ISSN 1301 7667

MERSİN ÜNİVERSİTESİ KILIKIA ARKEOLOJİSİNİ ARAŞTIRMA MERKEZİ
YAYINLARI
MERSIN UNIVERSITY PUBLICATIONS OF THE RESEARCH CENTER OF
CILICIAN ARCHAEOLOGY

OLBA
XXIX

(Ayrıbasım / Offprint)

MERSİN
2021

KAAM YAYINLARI
OLBA
XXIX

ISSN 1301 7667

Yayıncı Sertifika No: 18698

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ARTS & HUMANITIES CITATION INDEX, EBSCO, PROQUEST
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Baskı / Printed by
Sonsöz Gazetecilik, Matbaacılık, Rek. İnş. San. ve Tic. Ltd. Şti.
İvedik Mah. Matbaacılar Sit. 1341. Cad. No: 56-58 İvedik OSB - Yenimahalle / ANKARA
Tel: +90 312 394 57 71 Fax: +90 312 394 57 74 • Sertifika No: 18698

Grafik / Graphic
Digilife Dijital Basım Yay. Tan. ve Org. Hiz. San. ve Tic. Ltd. Şti.
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Tel: +90 324 231 14 16 • www.digilifemersin.com

MERSİN ÜNİVERSİTESİ KILIKIA ARKEOLOJİSİNİ ARAŞTIRMA MERKEZİ
(KAAM) YAYINLARI-XXIX
MERSIN UNIVERSITY PUBLICATIONS OF THE RESEARCH CENTER OF
CILICIAN ARCHAEOLOGY (KAAM)-XXIX

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MERSİN
2021

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MERSİN ÜNİVERSİTESİ

KILIKIA ARKEOLOJİSİNİ ARAŞTIRMA MERKEZİ

BİLİMSEL SÜRELİ YAYINI 'OLBA'

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Dipnot (kitaplar ve makaleler için)

Richter 1977, 162, res. 217.

Diğer Kısaltmalar

age.	adı geçen eser
ay.	aynı yazar
vd.	ve devamı
yak.	yaklaşık
v.d.	ve diğerleri
y.dn.	yukarı dipnot
dn.	dipnot
a.dn.	aşağı dipnot
bk.	Bakınız

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Olba is printed once a year in May. Deadline for sending papers is the end of November each year.

The Journal 'Olba', being published since 1998 by the 'Research Center of Cilician Archeology' of the Mersin University (Turkey), includes original studies done on prehistory, protohistory, classical archaeology, classical philology (and ancient languages and cultures), ancient history, numismatics and early christian archeology of Asia Minor, the Mediterranean region and the Near East.

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   d. Titles within the article should be written in small letters and be marked as bold. Other choises (big letters, underline or italic) should not be used.

2. Punctuation (hyphen) Marks:

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   *It should be set in brackets and one space should be given after the dot (fig. 3);

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Footnotes (for books and articles):

Richter 1977, 162, fig. 217.

Miscellaneous Abbreviations:

op. cit.	in the work already cited
idem	an auther that has just been mentioned
ff	following pages
et al.	and others
n.	footnote
see	see
infra	see below
supra	see above

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OLBA XXIX, 2021, 349-362
ISSN 1301-7667

Makale Geliş | Received : 21.10.2020
Makale Kabul | Accepted : 12.11.2020

A NEW MEMBER OF THE LATE ROMAN D *KOINÉ*? A New Red-Slipped Pottery Group Found at Seleukeia Sidera

Bilge HÜRMÜZLÜ – Burak SÖNMEZ *

ÖZ

Geç Roma D *Koiné*si'nin Yeni Bir Üyesi mi?

Seleukeia Sidera'da Ele Geçen Yeni Bir Grup Kırmızı Astarlı Seramik

Antik Dönem Pisidia Bölgesi kentlerinden olan Seleukeia Sidera Antik Kenti'nde son yıllarda gerçekleştirilen çalışmalarda, kentte Geç Roma İmparatorluk Dönemi'nde kayda değer bir seramik üretimi olduğuna dair verilere ulaşılmıştır. Kırmızı astarlı seramikler, form özellikleri ve kil yapılarının makroskopik özellikleri açısından Antik Dönem'de bölgenin en önemli üretimleri olduğu bilinen Sagalassos Kırmızı Astarlıları ile özdeş görünmektedir. Bununla birlikte detaylı tipoloji çalışmaları ve gerçekleştirilen arkeometrik analizler sonucunda seramikler içinde form ve bezeme özellikleri ile dikkati çeken bir grubun Sagalassos Kırmızı Astarlıları ve çevredeki diğer kentlerde bulunan, arkeometrik analiz sonuçları yayınlanmış diğer kentlerden farklı olduğu görülmüştür. Dışa çekik geniş ağızda kabara şekilli tek sıra kabartma bezeme taşıyan bu kâse grubu, ilk bakışta çevredeki diğer kentlerin kırmızı astarlı grupları ile oldukça benzer görünmektedir. Bununla birlikte ağızda yer alan bezemeler ve ağız formunun detaylı şekilde incelenmesi, kendine özgü farklılıklara sahip olduğunu göstermiştir. Form detayları ve ağız bezemeleri açısından farklılıklar taşımaktadırlar. Seleukeia Sidera örnekleri ile benzer şekilde ağızda kabara şekilli kabartma bezemenin görüldüğü Arykanda, Perge ve Aizanoi gibi kentlerde de farklılıklar görülmektedir. Ayrıca Sagalassos dışındaki kentlerde bu örnekler çok az sayıda örnekle temsil edilmektedir. Seleukeia Sidera seramikleri üzerinde gerçekleştirilen arkeometrik analizlerin sonuçları, çevre kentlerde tespit edilen örneklere göre daha sık şekilde karşımıza çıkmaları ve tutarlı alt tiplere sahip olmaları bir arada değerlendirildiğinde, bu grubun Seleukeia Sidera'da ya da yakın çevresindeki bir atölyede üretildiklerini göstermektedir. Bu durum, Poblome ve Fırat tarafından önerilen, Geç Roma İmparatorluk Dönemi'nde Batı Anadolu'daki kentlerde sosyo-kültürel ve sosyo-ekonomik ilişkiler sonucunda birbirleri ile ilişkili üretimler yapan kentlerin oluşturduğu LRD *koiné*si içinde pay sahibi olduğuna işaret etmektedir.

Anahtar Kelimeler: Seleukeia Sidera, Pisidia, LRD *koiné*si, bölgesel üretim.

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ABSTRACT

Research in recent years at Seleukeia Sidera has revealed indications of a significant pottery production in the city during the Late Roman Imperial Period. The red slip pottery from Seleukeia Sidera seems to be similar in terms of its formal features and macroscopic characteristics of its clay fabric to that known to be produced at Sagalassos, one of the most important production centres of the region in Antiquity. Yet, as a result of detailed typological studies as well as archaeometric analysis, it has been established that a group of pottery from Seleukeia Sidera, which draws attention with its formal and decorative characteristics, is different from the Sagalassos Red Slip Ware examples. At first glance, this group of bowls, which carry a single row of pearl-like relief decoration on their everted wide rims, looks remarkably similar to the red slipped groups of the surrounding cities. However, a closer examination of the decorations and the rim form indicated distinctive differences. Similar to the examples of Seleukeia Sidera, such differences can also be observed on bowls with a pearl-like relief decoration on the rim found at cities such as Arykanda, Perge and Aizanoi. Moreover, these examples are represented by only very few examples in cities other than Sagalassos. The results of the archaeometric analysis carried out on Seleukeia Sidera pottery suggest that this group was either produced at Seleukeia Sidera or in a workshop in its vicinity, as they appear more frequently there than the examples registered in the surrounding cities and have consistent subtypes as well. This production also seems to adhere to the concept of the LRD *koiné*, put forward by Poblome and Fırat, which consisted of production centres that made interrelated products resulting from socio-cultural and socio-economic relations between the cities of Southwestern Anatolia during the Late Roman Imperial Period.

Keywords: Seleukeia Sidera, Pisidia, *koiné* of LRD, regional production.

Archaeological research carried out in the ancient region of Pisidia and its immediate surroundings has so far yielded evidence for pottery production in the territories of Sagalassos, Pednelissos and Kibyra. At Sagalassos, which stands out as a major pottery production centre in the region since the Hellenistic Period, detailed typological studies as well as several archaeometrical analyses of potterys have attested mass production of red slip ware between the 1st and 6th centuries AD[1]. At the time, it not only supplied the cities of Pisidia and environs, but also exported to cities in distant locations[2]. Secondly, archaeological surveys conducted in the territory of Pednelissos generated data that attested to a comprehensive pottery production and allowed the identification of pottery workshops in the territory of the city[3]. More specifically, large amounts of misfired pottery and materials used in pottery production such as stamps and moulds were found in several dumps. From this material it was understood that these workshops manufactured potterys belonging to the Late Roman D ware group, a category of red-slipped pottery which had a widespread circulation in the Mediterranean Basin during the Late Roman Imperial Period and was originally thought to have been produced on Cyprus[4]. Finally, potterys are also known to have been

1 Ottenburgs – Jorissen – Viaene 1993; Degryse et al., 2000; Degryse et al., 2002.
2 Poblome 1999; Poblome et al., 2013, 193.
3 Kenkel 2007; Jackson et al. 2012.
4 Jackson et al. 2012, 112. It should be emphasized that archaeometric analyses have not been carried out on these potterys; only the typological features of the finds have been examined and some samples of misfired sherds have been published.

made at the city of Kibyra, which is located in the area to the southwest of Pisidia. It has been stated that the production in the city continued from the Late Hellenistic Period to the Early Byzantine Period[5].

As a result of typological studies and archaeometrical analyses recently carried out on red-slipped potterys from Seleukeia Sidera within the scope of ongoing PhD research[6], a new group of red slip ware can now be identified at this Pisidian city. It is the aim of this brief study to present this group of red-slipped pottery and characterize them as the products of a new pottery production centre, possibly located at Seleukeia Sidera or in its immediate vicinity. In addition to this, our objective is to situate this new group of red slip ware in the LRD *koiné* concept proposed by Poblome and Fırat[7]. This concept is borrowed from philology to explain pottery production interaction in Antiquity. *Koiné* stands for the "common language" of the Greeks in Antiquity. According to this theory, different pottery groups produced in Southwest Anatolia are not isolated groups. Instead they should be evaluated as different dialects of a common socio-cultural and socio-economic language[8].

Red-slipped bowls with pearl-shaped relief decorated rim

As part of the studies carried out on the red-slipped potterys found at Seleukeia Sidera between 2016-2019 during field surveys and excavations[9], a total of 69 red-slipped bowls with pearl-like relief decoration on the rim were found and classified according to their form features (fig. 1-2)[10]. Bowls belonging to this group generally have an everted or thickened rim (fig. 1/1-9), except for one type (fig. 1/10). Pearl-like relief decoration made in a single row on the lip is a common feature. On some sherds, stamped decorations such as circles and crescents in single row can be observed on the protruding rim.

In the pieces of this group, the fired clay fabric is medium hard, while the amount and sizes of pores are variable. Small limestone inclusions of different densities can be seen in all of the potterys. The colour of the clay fabric varies, with different shades of red and brown in a small number of samples. Mostly the colour is 5YR-6/6 reddish yellow and 5YR-6/8 reddish yellow. In the fabric of 16 pieces, there are lump-shaped

5 Özüdoğru – Dündar, 2007; Uygun – Dökü, 2008; Japp, 2009, 95. Although typological studies have been made on these potterys, archaeometric analyses have not yet been carried out.

6 The Roman and Late Roman Imperial pottery production at Seleukeia Sidera is being studied in the scope of a PhD thesis under the title of "Pottery Production and Trade Connections in Seleukeia Sidera during the Roman Imperial Period" by Burak Sönmez. The Phd thesis and the results discussed in this paper supported by Scientific Research Fund of the Süleyman Demirel University. Project Number: SDK-2019-7041. We are thankful to Scientific Research Fund of the Süleyman Demirel University for their support.

7 Poblome – Fırat 2011, 49.

8 Poblome – Fırat 2011, 42.

9 In Seleukeia Sidera, field surveys were conducted between 2016 and 2019 as part of Isparta Archaeological Survey Project (IAS) by Prof. Dr. Bilge Hürmüzlü-Kortholt. See: Hürmüzlü – Sönmez – Ayaşan 2017; Hürmüzlü-Kortholt et al. 2017; Schenk et al. 2018. Excavations are having been carried out at Seleukeia by the team under the direction of Prof. Dr. Bilge Hürmüzlü-Kortholt since 2018. See: Hürmüzlü et al. 2018; Hürmüzlü et al. 2019; Hürmüzlü – Sönmez – Atav-Köker, in press; Hürmüzlü 2020.

10 For six fragments from excavations in 1993, see: Laflı 2000, Fig. 2/17, 19-23.

inclusions present, burgundy (7.5R-3/3 and 3/4 dusky red) or dark brown (7.5YR-2.5/2 very dark brown) in colour and ranging in size from small to very large (fig. 3). They are understood as pieces of pure clay mixed into the clay fabric in a wet state. The colour of the slip and its application on the vessels are not standard (fig. 2). In some pieces, the slip was applied thinly and with colour fluctuations, while in other pieces it was more carefully applied, resulting in an even thick and monochrome appearance. Almost all the pieces have a slip in shades of red, with a small number of pieces have a brown slip: the most common slip colour is 2.5YR-5/8 red, followed by 10R-5/8 red and 10R-5/6 red.

The numbers and the consistent variations of the red slipped group from Seleukeia Sidera can be considered as an important indicator of local or regional production at or near Seleukeia Sidera. Examples of red-slipped bowls belonging to the same group of Seleukeia Sidera have also been identified at Sagalassos[11], while similar groups of local production were discerned in some cities of the surrounding regions such as Aizanoi, Arykanda, Perge and Hierapolis[12]. Although the products of these cities are similar in form and relief decoration, they are different from the Seleukeia Sidera group in terms of the application of the details. Only a few examples have almost the same form features, such as a bowl from Hierapolis[13] and a bowl type from Aizanoi[14]. On the other hand, other above-mentioned cities such as Sagalassos, Arykanda and Perge have their own variations. A well-known bowl type from Sagalassos, Variant 1B233 has a pearl-like rim decoration[15] as seen at Seleukeia Sidera, yet details of pearl-like motifs and rim shapes of Seleukeia Sidera are different. As for Arykanda and Perge, details of rims and pearl-like decorations are overtly different[16]. Examples in terms of protruding rim with decoration, constitute an inconsiderable group in the red slip pottery assemblage.

In addition to the bowls with pearl-like relief decoration on their rims, a group of bowls and dish body fragments, of which only the tondo part is preserved, can be included in the red slipped group discussed above, on the basis of the similarity of the clay and slip characteristics, as well as the element contents (fig. 4-5) . The clay and slip properties of these bottom fragments are similar to the bowls evaluated above. They carry stamped geometric and floral decoration in their tondos. In Sagalassos Red Slip Ware, a type that can be considered similar to the Seleukeia Sidera red slip bowls is known. The form has been evaluated by Poblome under the title Variant 1B233[17]. A find from the Domestic Area at Perge in Pamphylia has similar characteristics

11 Examples of the local/regional production Type 1 with pearl-like relief decoration on the protruding rim are similar to the Sagalassos Red Slip Variant 1B233. See, Poblome 1999, 96-98, Fig. 41. However, there are many pieces with different characteristics.

12 Aizanoi: Ateş 2015, 102, Pl. 30/182; 127, Pl. 53/296; Arykanda: Yaman 2018, 134-135, Pl. 26/140-143; Perge: Fırat 1999, 34-35, Pl. 45/158; Hierapolis: Poblome et al. 2001, 121, Fig. 2/6.

13 Poblome et al. 2001, 121, Fig. 2/6.

14 Ateş 2015, 102, Pl. 30/182; 127, Pl. 53/296.

15 Poblome 1999, 96-98, Fig. 41.

16 Arykanda: Yaman 2018, 134-135, Pl. 26/140-143; Perge: Fırat 1999, 34-35, Pl. 45/158.

17 Although the type is similar in general appearance to the Seleukeia examples, there are differences in details. In the Sagalassos examples, the rim is flat and the relief decoration on the rim is different; see Poblome 1999, 96-98, Fig. 41.

as the Seleukeia examples[18]. A group of red-slipped potterys found at Rhodiapolis in Lycia that are stated to be locally produced, also have similar form features as the instances from Seleukeia Sidera[19]. And among the locally produced potterys of Lycian Arykanda, there are also comparable pieces[20]. This situation can probably be explained as the result of local pottery workshops producing their own variations of a common type due to interaction with workshops in surrounding cities. In Anemurium, a group of wares found in a small sector and suggested to be locally produced. One example of these group is reminiscent to those found in Seleuekia Sidera[21]. Similar examples of Seleukeia Sidera fragments found at Sagalassos and cities in the surrounding regions are all dated in the 5th - 6th centuries AD based on the stratigraphical contexts from which they originated. For now, this date range can also be accepted for the Seleukeia Sidera group until contextual dates are available from future excavations at the site.

The red slip bowls evaluated here constitute a consistent group in terms of form and macroscopic features of the clay fabric. Archaeometrical analysis performed on 34 bowls and five stamped tondo fragments confirmed this observation[22]. As a result of petrographic analysis, it became clear that the potterys were mostly produced from mixed clays containing vermiculite, illite and smectite. It is understood that the clay resources were taken from an area with alkaline and volcanic content. Furthermore, quartz, sericite, muscovite, chlorite, plagioclase, opaque minerals and chert were found to be part of their mineralogical composition. XRF analyses of the Seleukeia examples (fig. 6) established different element values from those of Sagalassos Red Slip Ware[23], from the red slipped pottery group of unknown origin which was found at Hierapolis, Perge and Sagalassos[24], and from the SRSW Similar-1 and SRSW Similar-2 groups detected at Perge[25].

When the Seleukeia Sidera Red Slipped potterys are compared with those of Sagalassos Red Slip Ware, it is understood that the element values are substantially different. The values of Al2O3 and Na2O are dissimilar from the Sagalassos values in all analysed pieces, while being consistent within the group. As a result of the XRF analysis, it was understood that the Al2O3 values ranged between 12.44-14.82%.

18 In the instance from Perge, there is a pearl-shaped relief on the flattened rim. However, this piece was evaluated under the Piecrust Rim group, dated after 580's AD; see Fırat 1999, 34-35.

19 An example from this group is the piece of a flared bowl. The lip is not thickened and the rim is grooved by scraping; see Akın 2012, 46, No. 196.

20 The group classified as Arykanda Local/Regional Form 3 consists of bowls with flared and upturned rim and a wide rim ledge. An example from this group is close to the Seleukeia Sidera group. Notches were made on the rim; see Yaman 2018, 134-135, Pl. 26/140.

21 In Anemurium, these group have been found in 7th century context, see Williams 1989, 53, Fig. 27, No. 315. The typical feature of this group is the fingerprint decoration on the rim. On the other hand, the application of the decoration on the mouth and the clear difference between the clay properties make it difficult to establish close connections between the groups from Anemurium and Seleukeia Sidera.

22 Archaeometrical analyses were carried out in Archaeometry Laboratory at the Earth Sciences Application and Research Center (YEBİM) of the Ankara University, by the team under the direction of Prof. Dr. Yusuf Kağan KADIOĞLU.

23 Poblome et al. 1997, 514, Table 1.

24 Poblome et al. 2001; 125-126.

25 Özden-Gerçeker 2015, 139-141.

The analyses performed on Sagalassos Red Slip Ware, on the other hand, yielded Al2O3 values between 15.00-16.46%[26] and 16-18%[27]. The situation is the same for the SRSW finds from Perge where Al2O3 values are in the range of 15.03-16.66%[28]. Na2O values observed to be 0.04-0.5% in the Seleukeia Sidera samples[29], were 0.83-1.13%[30] and 0.7-1.2%[31] in the SRSW finds from Sagalassos, and between 0.71-1.04% in the Perge samples[32].

P2O5, CaO, TiO2 and MnO values have different values in most of the examined pieces. P2O5 values in the Seleukeia Sidera samples vary between 0.13-2.47%; the value is lower in six pieces compared to samples from Sagalassos and Perge, and higher in 23 pieces. In the Sagalassos finds, the P2O5 value ranges between 0.20-0.32%[33] and 0.2-0.7%[34]; in the Perge samples, it is in the range of 0.18-0.35%[35]. CaO values in twelve pieces from Seleukeia are higher than in the Sagalassos and Perge samples; it varies between 10.04-13.2%. In Sagalassos samples, these values are between 6.07-9.03%[36] and 5-7%[37], and in Perge 7.64-9.95%[38]. TiO2 values varying between 0.71-0.92% are lower than the SRSW samples from Sagalassos and Perge in ten pieces. TiO2 values in the Sagalassos samples are between 0.82-0.91%[39]; for the pieces from Perge, it changes between 0.86-0.94%[40]. MnO values are in the range of 0.06-0.09%, lower in eighteen pieces than the values of the analysed SRSW pieces from Sagalassos and Perge which are in the range of 0.08-0.11%[41]. Fe2O3 values ranging between 6.67-8.87% only vary in a few pieces. It is lower in three pieces and higher in two pieces compared to the examples from Sagalassos and Perge. Si2O3 values have the same value ranges in samples from all three cities.

The element content of the red slip group of unknown origin, which is similar to the Sagalassos Red Slip Ware and detected at Hierapolis, Perge and Sagalassos, is also different from that of the red slip group found at Seleukeia Sidera[42]. Al2O3 and Na2O values of Seleukeia Sidera samples are again lower than those of the red slip group samples from these cities. SiO2 values are in the same range, while values of MgO, P2O5, K2O, CaO, TiO2, MnO and Fe2O3 vary at different rates[43]. A similar situation is observed in the SRSW Like-1 and SRSW Like-2 groups from Perge[44].

26 Poblome et al. 1997, 514, Table 1.
27 Ottenburgs – Jorissen – Viaene 1993, 164, Table 1.
28 Özden-Gerçeker 2015, Tablo 98.
29 Na2O value for an exceptional piece is 1%.
30 Poblome et al. 1997, 514, Table 1.
31 Ottenburgs – Jorissen – Viaene 1993, 164, Table 1.
32 Özden-Gerçeker 2015, Table 98.
33 Poblome et al. 1997, 514, Table 1.
34 Ottenburgs – Jorissen – Viaene 1993, 164, Table 1.
35 Özden-Gerçeker 2015, Table 98.
36 Poblome et al. 1997, 514, Table 1.
37 Ottenburgs – Jorissen – Viaene 1993, 164, Table 1.
38 Özden-Gerçeker 2015, Table 98.
39 Poblome et al. 1997, 514, Table 1.
40 Özden-Gerçeker 2015, Table 98.
41 Poblome et al. 1997, 514, Table 1.
42 Poblome et al. 2001; 125, Table 1.
43 Poblome et al. 2001; 125, Table 1.
44 Özden-Gerçeker 2015, 145-147, Table 98.

All these archaeometrical data suggest that the group of red-slipped bowls found at Seleukeia Sidera is different from Sagalassos Red Slip Ware, the local products of Arykanda, Aizanoi and the products of the unknown production centre attested at Hierapolis, Perge and Sagalassos, and therefore should be identified as the product of a previously unknown workshop, possibly situated either at Seleukeia Sidera or in its immediate vicinity.

The Importance of the Newly Detected Red-Slipped Pottery Group

In addition to the production centres previously identified in the region of Pisidia and its surroundings, the existence of different, regionally produced pottery groups, whose place of production is not known yet, can now be suggested. It is generally not possible to distinguish these groups of red-slipped potterys macroscopically. Therefore, they can only be identified when archaeometrical analyses are performed. A group of red-slipped potterys identified by archaeometrical analysis and comparative typology studies at Perge, Hierapolis and Sagalassos can be given as an example. This group is similar to Sagalassos Red Slip Ware in terms of form features but was also influenced by African, Cypriot and Phocaean Red Slipped Wares. Archaeometrical analysis revealed that it constituted the production of a previously unknown workshop[45]. Moreover, similar results were obtained from later studies carried out in Perge. There, two groups of potterys, which are indistinguishably similar to Sagalassos Red Slip Ware in terms of form features and slip appearance, could be distinguished from the former on the basis of their different element composition[46]. The second group was considered to be similar to the products of the unlocalized red slip workshop, attested at Sagalassos, Perge and Hierapolis[47].

To conclude, the group of red-slipped potterys found at Seleukeia Sidera draws attention with its clay/slip and form features. The group, which resembles Sagalassos Red Slip Ware and locally produced potterys from some surrounding cities such as Arykanda, Rhodiapolis, and Aizanoi, as far as its form characteristics are concerned, has a single row of pearl-like relief decoration on the rim as the standard decoration element in most of the pieces. Some sherds also have stamped decorations on the rim. In addition to the presence of subtypes that are not seen in the surrounding cities, it displays features that differ from the clay fabric and slip of other known sigillata and red slip ware groups, which have a wide distribution in and around Anatolia. In Arykanda, the group of red slipped potterys proposed as items of local or regional production based on distinctive clay and slip features, includes ten different forms. Form 3 has ten examples which are vaguely similar to the potterys of Seleukeia Sidera, only one of which has pearl-like motifs on the protruding rim[48]. In Aizanoi, two different forms (Schüssel 8 and Schale 44) similar to the Seleukeia Sidera examples have been determined[49]. On the other hand, these vessels have single rows of small hollows

45 Poblome et al. 2001, 125.
46 Özden-Gerçeker 2015, 145-147; Poblome – Özden-Gerçeker – Loopmans 2017, 90-91.
47 Poblome – Özden-Gerçeker – Loopmans 2017, 91.
48 Yaman 2018, 134-135, Pl. 26, No. 140.
49 Ateş 2015, 127, Taf. 53/296; 102, Taf. 30/182.

on the rim that differ from the pearl-like relief motifs of Seleukeia Sidera. In Perge, a bowl with similar pearl-like motifs on the protruding rim has been found. This type is examined under the Piecrust Rim Ware Group and is represented by only one example[50].

Archaeometrical analysis performed on the potterys of Seleukeia Sidera revealed that the clay raw material used in production was different in terms of elemental composition from that used at Sagalassos, the most dominant pottery production centre of the region during the Roman Imperial Period. In accordance with the concept of the LRD *koiné* proposed by Poblome and Fırat[51], the pottery group of unknown origin, identified at Perge, Hierapolis and Sagalassos, already indicated that, in order to understand the pottery distribution dynamics of the Late Roman Imperial Period, it is necessary to take into consideration smaller, local production centres, as well as dominant workshops geared towards large scale production for export to distant areas. The relationship of the newly established red slip ware group identified at Seleukeia Sidera, with Sagalassos Red Slip Ware and the production detected in the surrounding cities, indicates that it is a constituent of the LRD *koiné* proposed by Poblome and Fırat, and an active shareholder of the oligopoly economy model which is assumed to include many cities in and around the region of Pisidia[52]. From this point of view, the new pottery group determined at Seleukeia Sidera can be interpret as a part of mentioned LRD *koiné*.

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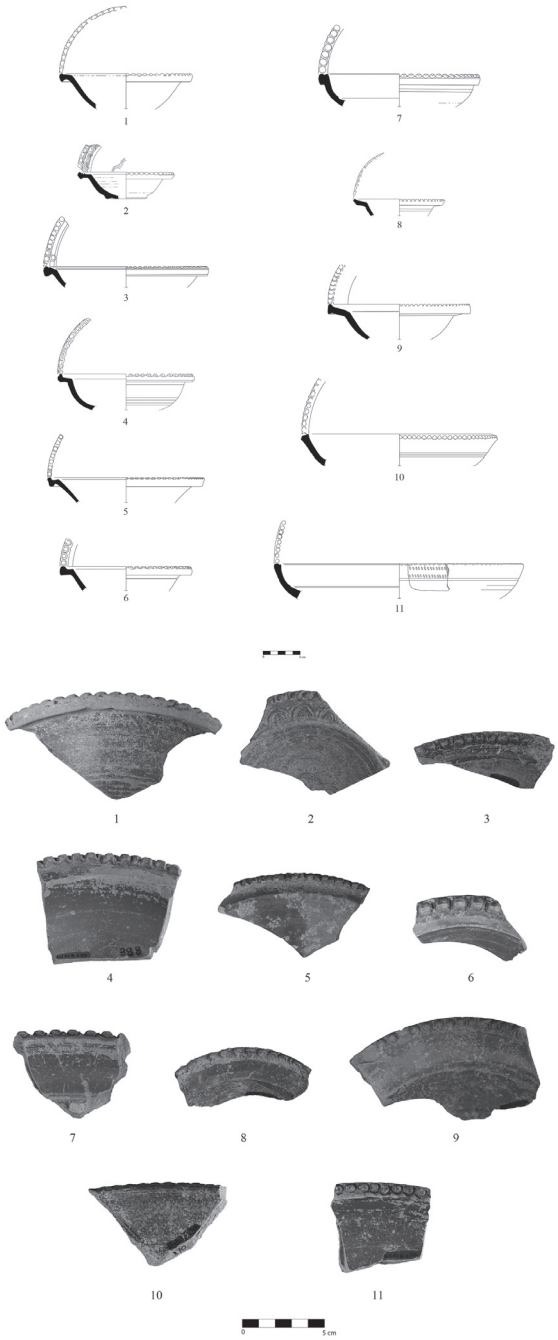

Fig. 1-2 Red-slipped bowl group found at Seleukeia Sidera.

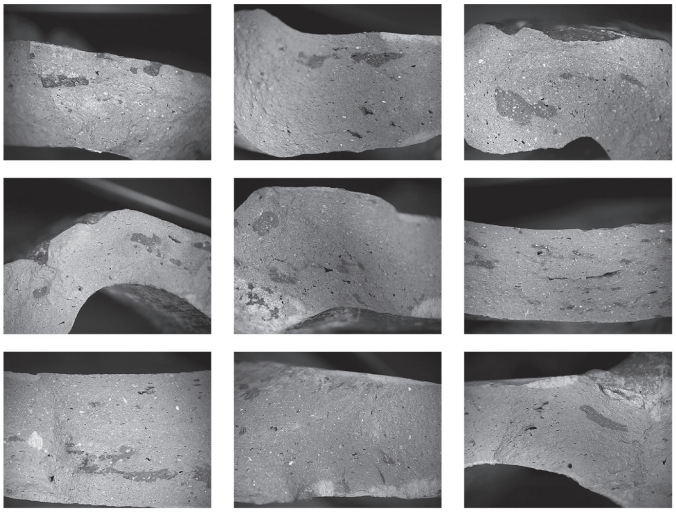

Fig. 3 Dark coloured clay contents detected in some of the red-slipped ceramics from Seleukeia Sidera.

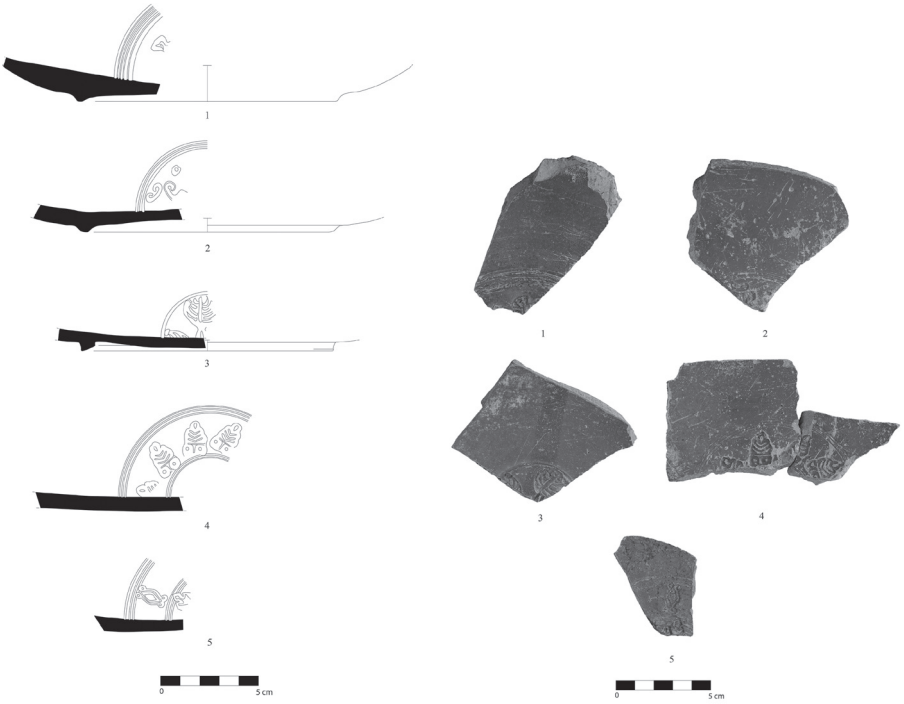

Fig. 4-5 Tondos belonging to the red-slipped bowls and plates found at Seleukeia Sidera.

	Na2O	MgO	Al2O3	SiO2	P2O5	K2O	CaO	TiO2	MnO	Fe2O3	LOI
Example	%	%	%	%	%	%	%	%	%	%	%
slv93.18.s.128	0,049	7,823	13,63	54,18	0,3922	2,936	9,38	0,8306	0,0799	8,381	1,98
slv93.18.s.145	0,05	4,141	15,27	52,4	0,4891	3,454	12,99	0,7122	0,0697	6,678	3,72
slv93.18.s.129	0,091	7,29	13,88	52,99	0,5854	2,713	8,728	0,8266	0,0739	8,111	4,62
slv93.18.s.176	0,15	7,385	13,16	52,85	0,2561	2,742	9,333	0,8022	0,0779	8,021	4,75
slv93.18.s.160	0,23	8,017	13,86	52,72	0,1742	2,806	9,764	0,838	0,0814	8,454	2,56
slv93.18.s.142	0,051	7,452	15,13	53,13	0,286	3,035	8,507	0,8943	0,0811	8,784	2,61
slv93.18.s.162	0,13	7,194	14,53	52,04	0,3247	2,906	8,003	0,8219	0,0823	8,631	5,54
slv93.18.s.126	0,39	7,932	14,23	51,99	0,1679	2,959	8,809	0,871	0,076	8,4	3,92
slv93.18.s.133	0,051	6,579	14,43	49,34	0,3442	2,763	12,587	0,8827	0,0866	8,443	3,77
slv93.18.s.130	0,053	7,464	13,58	51,38	2,471	2,935	13,2	0,8109	0,0729	7,974	0,52
slv93.18.s.121	0,051	7,549	13,05	52,81	0,417	2,778	9,81	0,781	0,0785	7,849	3,82
slv93.18.s.109	0,075	6,38	13,42	51,59	1,357	3,255	10,45	1,004	0,0873	10,29	1,64
slv93.18.s.147	0,051	6,59	14,28	48,05	0,5114	2,931	7,978	0,8858	0,0792	8,761	9,55
slv93.18.s.150	0,05	7,586	13,52	49,06	0,2558	3,068	8,114	0,807	0,0803	8,281	8,52
slv93.19.s.69	0,05	7,403	13,23	48,11	0,1894	3,653	8,417	0,7542	0,0793	8,049	8,83
slv93.18.s.113	0,11	7,513	14,23	49,41	0,2088	2,999	7,358	0,8582	0,0822	8,701	9,34
slv93.17.s.26	0,056	6,438	13,05	48,44	0,2406	2,935	10,04	0,8256	0,0737	8,587	8,63
slv93.17.s.58	0,088	7,134	12,92	55,33	0,3156	3,237	5,122	0,7823	0,0776	8,229	6,99
slv93.17.s.200	0,47	8,78	12,56	50,09	0,1372	2,655	6,383	0,7881	0,0745	8,364	9,55
slv93.17.s.244	1	6,24	12,89	51,9	0,933	3,721	12,01	0,8023	0,0638	7,6	2,8
slv93.17.s.394	0,064	3,443	16,94	55,36	0,2064	3,279	10,11	0,9227	0,0823	7,133	232
sld18.ab23/01.5.s.4	0,33	7,342	14,1	54,36	0,1372	2,983	6,809	0,8716	0,0814	8,633	4,93
sld18.z22/13.1.s.3	0,25	7,26	14,03	52,77	0,1514	2,968	7,777	0,8663	0,0829	8,659	4,87
slv93.18.s.140	0,054	7,741	13,2	52,54	1,075	2,667	10,13	0,805	0,0842	8,104	3,91
slv93.18.s.131	0,052	7,093	13,09	52,07	0,6208	3,419	12,08	0,7914	0,0814	7,993	2,91
slv93.18.s.154	0,18	7,875	14,42	54,17	0,9165	3,004	9,284	0,8744	0,0766	8,794	0,73
slv93.18.s.149	0,05	8,128	13,44	52,65	0,6824	2,892	6,178	0,8257	0,071	12,694	2,53
slv93.18.s.174	0,051	6,98	12,78	52,96	1,177	2,702	11,901	0,7874	0,0797	7,959	2,65
slv93.18.s.132	0,051	7,183	13,51	50,88	0,8175	2,873	7,594	0,8133	0,0865	8,371	7,83
slv93.18.s.137	0,05	7,09	12,44	54,69	0,6803	2,783	6,713	0,7893	0,0728	7,95	6,83
slv93.18.s.141	0,19	7,071	12,31	55,17	0,8037	2,551	7,483	0,7727	0,0747	7,857	5,82
slv93.18.s.144	0,054	6,509	11,78	56,66	0,8486	3,009	7,904	0,7668	0,0824	7,898	4,34
slv93.18.s.152	0,056	7,711	14,82	52,38	0,4956	3,047	6,588	0,874	0,0837	8,876	4,72
slv93.18.s.163	0,5	7,406	13,44	49,91	0,503	2,863	8,751	0,8159	0,0905	8,283	7,54
slv93.18.s.177	0,33	7,669	13,75	50,52	0,6573	2,918	8,862	0,819	0,0888	8,276	5,984
slv93.18.s.178	0,2	7,431	13,55	49,39	0,6694	2,808	10,55	0,8149	0,0841	8,109	6,76
slv93.18.s.183	0,38	7,486	13,24	48,85	1,028	2,723	10,44	0,8256	0,0812	8,363	6,65
slv93.18.s.197	0,16	7,066	13,79	50,61	0,5614	2,967	8,4	0,8242	0,0809	8,182	6,99
slv93.18.s.184	0,3	7,37	14	49,62	0,2178	2,965	8,954	0,8349	0,0797	8,131	7,53
slv93.18.s.195	0,052	7,055	13,29	49,09	1,248	2,894	9,653	0,8098	0,0901	8,22	6,93
slv93.18.s.187	0,21	7,705	13,1	48	0,2539	2,769	8,278	0,8006	0,0816	8,069	10,64

Fig. 6 Element values of red-slipped ceramics from Seleukeia Sidera.