

Maciej Pawlikowski*,

**Micro-artefacts as indicators of human activity.
Tel el Farcha archaeological site. The Nile Delta Egypt**

**/ Cathedral Mineralogy, Petrography and Geochemistry
AGH – University of Science and Technology, Krakow, Poland*

Investigation supported by AGH grant no 11.11.140.158

Abstract: The main aim of the studies was research performed in order to distinguish kinds and quantities of micro-artefacts occurring within a selected profile and in a selected trench of Tel El Farcha anthropogenic site was carried out. Micro-artefacts are those fragments of anthropogenic origin, which are smaller than 2,0 mm in size, so the fragments, which go through the sieve during sifting of the material at the site. They represented fragments of bones, burnt clay, fragments of charcoal and micro-flakes of flints resulting from treatment of stone tools.

The obtained results were used to draw profiles and maps of their distribution within the profile and anthropogenic trench. Obtained results were used to reconstruction of human activity in the selected areas of the site.

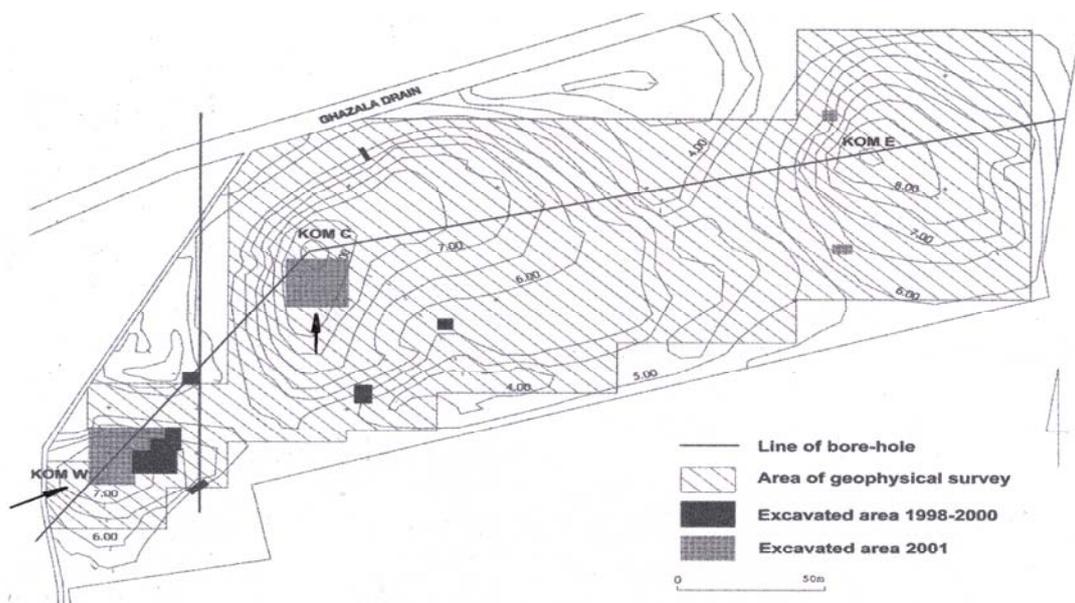


Fig.1 Location of archaeological trenches. Site - Tel el Farha (Jucha 2005).
Arrows show places of sampling

Material subjected to the studies

Samples from south wall of the trench C and the area to the west of place, namely trench W (Fig. 1) were collected to the studies. The samples were sift through the sieve and the fraction $< 2,00\text{mm}$ was separated. Next, the smaller grains were washed out from the fraction. Then, samples were dried and subjected to the studies (Fot. 1). Microscopic studies of 300 grains were performed on such prepared material, paying special attention to those of anthropogenic origin (Fot. 2)



Fot. 1 Examined fraction 0.1-2.0 selected from tested samples



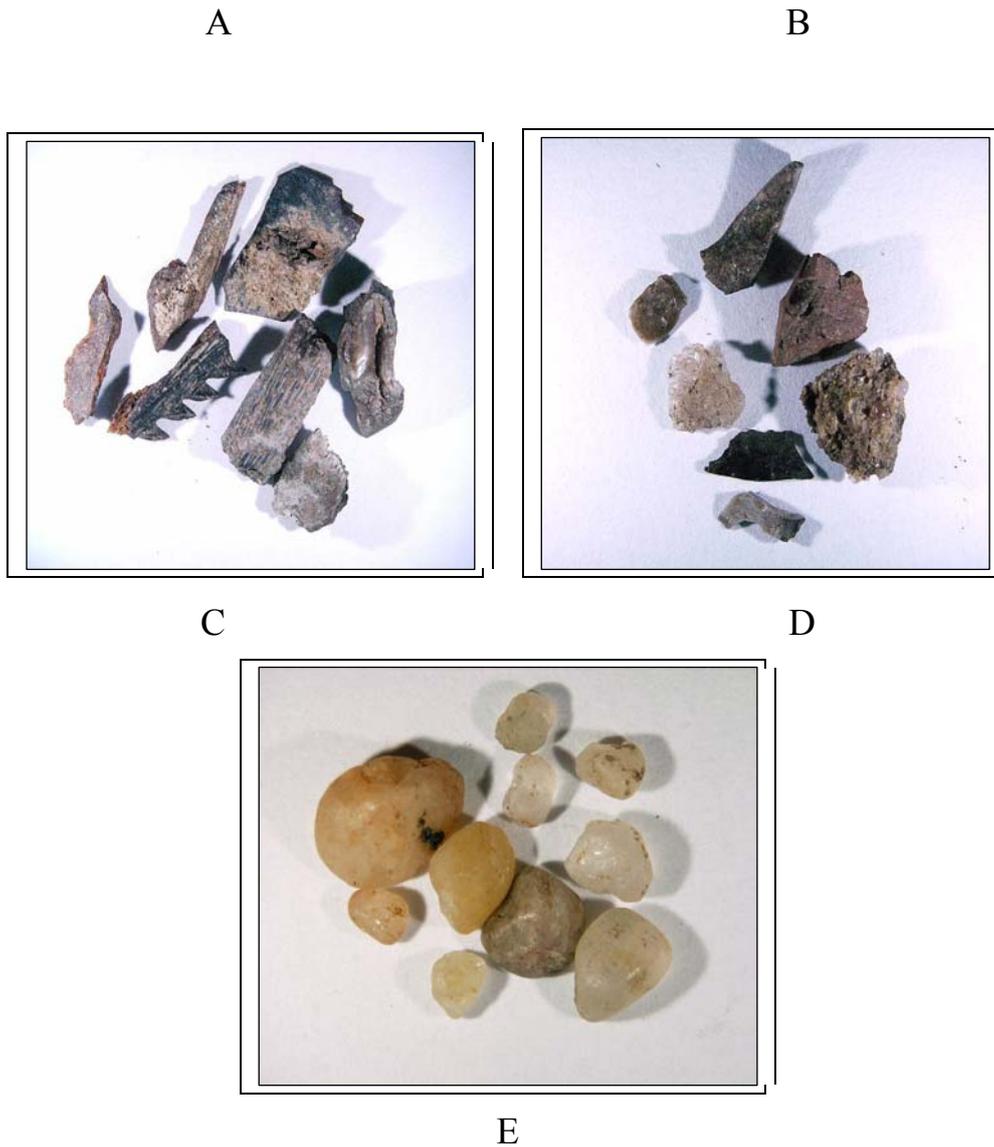


Photo 1 Micro-artifacts selected from fraction 0.1-2.0 mm of the examined samples. A- charcoal, B- burnt clay, C- small fragments of bones, D- microflakes of flints, E- natural grains of quartz. Digital microscope. Enlarged 5 x.

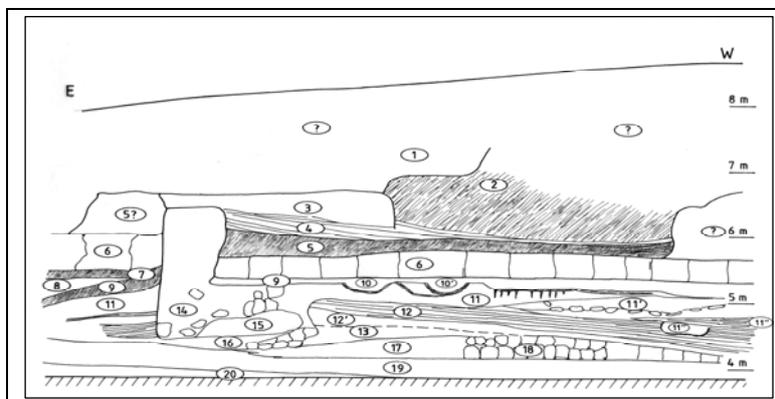


Fig. 2 Southern geological profile of central (C) archaeological trench. South wall. Nos in circles - places of sampling

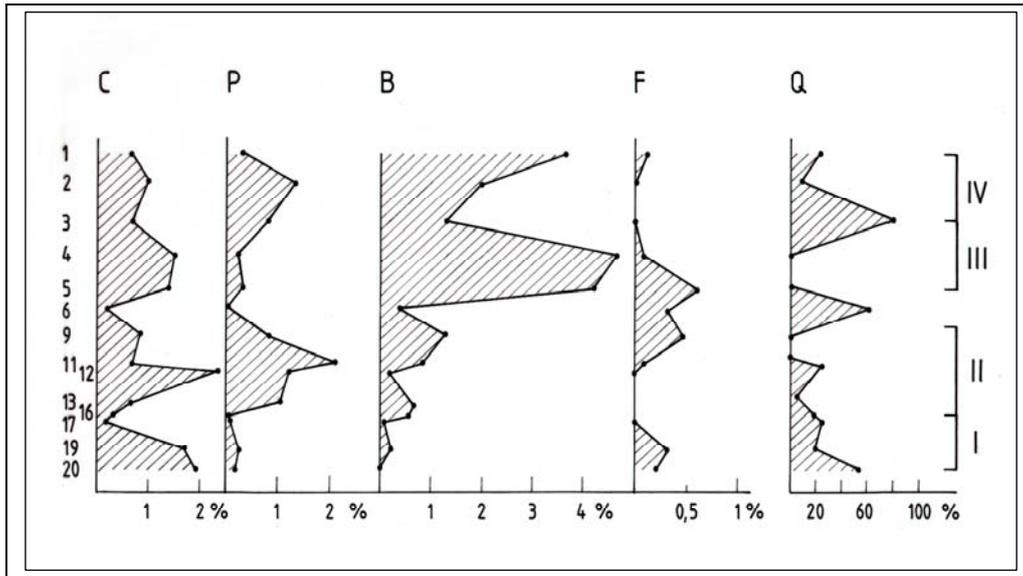


Fig. 3 Diagram showing changes in the amount of tested micro-artifacts in sediments showed as a profile at figure above.

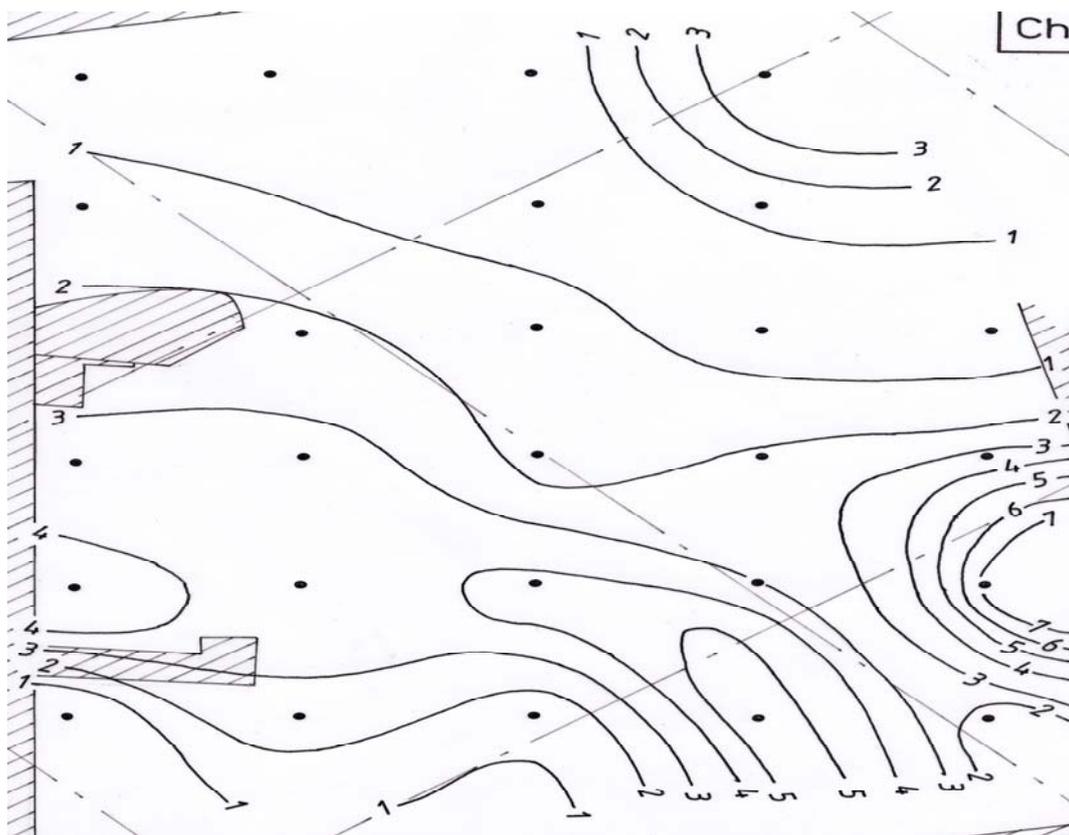


Fig. 4 The map shows the occurrence of small fragments of charcoal Market - walls of dried bricks. Seen archaeological net (10 x10 m)

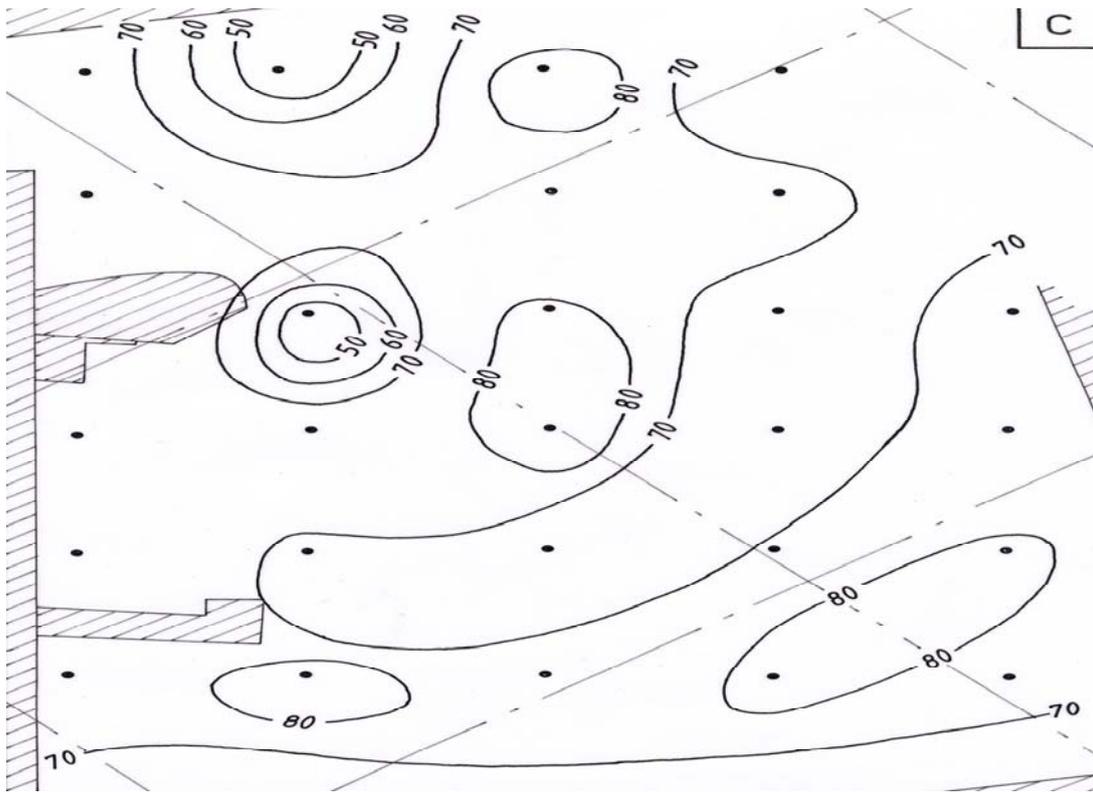


Fig. 5 The map shows the occurrence of small fragments of burnt clay
Market - walls of dried bricks. Seen archaeological net (10 x10 m)

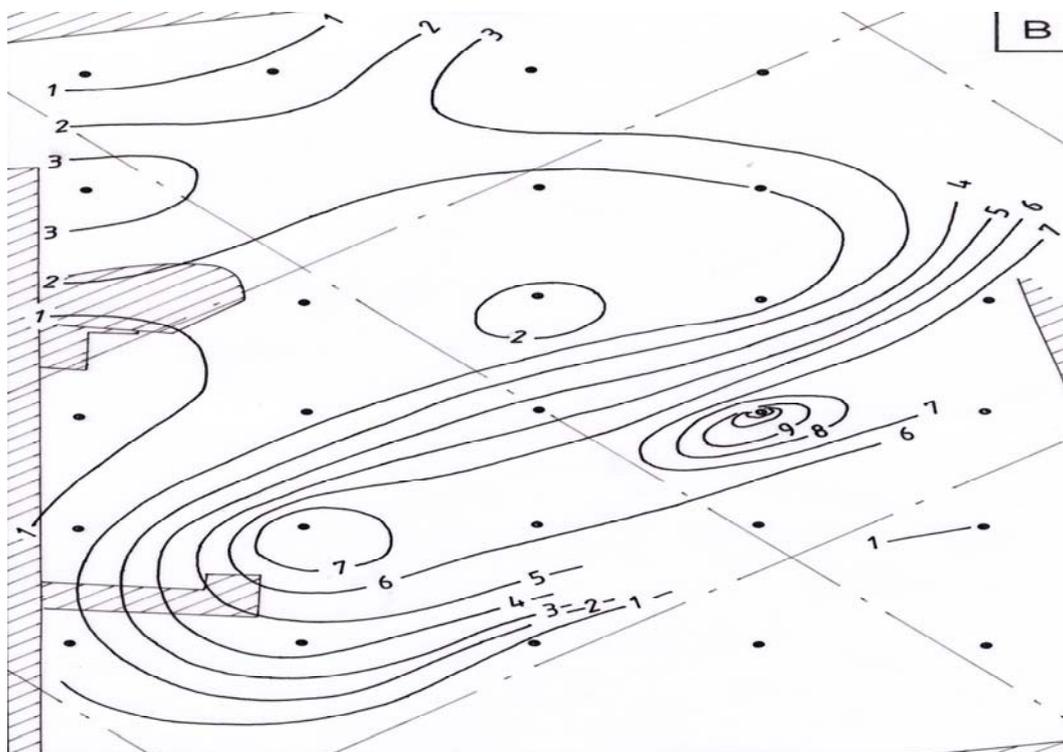


Fig. 6 The map shows the occurrence of small bone fragments
Market - walls of dried blocks. Seen archaeological net (10 x10 m)

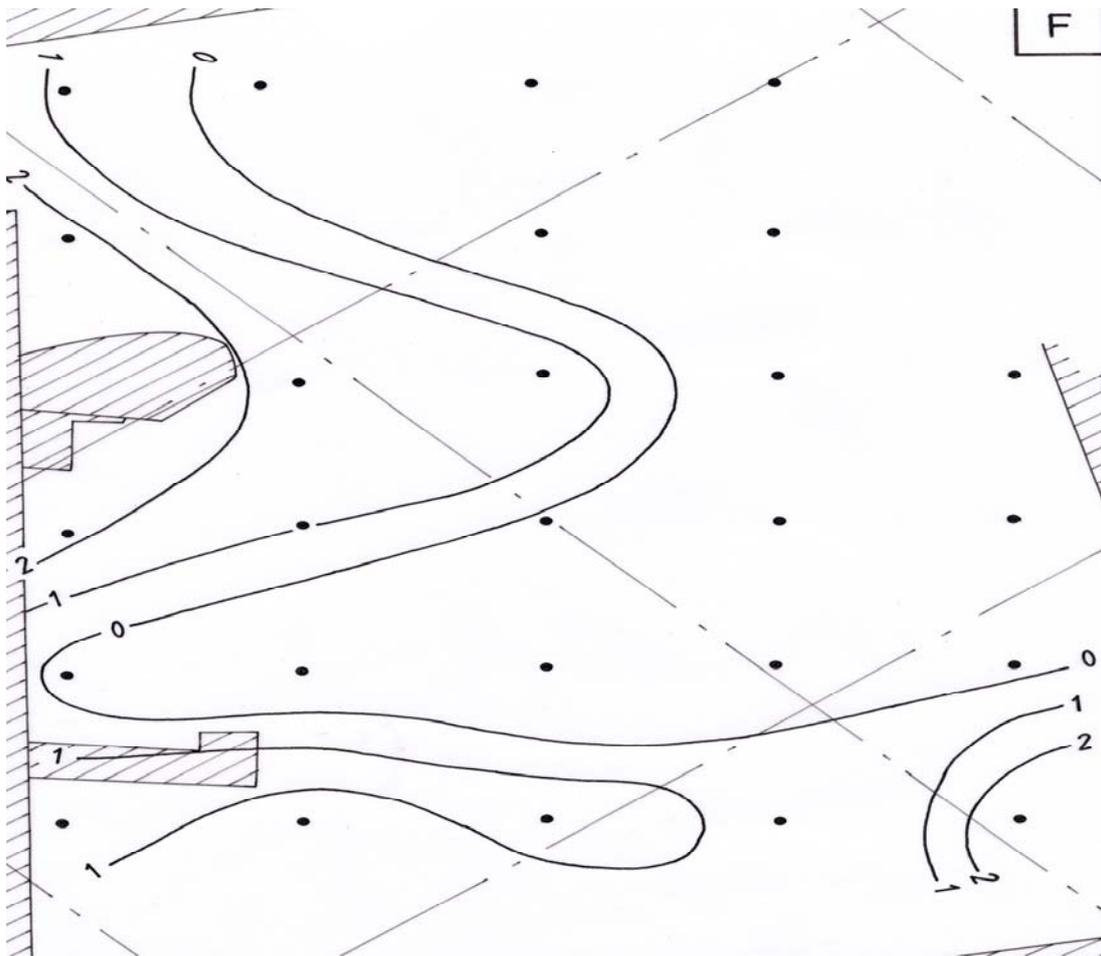


Fig. 7 The map shows the occurrence of flint micro-flakes
Market - walls of dried blocks. Seen archaeological net (10 x10 m)

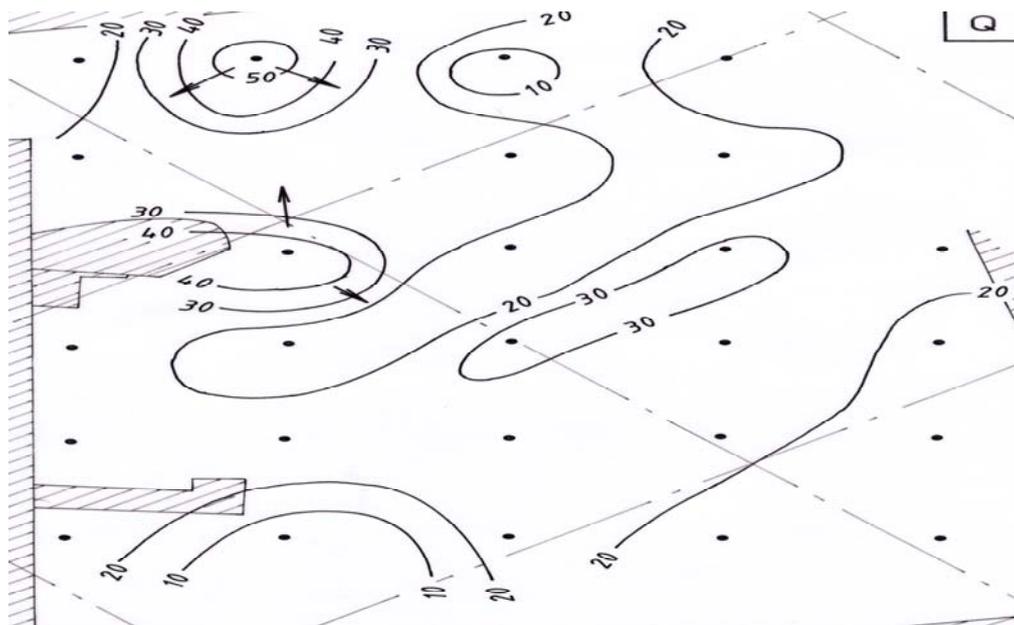


Fig. 8 The map showing the occurrence of quartz grains
Market - walls of dried bricks. Seen archaeological net (10 x10 m)

Conclusions

Investigation showed the small fraction and micro artefacts are useful for reconstruction of human activity at archaeological layers as well as on old anthropogenic surfaces. Obtained data confirm interesting relations between small artefacts for example bones and charcoal, small flakes of flints and burned clay etc. All these relations are helpful for reconstruction of functioning of the site during its long history.