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How late antique *dipinti* contribute to a better knowledge of amphora contents

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Abstract: I present here a survey of the inscriptions (*tituli picti* or *dipinti*) found on Late Roman Amphorae (LRA 1, 2, 4, 5/6, 9, North African amphorae) by describing their typologies and focussing on what we can learn from them about the contents of the various types of amphora.

Key words: *tituli picti*; *dipinti*; inscriptions; Late Roman Amphorae; Egypt.

1. Introduction

While the Latin *tituli picti* ou *dipinti*¹ on oil or salted fish amphorae from the Roman Period have been studied since the 19th century, particularly by Heinrich Dressel who proposed a masterful interpretation of them in *CIL XV*,² the Greek ones have been neglected. It was not until 2008 that the first volume dedicated to Greek *dipinti* appears, namely those of Tebtynis (Egypt) published by Nikos Litinas.³ But this book deals only with Ptolemaic and Roman material. As far as late antique *dipinti* (4-7th centuries) are concerned, they remain understudied. This is due in part to a lack of interest in the Early Byzantine era for decades, while Hellenistic amphoric stamps took up all the attention of specialists in amphoric epigraphy (Garlan 2010), but is mostly for reasons related to the late antique amphorae themselves:

1. Their great variety and apparent heterogeneity have long slowed down attempts to develop typologies, and it was not until 1977 that John Riley succeeded in arranging this apparent disorder with a reasoned typology, an essential prerequisite for a proper study of inscriptions.
2. Unlike the *dipinti* from previous periods, those on late antique amphorae have an extremely deformed writing style that makes them difficult to decipher.

3. The late antique *dipinti* are coded notations that can be read only if one decodes the system that informs them, and that depends on how the production and trade that were behind them were organized.

After Jean Gascoü and Tomasz Derda's previous research,⁴ the work carried out in collaboration with Dominique Pieri on the material from Antinoopolis (excavations of the Istituto Papirologico 'G. Vitelli') and the study of other Egyptian dossiers I have worked on for the last twenty years⁵ have led to some advances in our reading and understanding of these inscriptions, which are of the highest interest for the history of ancient trade. I am pleased to present here the results, still provisional, of this long-term study, focusing on the information these *dipinti* give on amphora contents.⁶ But since the mention of contents is just a part of a *dipinto*, we cannot understand it if the whole *dipinto* is not understood. That is why I shall present here a typology of these *dipinti*, stressing the issue of contents.

I will examine in turn four categories: the LRA 1, the amphorae from the Aegean Sea and mainland Greece (LRA 2), the Palestinian amphorae (LRA 4, LRA 5/6 and 9) and the North African *spatheia*.

¹I use the term *dipinto* in the conventional sense of an inscription made in ink on an amphora as a short expression for amphoric *dipinto*. The term, in its narrower sense, has already a certain tradition (e.g., Robinson 1959; Riley 1979; Davies 1984). It is also more convenient than *titulus pictus*, 'commercial notation' (Lang 1976) or 'vessel's notation' (Litinas 2008) that, despite the precision of the last two expressions, have the disadvantage of being in two words and prevent the formation of derivatives as 'dipintology' that I proposed in Fournet 2012.

²Dressel 1899, 560-699 in chapter III ('Tituli picti in amphoris in monte Testaceo et in emporio repertis'), especially in the introduction (560-565). It is noteworthy that among some Greek *dipinti* he publishes (no.4860-4897), some are from the Byzantine period and belong to the category I shall discuss below: no.4890-4895 and 4897.

³Litinas 2008. The reader will find a bibliography concerning *dipinti* found in Egypt in his introduction, pages 1-8.

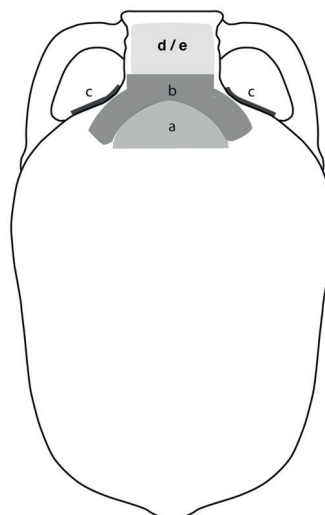
⁴Gascoü 1978, Derda 1992.

⁵*Dipinti* from the Kellia (IFAO), from Gabbari/Alexandria (Centre d'Études Alexandrines), from Baouït (Louvre-IFAO), from Saqqara (Rijksmuseum van Oudheden), from Oxyrhynchos (Ashmolean Museum). I would like to thank those who have given me these dossiers and authorized me to publish them: Jean-Yves Empereur (Centre d'Études Alexandrines, CNRS), Nicolas Grimal and the successive directors of the IFAO (Bernard Mathieu, Laure Pantalacci and B. Midant-Reynes), Dominique Benazeth (Musée du Louvre, Paris), Maarten J. Raven (Rijksmuseum van Oudheden, Leyde), Helen Whitehouse (Ashmolean Museum, Oxford), Nick Gonis (University College, London) and Rosario Pintaudi (Università di Messina and Biblioteca Laurenziana, Florence).

⁶The present paper will complete and correct what I have published in Fournet-Pieri 2008: 180-210 and Fournet 2012.

2. LRA 1

This amphora, produced in Cilicia, Isauria, Syria I, Rhodes and Cyprus, has long been considered a wine container (Fournet and Pieri 2008: 210–214, with bibliography). Is it confirmed by the *dipinti*? These are in fact extremely difficult to read and understand. They are located on several places on the amphora surface (neck, shoulder, under the handles) according to the nature of the data they contain and to the commercialization phases they correspond to. They can be classified into five types (a–e). The first three (written in red ink) are inscribed while the wine is being put into the amphorae (as can be seen from the similarity of ink and handwriting), the fourth and fifth ones are written, respectively in black and red ink, at later stages.



2.1. Type a

Raven-Verschoor-Vugts-van Walsem 2011:
128-129, Cat. 238
(red ink)

a ¹	ιδ	14 th <indiction>
a ²	φπγ	583 (isopsephism)
a ³⁺⁴	Ϡ χμγ Ϛ κθ [χμγ Ϛ 29 <sextarii> [

[instead of Ϛ κθ, one can also read λθ 39]

This is on the shoulder, centred between the handles. It is composed of two, three or four lines (the number of lines increasing over time):

- **a**¹: the date according to the indiction system (the word *ινδικτιών* is always omitted).
- **a**²: Christian formulas with, for instance, *χμγ* (acrostic for ‘Christ born of Maria’) and *φθ* (isopsephism for ‘amen’), the word *Θεός* ‘God’ or *κύριος* ‘Lord’ abbreviated, or a religious isopsephism (the most frequent being *υπδ* = 484 = *Θεοῦ* ‘from God’; here *φπγ* = 583 = *Θεοῦ ἀμήν* ‘from God, amen’?).⁷
- **a**³⁺⁴: the last line gives a more complex string. In its simplest pattern, attested at the first stages of the development of this amphora (LRA 1A), it is composed of the unit of measure *ξέστης* ‘sextarius’ abbreviated, followed by the quantity of wine the amphora contains, ranging from 20 to 30 *sextarii* and almost always expressed with fractions ($\frac{1}{2}$ and $\frac{1}{4}$; rarely $\frac{1}{3}$) (= **a**⁴).



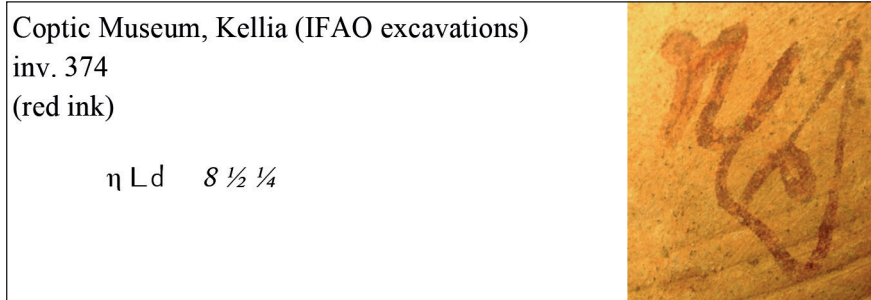
Type a (old style) (Antinoopolis inv. V110)

⁷ This interpretation is due to Grenfell-Hunt 1906-1907: 10–11. There are many other isopsephisms that are still mysterious to me.

Later on, the symbol for *sextarius* was usually omitted and the quantity was preceded by some letters, very stylized and of enigmatic content (= **a**³). Some logically thought they represented the product name (Gascou 1978: 26), but I believe they have the same value as in **a**², that is to say a religious formula, as can be seen from legible examples.

As a result, the product name was not mentioned in the inscriptions of type **a**, probably because it was considered obvious and, for that reason, not worth writing down. But the kind of product contained in the amphora can be deduced from one of the other types of inscription (type **c**).

2.2. Type *b*



This is located in the area surrounding **a**, written sometimes upside down or at right angles to it. It only contains a number with fraction(s), ranging from 1 to at least 12, usually around 6. No explanation has been proposed for this. Given the fractions, it can't be a batch number or anything like that, but it must be a quantity. It is likely to be the tare (weight when empty). Seeing that there was no standardization in late antique amphora production, it was necessary to measure the quantity of wine contained by each amphora in order to write it down on the shoulder (**a**⁴). This could not be done with a standard measuring jug: it would have required too much time. Yet the written quantities are very precise, for they have fractions (the smallest one is a quarter). The only

sensible solution was to weigh the amphora first when it was empty and again when filled. Then one subtracted the figure of the tare from the figure of the full amphora and converted the weight into *sextarii* by using tables of conversion of weight measures into liquid measures – similar to that preserved by the *P.Lond.* V 1718 (Bell 1917: 154–165) – that allowed the conversion of pounds into *sextarii* (but in our case, the conversion tables were specifically adapted to the weight of the ceramic and of the wine). But we have not been able to study enough complete specimens to definitively confirm this hypothesis. Nevertheless the tare system is clearly used on the latest form of LRA 1, the Antonov 9 (7th–beg. 8th century AD) and on other Aegean amphorae (see below, § 3.2).

2.3. Type c

Coptic Museum, Kellia (IFAO excavations) inv.			
61 (red ink)			
c ¹	Στεφάνου	<i>From Stephanos</i>	
c ²	Κατια	<i>Katia</i>	
c ⁴	λα	31	
Antinooupolis (Vitelli excavations)			
inv. 2004 (10) (red ink)			
c ¹	Ἰωάν<v>ου	<i>From Iōannês</i>	
c ²	Κωκ()	<i>Kōk()</i>	
c ³	ὀρινίου	<i>high-trained vines</i>	
c ⁴	λε	35	
Kirwan 1938, Pl. 118, No 40			
Ballana (red ink)			
c ¹	Θεοδώρου	<i>From Theodoros</i>	
c ²	Ωμαλ()	<i>Ōmal()</i>	
c ⁴	ιζ	17	
	+	+	
c ³	ὀρ(ινίου)	<i>high-trained vines</i>	

This inscription is written upside down under the handles. It is very difficult to read because the writer was hampered by the handle (as the modern reader is!) and was obliged to write in small characters (not to mention the numerous phonetisms that distort the words). It is usually composed of 3 lines. Each of the first two lines contains a proper name (in the genitive when not abbreviated); the third one a whole number (up to hundreds). It was suggested that they were the potter's name and a serial number. They are more likely to give the wine grower's name (c¹) and the batch number (i.e. number of amphorae filled with the same production sold at a certain moment) (c⁴). As to the second name in line 2 (c²), it could be a patronymic. However no clear anthroponym can be read as in line 1. The words one can decipher are in most cases non-Greek-sounding names. My suggested interpretation is that they were toponyms indicating the place of the wine-producing estate. I have been able to read, on two

fragments, 'Apamea,' but in most cases we are dealing with microtoponyms belonging to the native substratum (for instance, Dēbal(), Garer(), Katia, Rhana) and for that reason difficult to identify.⁸ One, Rhadam() could be identified on the basis of the Constantinople Synaxarium that cites an estate named Rhandama close to Anarzaba where Saint Marinos of Anarzaba was buried.⁹


The estate name or more rarely the number is sometimes followed by ὀρινίου (c³), usually abbreviated, which, according to Hesychius, means 'vine that grows up trees,' i.e. 'high-trained vines' (french 'conduit en hautain').¹⁰ This adjective, practically unknown to literary sources, designated a climbing vine as opposed to a vine on stakes (Brun 2003: 35–37). This word is so far the only clue given by the *dipinti* about the content of this amphora: it transported wine.

⁸ Fournet and Pieri 2008: 198–199 must be corrected. Angilas, in the published example, is probably a place name: 'a place called/field of) Angilas'. But if the place name has primarily a discriminator value, we cannot exclude that, in a number of cases, the family name was used, especially when it was unusual.

⁹ As a matter of fact, this place name is transmitted in various forms. The *Tabula Imperii Byzantini* (TIB 5, 1990: 390) gave preference to Rhadamnos after the *Acta Sanctorum*, but our *dipinti* show that the other form is the correct one. I owe these references to D. Feissel.

¹⁰ Hesychius, ο 1217: ὀρινία: ἀναδενδράδες. The adjective ὀρινίος was a hapax until now.

2.4. Type d

Ashmolean inv. GO 464 (black ink)		
d ¹ χμγ + φθ	χμγ + amen.	
Θεοῦ χάρις	Grace of God.	
d ² Ἀπολλιναρ(ίου)	From Apollinarios	
d ³ ἐμάτιν	haimaton.	
-----	-----	

This inscription is written in black on the neck. After two or three lines of Christian formulas (**d**¹), we come across a personal name in the genitive (**d**²) and then the name of the wine (**d**³), eventually with an indication of its quality (like πρωτεῖον ‘first quality’) and of its quantity. Given that, in some very clear cases, **d** was added above **a**, it is tempting to interpret this inscription as ‘labels’ added by the merchant or transporter advertising his own products. We have been able to collect a large dossier of ‘labels’ of a certain Apollinarios, found in Oxyrhynchos and Antinoopolis.¹¹ You can notice the unusually exuberant first stroke of the χ – which could have been (so to speak) the ‘logo’ of this trader. In one clear case

(Derda 1992: no.II.1), the name is Saint Isidoros, which I’d interpret as a monastery name, that plays here the role of a trading enterprise.

The name of the wine is usually ἐμάτι(ο)ν ου ἐμάτινον¹² that I interpret as a systematically incorrect¹³ form of αἱμάτιον ‘blood’ or αἱματίνον ‘blood-coloured’ (Fournet 2012: 257). It could be a metaphorical brand name of a dark-coloured wine (like, *mutatis mutandis*, the Hungarian *Bull’s Blood*).¹⁴


¹¹ The dossier from Antinoopolis is published in Fournet and Pieri 2008: 203–206.

¹² In Ashmolean inv. GO 464 (my example), it is tempting to read ἐμωτιν, but parallels suggest the reading of an alpha with a redundant stroke instead of an omega.

¹³ Same phenomenon with κέρδος often written καίρδος.

¹⁴ Not to be confused with the *garum* called αἱμάτιον (*Geoponica*, XX 46, 6 ed. Bechh): cf. Botte 2009: 20.

2.5. Type e

Antinoopolis (Vitelli excavations) inv. 2004 (62) (red ink)		
ρρ	190	

This consists of a figure written in large letters on the neck with a brush in red ink. This type is attested only on material found in Antinoopolis, which seems to prove that the dipinto was written in the importing country, probably when the amphorae arrived in Antinoopolis.

In conclusion:

- **a/b/c** seem to have been written simultaneously (first **b**, then **a**, finally **c**) at the point of departure, that is to say when filling amphorae: they are always in an identical ink and **a-b** have in common graphic peculiarities. This suggests that the amphorae were filled and inscribed

in some harbours of the coast under the control of a representative of the business organization who wrote on them the tare (**b**), then the quantity of wine (**a**) and the name of the producer and the production zone (**c**).

- **d** was perhaps written down after **a/b/c** or instead of **a/b/c**. The relationship between **a/b/c** and **d** is difficult to understand.
- **e** was written down at the arrival of the amphorae.

Even if not clearly mentioned in the main inscription (**a**), the content was wine, as can be deduced from **c**³ and, if I am not mistaken, from the later *dipinto* written down by the merchant (**d**).

3. Amphorae from the Aegean Sea and mainland Greece

The most common type is the LRA 2 (Aegean Sea; cf. Pieri 2005: 85–93). I'll also take into account the M273 (Samos), which can have *dipinti* belonging to the same typology.

The inscription is located on the lower part of the neck.

I have been able to identify at least two types of inscriptions:

3.1. Type 1

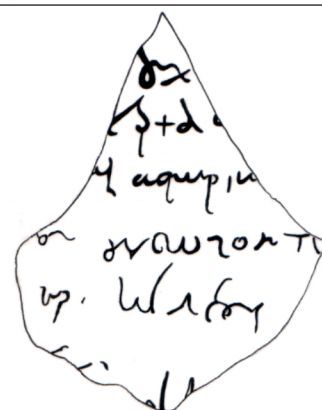
This is particularly well represented by a series of inscriptions on amphorae found in Romania and published by Popescu 1976. No pictures are published but only drawings which are hard to interpret. Derda 1992 re-edited them. But the product names are almost unreadable.

Type 1 is very similar to the *spatheia* inscriptions (see § 5.1), but is written in red ink (or sometimes incised).



Thessaloniki, Museum of the Byzantine Culture

Derda 1992, n° III.1 (red ink)		
a	[Θε]οῦ χ[άρις] [κ]έρ+δο[ς]	<i>Profit (is)</i> <i>a grace of God.</i>
b	[ἀ]γίας Μαρία[ς]	<i>From Saint Mary.</i>
a^{bis}	[Θε]οῦ σφ[ύ]ζοντο[ς]	<i>With God's salvation.</i>
c	. . [] . ελέου	<i>Oil of...</i>
d	(λίτραι ³) . δ . (----- ?)	<i>.4. pounds³</i> (----- ?)



- **a**: 2 or 3 lines of Christian formulas, extended by adding Θεοῦ σφύζοντος 'God saving (us)' or 'with God's salvation' usually after **b**. But it can be either before (Derda 1992: no.II.3).
- **b**: personal name or mostly name of a religious institution¹⁵.
- **a^{bis}**: after the name (but sometimes before, Derda 1992: no.II.3), there is again a Christian formula: Θεοῦ σφύζοντος 'God saving (us)' or 'with God's salvation'.
- **c**: product name. It is always illegible except the end -ελέου: it is a compound noun ending in -έλαιον, designating a kind of oil.¹⁶
- **d**: the quantity. It is repeated, probably three times as on other types of amphorae (except LRA 1) even if no example in the corpus gathered above has preserved more than two lines. It seems to be expressed with a measure expressed by a symbol (↗ judging by Popescu 1976, no.398) which could be for the *sextarius* or the pound. The second option seems best according to the information given by my type 2.

¹⁵ As for the element **b** of *spatheia* inscriptions, we should hesitate about the nature of this line: Christian formula to link to **a** (particularly since it may be followed by another line of Christian formulas, **a^{bis}**) or the producer's name? By analogy with the *spatheia*, I favor the second solution (following Derda 1992).

¹⁶ The reading ὕρ(χη) γλυκελέου (l. -λαίου) adopted by Derda after Popescu's bad drawings is highly doubtful: We don't expect the first to be abbreviated in such a way; moreover, ὕρχη normally refers to a storage container and not a transport container. After Popescu's drawing (including no.142 and 398), I would be tempted to read γριμελέου (the first three letters seem to suit the traces); but this type of product is attested with certainty only in Palestinian amphorae (see below, § 4.2). So I would suggest not imposing this reading here.

3.2. Type 2

I suspect the existence of another type of inscription, coming from a very small number of specimens, which does not really allow us to guarantee its validity. The

particularity of this type lies in the way the amount is expressed and its being written in black ink unlike type 1.

Graeco-Roman Museum (Alexandria),
inv. 28379 (Kuhn 2009, No 7) (black ink)

a χμγ
Θεοῦ χάρις
c κοῦφ(ον)· λί(τραι) θL
καθαρ(όν)· λί(τραι) μη[
καθαρ[(όν)]· λί[(τραι) μη
[καθαρ(όν)· λί(τραι) μη]

χμγ
Grace of God.
tare : 9 ½ pounds
net weight : 48 [+ fraction?] pounds
(repeated thrice)



- **a:** Christian formulas.
- **c:** the quantity. It is given jointly by the tare (κοῦφον, litt. ‘empty (amphora)’¹⁷) and by the net weight

(καθαρόν), that is to say the weight of the full amphora minus the tare, repeated three times. Both are calculated in pounds (λίτραι abbreviated).¹⁸

¹⁷ Cf. Mayerson 1997.

¹⁸ The amount is expressed in the same way on the latest LRA 1 (Antonov 9). See above, § 2.2.

3.3. Re-uses

Here I report a case of re-use: an amphora reused as a honey container.

Harper 1997: 31, No 145
(black ink)

Κ(ύρι)ε, σῶσον	<i>God, save (us).</i>
Λαζάρου	<i>(Property of) Lazaros :</i>
μέλι ἀττικ(όν)	<i>Attic honey</i>
κγLd	<i>23 ½ ¼</i>



The decoration around the inscription, unusually neat, indicates that this inscription was written down by the

owner (Lazaros) rather than the producer or merchant, on an amphora which was reused.

4. Palestinian amphoras (LRA 4, LRA 5/6 and LRA 9)

4.1. LRA 4

Wine amphora, produced in the Gaza area (4th-7th centuries) (Pieri 2005: 101–114).

The LRA 4 dipinti do not have a structure or a writing as homogeneous as those of LRA 1. They are found in lesser quantities. It is therefore difficult to propose fine typologies based on well-documented series.

The *dipinti* (in red or black ink) is located on the belly of the amphora between the two series of ridges. Some are written vertically; other horizontally on the upper part of this zone. They seem to have only one inscription unlike LRA 1.

As for their contents, the structure of these inscriptions, when they can be read, is rather close to the LRA 1:



Alexandria, CE Alex Gabari 99-SP520 (red ink)		
a^1	$\varphi\theta$	99 (= <i>amen</i>)
a^{2+3}	$\dagger \varphi\theta\lambda L$	99 (= <i>amen</i>), 30 $\frac{1}{2}$ < <i>sextarii</i> >

- a^1 (= a^2 on the LRA 1): Christian formulas.
- a^{2+3} (= a^{3+4} on the LRA 1): a Christian invocation is followed, directly or separated by a vertical line, by the quantity of wine expressed in *sextarii* (the measure unit is always omitted) in the form of a figure with fractions ($\frac{1}{2}$ and / or $\frac{1}{4}$).

Because of their large mouths, these amphorae are often the subject of re-uses for various products: figs, olives,¹⁹ cheeses (Gabbari 97-14.3, unpublished).

¹⁹I could identify a set of LRA 4 from the Kellia (Egypt), bearing inscriptions attesting that they were reused as fig and olive containers, in particular within the economical activities of the St. Menas monastery (in the Alexandria area).

4.2. Agora M334 (or LRA 9)

An amphora dated to the 4th-beginning 8th centuries, considered a wine container (Pieri 2005: 137–138). But

dipinti force us to look at this amphora type, at least those with dipinti, as an oil amphora, as we will see below.

Inscriptions are located on the neck, written in black ink in a single text block.



Cairo, Coptic Museum

Coptic Museum inv. 9073 (black ink)			
	+		
a	Θεοῦ χάρις κέρδος	<i>Profit (is) a grace of God.</i>	
b	γριμελέου	<i>Grimelaion</i>	
c	ἀγίου Ἰσιδώρου	<i>from Saint Isidoros.</i>	
a^{bis}	σῶσον ρθ	<i>Save (us), amen.</i>	
d	(λίτρ.) μβλδ´ (λίτρ.) μβλδ´ (λίτρ.) μβλδ´	<i>42 ½ ¼ pounds 42 ½ ¼ pounds 42 ½ ¼ pounds</i>	


These dipinti are very similar to those of *spatheia*:

- **a:** Christian formulas.
- **b:** product name. The name that comes up most is γριμέλαιον, an otherwise unknown term, which also occurs on another Palestinian amphora, the so-called Bag-shaped type (see § 4.3). Seeing that these amphorae are only of Palestinian origin, it is safe to conclude that this word refers to a kind of oil (ἔλαιον)
- **c:** name of a person or of a religious institution. This is most likely the production domain.
- **d:** the quantity of the product is repeated three times after the symbol of a measure (ε or ς, likely for the pound), often a fourth time on the right of the main inscription.

4.3. Bag-shaped amphora (or LRA 5/6)

Amphora regarded as a wine container (Pieri 2005: 114-127). *Dipinti* are written down in black ink on the shoulder.

Antinooupolis (Vitelli excavations)		
inv. 2005 [24]		
(black ink)		
a	+Θ(εο)ῦ χάρις(ις).	<i>Grace of God.</i>
b	Γριμελ(έου)	Grimelaion
c [?]	monogram	(producer name ?).
d	(λίτραι) [[- - -] pounds
	(λίτραι) [[- - -] pounds
	[(λίτραι)	[- - -] pounds.



The inscription typology and the content are the same as in LRA 9. Contrary to what is generally thought, this

amphora could contain oil as clearly seen from the mention of *grimelaion*.

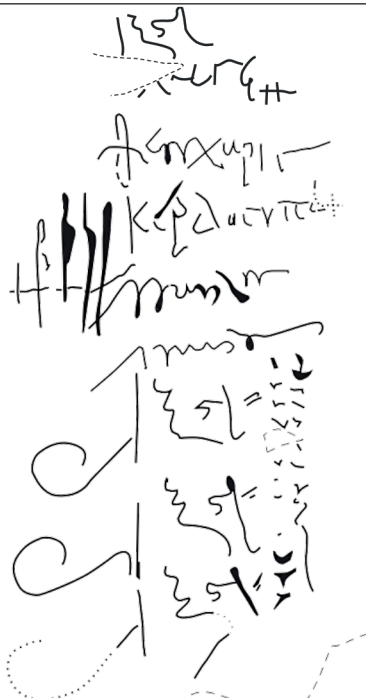
5. North African amphorae

5.1. *Spatheia*

Whatever the type of amphorae, the notations are always written in black ink on the neck in one text block. Their typology is fairly homogeneous.

Garum, wine or oil amphorae. Types cited here after: SPA 1 (4th-mid 5th century) – SPA 2 (5th century) – SPA 3 (6th-7th century) specialized for *garum* (Bonifay 2004).

Antinooupolis		
Fournet-Pieri 2008: 180–181		
SPA 1		
(black ink)		
d	λίτρ. [?] ξςL	66 ½ pounds [?] .
a	χμγ ρθ	χμγ, 99 (= amen).
	Θεοῦ χάρις	<i>Profit (is)</i>
	κέρδος υπδ†	<i>a grace of God,</i>
		484 (= God).
b	++++Παύλου	<i>From Paulos</i>
	Παύλου	<i>From Paulos.</i>
	(λίτρ. [?]) ξςL [°]	66 ½ pounds [?]
d	(λίτρ. [?]) ξςL [°]	66 ½ pounds [?]
	(λίτρ. [?]) ξςL [°]	66 ½ pounds [?]



- **a:** Christian formulas
- **b:** personal name [optional]. It is *a priori* tempting to interpret them as names of producers who may be either laymen (Paulos in my example) or religious institutions (Saint Theodoros, Saint John, Saint Menas),²⁰ But see below.
- **c:** product name [optional, not in my example]. The only product whose reading is clear is *garum* (Botte 2009: 19–20). It is accompanied by precisions (γάρου πόλεος, γάρου λευκοῦ πόλεος, γάρου πόλεος λευκοῦ, κ(ε)υντοπόλεος) that are problematic.²¹
- **d:** the quantity was repeated three times after the measure symbol (Ϟ or ϙ, sometimes Ϛ). The first symbol is likely to be for *sextarius*, but it results in too low values for this measure. It would be best to interpret it as the symbol for pound (λίτρα).

²⁰Derda 1992: 137, ‘A name in the genitive appears, often preceded by the adjective ἅγιος [...], presumably referring to the church or the monastery where the amphora was filled with the product mentioned further on in the text.’ He seems to consider that the names without ἅγιος refer also to religious estates. The ellipse of ἅγιος is however impossible in the case of a saint.

²¹The interpretation that I proposed in Fournet and Pieri 2008: 207 should be revised in light of some new *dipinti* recently discovered in Antinoopolis. I will deal with this issue elsewhere.

It is surprising that these inscriptions are written in Greek while Latin was the usual language in Proconsular Africa.²² It could be argued that the use of Greek was justified by exports to the Greek-speaking world (actually, the material is of Egyptian origin), or that Greek was the commercial *lingua franca*. But what is troubling if one considers that **b** gives the name of the producer is the mention of the sanctuary of St. Menas, which is located in the Alexandria area. Two explanations are possible:

1. these amphorae have been reused to sell an Egyptian production.
2. these notations are due to the merchants. The name in **b** would be that of the *mercator*. If it is correct, this would mean that the monastery of Saint Menas could have acted as a commercial enterprise, which was suspected also in the case of the LRA 1 ‘labels’ (cf. § 2.4). This third explanation is more likely. It confirms that the content was indeed of African origin.

²²We have at least one stopper in connection with a *spatheion* neck (Antinoopolis inv. 2005 [12], unpublished): it is inscribed in Latin.

5.2. Other African types

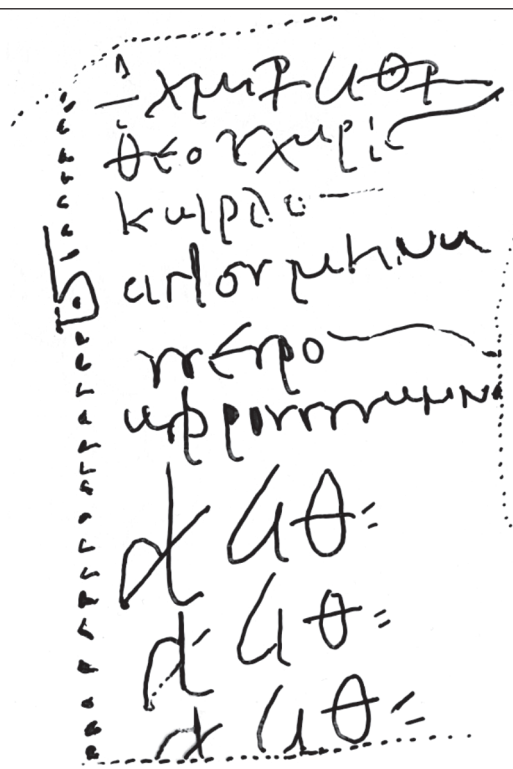
I would like to point out a set of African amphorae of medium and large size that contained a previously

unknown product, the *aphrospanon*. It is evidenced so far by four *dipinti* (three still unpublished):

Ashmolean inv. SC 33920/Gr. inscr. 25,
Oxyrhynchos
North African cylindrical amphora of medium size,
5th-beg. 6th cent.
(black ink)


a	Ϡ χμγ Ϡ ϑθ Ϡ	χμγ, 99 (= amen).
	Θεοῦ χάρις	<i>Profit (is)</i>
	καίρδος	<i>a grace of God.</i>
b	ἁγίου Μηνᾶ	<i>From Saint Menas,</i>
	Πέτρου	<i>From Petros.</i>
c	Ἀφρουσπάννου	Aphrospanon
d	(ξεστ.?) ϑθ Ϟ	99 ½ sext.?
	(ξεστ.?) ϑθ Ϟ	99 ½ sext.?
	(ξεστ.?) ϑθ Ϟ	99 ½ sext.?

It is published by Grenfell-Hunt 1906: 14 (No 4 = SB I 1965), who did not recognize the name of the product that was at the time without parallel. My reading is supported by the next three unpublished parallels.



IFAO s. n.,
Edfou
Keay XXXIV
(black ink)

a χμγ + ρθ	χμγ, 99 (= amen)
	υοδ	474 (= isopsephism).
c	Ἄφροσπάνου	Aphrospanon
d	(ξεστ.?) πθL	89 ½ sext.?
	(ξεστ.?) πθL	89 ½ sext.?
	[(ξεστ.?) πθL]	89 ½ sext.?

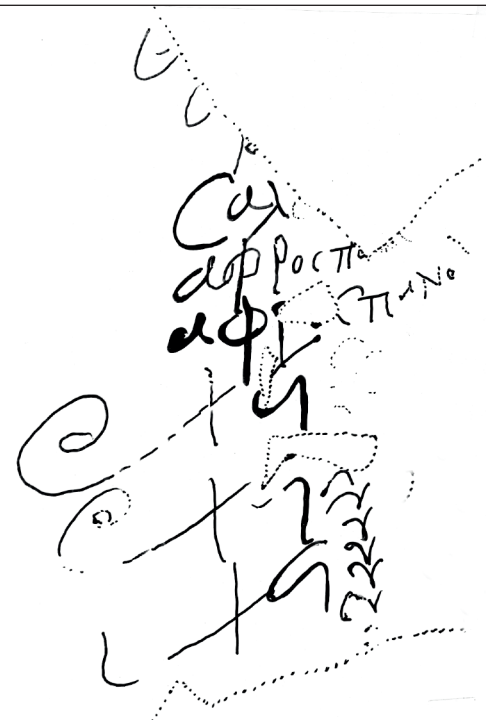


Coptic Museum inv. 12323,
Tell Atrib
North African cylindrical amphora of large size
(black ink)

a	----- .[[--]
	.[[--]
	κ[[--]
b?	Σαλ.[Sal[--].
c	Ἄφροσπάνου	Aphrospanon,
	Ἄφροσπάνου	aphrospanon
d	(ξεστ.?) ρ	90 sext.?
	(ξεστ.?) ρ	90 sext.?
	(ξεστ.?) ρ	90 sext.?


+ *dipinto* on the right mentioning oil.

[I thank Tomasz Górecki for the permission to publish this *dipinto*]



Ashmolean inv. GO 454
Albenga 11-12 (5th-beg. 6th c.)
(black ink)

a	[χ]μγ + ρθ	χμγ, 99 (= amen)
b?	[.] , οζεβ	[--]-ozeub.
c	[Ἀ]φροσπάνου	Aphrospanon
d	[(ξεστ.?)] ζ	[.]7 sext.?



I suggest this was the trade name of an oil produced in Africa (ἀφρό-) and Spain, i.e. Baetica (-σπανov).²³ It is tempting to compare this word with an expression attested in a Roman inscription from Hispalis (*CIL* II 1180²⁴, 161–169), in which Julius Possessor is said to be *adiu/tori Ulpii Saturnini praef(ecti) Annon(ae) / ad oleum Afrum et Hispanum recen/sendum*. ‘assistant of Ulpius Saturninus, *praefectus annonae*, for inspecting oil from Africa and Baetica’. Though the expression *oleum Afrum et Hispanum* refers here to two oil productions, one from Africa, the other from Spain, this parallel shows that these two oils were in some way related to one another. Does the compound noun *aphrospanon* mean that both oils came from regions administratively connected or that they were regarded as resulting from a similar way of manufacturing practised in Africa and Baetica, so that they could be considered as an identical or similar product and eventually mixed?

6. Conclusion

I’d like to conclude by stressing two points:

1. The LRA 1 *dipinti*, displaying a complex system, with several notations located on various places on the amphora, written in red ink in a very stylized scripture, constitute a homogeneous ensemble that differs from the *dipinti* of the other types of amphorae, which are more easy to read and understand, written usually in black ink in one textual block according to variable formulars.

<i>dipinti</i> on LRA 1	<i>dipinti</i> on other types of amphorae
in red ink stylised writing at several points of the amphora according to their function homogeneous formular product not mentioned	usually in black ink clear writing one text block heterogeneous formular product mentioned

By their very nature, LRA 1 *dipinti* are evidence of a highly centralized commercial organisation. As a matter of fact, behind the numerous small or medium producers whose name and production quantity is indicated in the type c inscriptions, we can guess that a huge trading organisation covering a large area straddling several administrative provinces (Cilicia, Isauria, Syria I, Rhodes and Cyprus) existed. In the absence of information given by more ‘talkative’ sources, the structures of this organisation remain for us somehow blurred or obscure in detail.

The formal homogeneity of the *dipinti* at the same time testifies the traders’ intention of giving this production, however geographically various it might

have been, a specific identity that made it recognizable by the wine-importing countries. We can say that paleography was in the service of marketing!

This homogeneity implies that all the LRA 1 contained the same product. For this reason, one would not feel the need to write down the product name in the **a-c** *dipinti* unlike the *dipinti* of other kinds of amphorae, hence the heterogeneity of their inscriptions.

But, despite the differences between LRA 1 *dipinti* and the others, we are struck by the great unity of formulas evidenced by all the types of *dipinti*, especially in Christian invocations (acrostics, isopsephisms or others) identical from Carthage to Apamea.

2. These *dipinti* bring meaningful contributions to several fields: as far as palaeography is concerned, the LRA 1 *dipinti* are nearly the only testimonies of cursive writing (I mean non epigraphic) in this area of the Byzantine Empire, and indeed they reveal peculiarities so far unknown (Fournet 2012). They also give new data about toponymy. But their greatest contribution is to commercial history, by giving names of products which were unknown till now. Thus they help us to fill in some lacunas of literary and papyrological sources and improve our knowledge of commercial Greek.

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²³ This term may refer to the method of production used for the North African and Betic oils as for σπανέλαιον: cf. Kramer 1990: 261–264.

²⁴ = ILS 1403 = AE 1965, 237 = AE 1971, 171 = AE 1991, 993 = CIL II, 23.

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