



Long-term clay raw material selection and use in the region of Classical/Hellenistic to Early Byzantine Sagalassos (SW Turkey)

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ABSTRACT

A provenance study was carried out on coarse ceramics from the Classical/Hellenistic to Mid-Byzantine city of Sagalassos, SW Turkey. The ceramics were sampled from the excavations of the city, and clay raw materials were sampled throughout its ancient territory. Used techniques were optical microscopy and electron microprobe analysis on thin sections, geochemical analysis (fusion ICP/MS and mineralogical analysis (X-ray diffraction). The geochemical/mineralogical diversity in the ceramics is not as wide as for the clay raw materials. It seems that even at the restricted scale of this study, the resources were limited to the area around the ancient site. The differences between the ceramics are likely due to the use of different ophiolitic clay bodies being exploited for their production.

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1. Introduction and aims

Sagalassos is a Classical/Hellenistic (5th–2nd century BC) to Mid Byzantine (12th/13th century AD) town situated in the south-western parts of Turkey (Fig. 1), where, since 1986, multi-strategy archaeological research is carried out by the Katholieke Universiteit Leuven (Waelkens, 1993, 2008; Waelkens and Poblome, 1993, 1995, 1997; Waelkens and Loots, 2000; Waelkens and Degryse, 2008). During most of its existence, Sagalassos also functioned as a regional centre for pottery production (Poblome, 2011). The most representative local product was the mass produced red slipped tableware, also known as Sagalassos red slip ware (SRSW), datable between the end of the 1st century BC and the 7th or early 8th century AD (Poblome, 1999; Poblome et al., 2010). Previous provenance studies indicated that SRSW was manufactured from a single clay source exploited in a nearby valley system, close to the present-day village of Çanaklı (Fig. 2) (Ottenburgs et al., 1993). On the other hand, large amounts of local coarse wares show a clear chemical and petrographical distinction with these tablewares (Ottenburgs et al., 1993). This paper focuses on the macroscopically defined group of the so-called coarse ‘Fabric 4’ wares, from which mostly cooking and

storage/transport vessels were produced (Degeest, 2000). Previous chemical analyses showed more heterogeneity than for the tablewares (Ottenburgs et al., 1993; Degeest et al., 1997; Poblome et al., 1997, 2002; Degryse et al., 2003; Degryse and Poblome, 2008). With this study, an attempt is made to explain the attested heterogeneity. The aim of this paper is to present a petrographical characterization of the coarse Fabric 4 wares found at Sagalassos and in the associated study region. Together with bulk chemical analysis, X-ray diffraction and focussed electron microprobe analysis, an attempt is made to link the observations to the varieties in the local geological substrate (Fig. 2), with the following questions in mind: Are there different exploited sources to produce these ceramics, or could the heterogeneity of the sherds be the result of different preparations methods (adding tempers or mixing clays)? A comparison with the different clay sources from the territory of Sagalassos is made. Solving these issues is important from an archaeological point of view as the outcome will feed our understanding of the regional system of production, and how it evolved through time. Indeed, the nature of the clay used for Fabric 4 is compatible with an origin from the Potters’ Quarter in eastern suburbia of Sagalassos (Degryse et al., 2003), but so far no evidence has been discovered, such as Fabric 4 wasters, which could hint at Fabric 4 being an urban product. On the other hand, the fact that, from the third quarter of the fourth century AD onwards, also a local amphora series was being produced in Fabric 4 could be indicative

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Fig. 1. Location of Sagalassos in Turkey.

for production of these vessels in farmsteads where also the products, such as wine or oil, intended for the amphorae were available (Poblome et al., 2008). This is a common production logic in the Roman world (Peacock and Williams, 1986) and could imply that various different production units associated with farms were active in the production of late Roman Fabric 4 amphorae. If, moreover, the local amphora fabric characteristics prove to be compatible with those of the cooking wares found at Sagalassos and made from the same Fabric 4, the late Roman production units could have had a diverse production portfolio. Finally, when the sampled Fabric 4 cooking ware sherds from earlier, Roman imperial centuries, and even from the Classical/Hellenistic era, should provide a compatible set of results, a decentralised, rural model of production could be reconstructed throughout many centuries of occupation at Sagalassos.

The importance of this paper lies in the fact that it illustrates how a small-scale regional provenance study of ceramics can contribute greatly to the larger picture of a long-term and multi-dimensional archaeological and interdisciplinary project such as the Sagalassos project. It also forms a solid base for further ceramological research in the area. The detailed and long-term research at Sagalassos leads to wider and more detailed conclusions than a single case study ever could. The importance of the study is mainly reflected in the ability of establishing and distinguishing whether the main types of pottery appearing in Hellenistic to Roman periods are locally produced or imported. These results add a very important voice to the discussion on the changes in craft activities, and by extension possible cultural changes in Sagalassos, Pisidia and the area of Southwest Turkey in general. It is moreover prevalent to dissolve the danger on circular

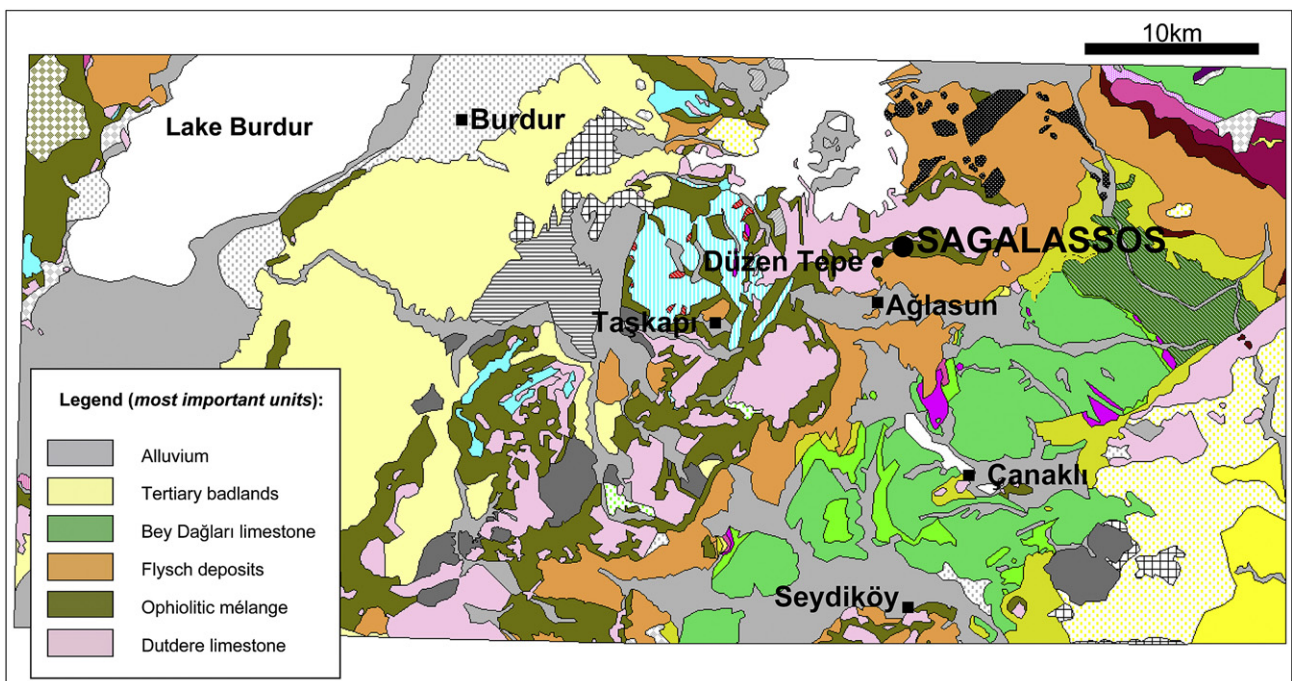


Fig. 2. Geological map of the area around Sagalassos, corresponding to the Roman territory of the city, with the locations of the archaeological sites and villages mentioned in the text (De Laet, 2007). The legend describes the most important geological units in the area.

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