority of the pottery represents “kitchen” or “hard” ceramics with characteristic features of large size vessels and thick walls, used mainly for storage and kitchen purposes. As an example of other ceramic type a “thin” pottery appeared.



Fig. 1.: Pottery fragments in the pit during the excavations in 2003 (Photo taken by J. Baron)

Further phase of research was based on the microstructure analysis taken under the microscope in transmitted and reflected light. During the laboratory research the aim was to analyse the mineral composition of admixture and to examine the microstructure in comparison to the macrostructure (form) of the pottery. 17 thin sections were taken under study presenting a chosen sample from the whole set. During my presentation I am going to present results of the microscope analyses drawing special attention to the relation of the admixture and microstructure with a macrostructure. Petrographic examination has shown the mineral composition of both types of the ceramics. As “basic” elements appearing in most of the samples quartz, plagioclase and microcline grains should be mentioned. Interesting fact observed was domination of stone (mostly granitoids and sandstone) as well as old ceramic fragments in “hard” ceramic, and the fact that grains of big size seem not to be connected with any particular type of ceramic. Exact differentiation in a grain size is going to be presented on the poster. Varied

occurrence of rounded and angular grains also proves miscellaneous admixture sources deriving from both random and previously prepared breakstone.

Directional texture appeared in few of the samples (e.g. NIEM/05/199/a sample, presented on the Fig. 2.) what led to conclusion that this vessels have been prepared in a peculiar way which included strong smoothing of the surface.

The poster is also going to focus on the color, type and burning of the clay minerals in a ceramic mass (as well as following conclusions on the temperature of vessel baking).

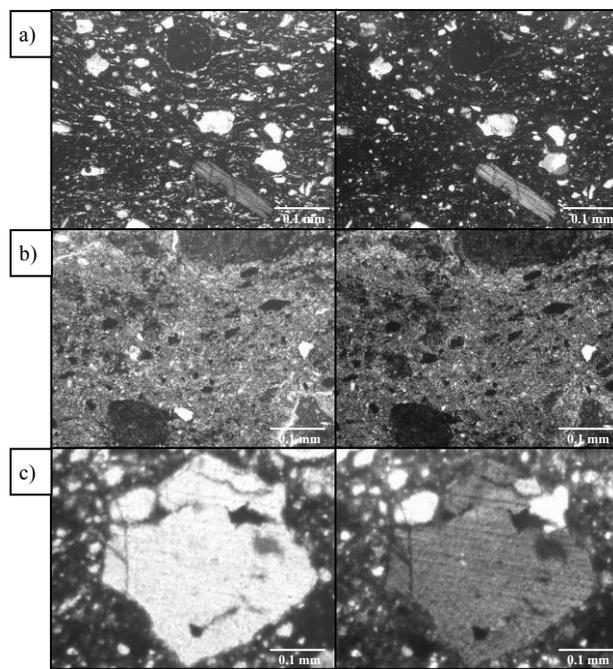


Fig. 2.: Microscopic photos of ceramic samples number: a) NIEM/05/199/a, b) NIEM/05/161/a, c) NIEM/05/150/a taken with 10x enlargement in transmitted and reflected light. Photos: a) petite admixture of a “thin” ceramics with 0.18 mm organic piece, b) ceramic mass of a “hard” ceramics with ferruginous grains of old ceramics, c) 0.4 mm angular grain of plagioclase in a “thin” ceramic sample.

Another part of the presentation will be associated with the general condition of the ceramic petrography in Poland. Whereas expanding in some European academic centers (especially in British geoarchaeology), condition of ceramic petrography in Poland is still in a prior state. Several researchers have recently started to introduce this discipline into archaeology (Łaciak, 2007) unfortunately basing mostly on the ordered research. On the other hand geological scientists are usually more concerned with stone remains than ceramics. As a result of these reflections, another aim of the presentation is emphasis of the importance of conducting this kind of research in the geoarchaeological environment.

Łaciak, D. (2007): Śląskie Sprawozdania Archeologiczne, 49/1: 147-154