

A SYRIAC EPITOME
OF GALEN'S ON SIMPLE DRUGS, BOOKS 9-11:
TEXT AND TRANSLATION

MATTEO MARTELLI*

ABSTRACT · The Syriac manuscript Mm. 6.29 (15th century), kept at the Cambridge University Library, transmits an epitome of Galen's *On Simple Drugs*, books 9-11, under the name of the Graeco-Egyptian alchemist Zosimus (3rd-4th century AD). After summarizing the state of the art in a short introduction, the paper offers the first edition of the Syriac text, with translation and critical notes. Particular attention will be devoted to the comparison with the Greek text and its manuscript tradition.

KEYWORDS · Galen; simple drugs; Zosimus of Panopolis; Syriac translation; minerals; alchemy.

Introduction

IN 1895, the French chemist and historian of science Marcelin Berthelot identified a Syriac text preserved in the Cambridge University Library manuscript Mm 6.29 (15th century) with the translation of some sections taken from book 9 of Galen's pharmacological treatise *On the Properties of Simple Drugs* (*On Simple Drugs* hereafter).¹ Berthelot's conclusions were based on the French translation of the Syriac text, which he published in 1893 with the collaboration of Rubens Duval.² Further and more recent investigations have shown that this text must be

* matteo.martelli@unibo.it. Alma Mater Studiorum, University of Bologna. This publication is part of the research project *Alchemy in the Making: From Ancient Babylonia via Graeco-Roman Egypt into the Byzantine, Syriac, and Arabic Traditions*, acronym *AlchemEast*. The *AlchemEast* project has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (G.A. 724914). I warmly thank Emiliano Fiori, Ivan Garofalo, and Fabian Käs for their valuable remarks and suggestions. This article is in open access at galenos.libraweb.net.

¹ MARCELIN BERTHELOT, *Sur les voyages de Galien et de Zosime dans l'Archipel et en Asie, et sur la matière médicale dans l'antiquité*, «Journal des Savants» CCXLI, 1895, pp. 382-387.

² See MARCELIN BERTHELOT, RUBENS DUVAL, *La chimie au Moyen-Âge*, vol. II, *L'alchimie syriaque*, Paris, Imprimerie Nationale, 1893 (*CMA II* hereafter). The following abbreviations will be used in this paper: *BB* = *Lexicon Syriacum auctore Hassano bar Bahlule*, ed. Rubens Duval, 2 vols., Paris, Imprimerie Nationale, 1888-1901; *SL* = MICHAEL SOKOLOFF, *A Syriac Lexicon. A Translation from the Latin, Corrections, Expansion, and Update of C. Brockelmann's Lexicon Syriacum*, Winona Lake (IN)-Piscataway (NJ), Eisenbrauns-Gorgias Press, 2009; *SMF* = *De simplicium medicamentorum facultatibus* (Galen's *On the Properties of Simple Drugs*) in *Galen Opera Omnia*, ed. Karl Gottlob Kühn, vol. XII, Leipzig, Knobloch, 1826 (K); *ThSyr* = R. PAYNE SMITH, *Thesaurus Syriacus*, 2 vols., Oxford, Clarendon Press, 1879-1901.

identified with a Syriac epitome of books 9-11 of Galen's treatise.³ Despite the relevance of this textual source, which, along with the Syriac Galen Palimpsest,⁴ represents the only extant translation (although in an epitomized form) of the last three books of *On Simple Drugs* into Syriac, the Syriac text of the CUL manuscript has never been edited. In this paper, I shall provide a first edition of the epitome, with translation and critical notes.

In ms. Mm. 6.29, which transmits an anthology of alchemical texts, the epitomized version of Galen's last three books of *On Simple Drugs* is ascribed to the Graeco-Egyptian alchemist Zosimus of Panopolis (3rd-4th century AD). This attribution is probably late, as argued elsewhere.⁵ The epitome seems to summarize and reshape an already extant Syriac translation, which probably draws upon (at least in some sections) Sergius of Rēš 'Aynā's version of the Galenic treatise. We know, indeed, that Sergius translated at least the last five books of *On Simple Drugs*,⁶ a translation that was afterwards revised by Ḥunayn ibn Ishāq, who claimed to have improved and corrected the earlier version.⁷

The epitome of the CUL ms. Mm. 6.29 is divided into four sections. The first three sections depend on book 9 of Galen's *On Simple Drugs*, although they are organized in a slightly different order. The first Syriac section deals with mineral medicines, which is the third group of substances that Galen describes in the third and last part of book 9 (SMF IX.3). Then, the Syriac epitome lists medicinal earths and stones, which are discussed respectively in the first and the second parts of *On Simple Drugs* (SMF IX.1 and IX.2). The last section of the Syriac epitome

³ See SEBASTIAN BROCK, *The Syriac Background to Ḥunayn's Translation Techniques*, «ARAM» III, 1991, pp. 139-162: 154; MATTEO MARTELLI, *Medicina e alchimia. 'Estratti galenici' nel Corpus degli scritti alchemici siriaci di Zosimo*, «Galenos» 4, 2010, pp. 207-228; GRIGORY KESSEL, *Inventory of Galen's Extant Works in Syriac*, in John C. Lamoreaux (ed.), *Ḥunayn ibn Ishāq on His Galen Translations*, Provo (UT), Brigham Young University Press, 2016, pp. 168-192: 177-178.

⁴ This crucial witness, whose undertext transmits large sections of a possibly complete Syriac translation of *On Simple Drugs*, is currently investigated within Peter Pormann's AHRC funded project *The Syriac Galen Palimpsest: Galen's On Simple Drugs and the Recovery of Lost Texts through Sophisticated Imaging Techniques*. For an up-to-date state of the art, see: NAIMA AFIF, CORNELIU ARSENE, SIAM BHAYRO, IRENE CALÀ, JIMMY DACCACHE, ROBERT HAWLEY, GRIGORY KESSEL, PETER PORMANN, WILLIAM I. SELLERS, NATALIA SMELOVA, *Continuing Research on the Syriac Galen Palimpsest: Collaborative Implementation within the Framework of two European Projects*, «Semitica et Classica» IX, 2016, pp. 261-268.

⁵ See MATTEO MARTELLI, *Galen's On Simple Drugs in the Syriac Alchemical Tradition*, forthcoming in the *British Academy Proceedings* of the conference on the Syriac Galen Palimpsest held in Manchester (November 2019).

⁶ Note that we cannot exclude the possibility that he translated the whole treatise: see SIAM BHAYRO, SEBASTIAN BROCK, *The Syriac Galen Palimpsest and the Role of Syriac in the Transmission of Greek Medicine in the Orient*, «Bulletin of the John Rylands Library» LXXXIX, supplement 1, 2013, pp. 25-43: 38-40.

⁷ In his famous 'Epistle' on his own translations of Galen's writings, Ḥunayn does not only mention his work on Galen's pharmacological treatise, but he also records previous Syriac translations of the first and the second part of *On Simple Drugs*, namely, books 1-5 (the theoretical part) and 6-11 (the practical part). See GOTTHELF BERGSTRÄSSER, *Ḥunayn ibn Ishāq über die syrischen und arabischen Galen-Übersetzungen*, Leipzig, F. A. Brockhaus, 1925, pp. 7 and 24; Lamoreaux, *Ḥunayn ibn Ishāq*, cit., p. 66 and p. 67.

me is about animal substances, which represent the topic of books 10-11 of Galen's pharmacological treatise. The epitomizer is driven by a clear lexicographical interest, since many chapters are condensed into short lexical entries. The whole book 10 of *On Simple Drugs*, for instance, is distilled into 9 telegraphic entries. Each entry lists the Greek term transliterated with Syriac characters along with its Syriac equivalent, thus providing a kind of 'table of content' (or *pinax*) of Galen's books, somehow comparable with the *pinakes* that Sergius of Rēš 'Aynā added to his translation of books 6-8.⁸ In other cases, large sections of Galen's chapters are kept in the epitome, such as parts describing different features of the drugs (colour, texture) as well as the places from where they were extracted. The epitome also includes the Syriac translation of substantial sections in which Galen provided detailed accounts of his own journeys to various islands rich of mineral medicines (Cyprus, Lemnos). Some entries of the epitome, indeed, can be identified with an almost complete translation of Galen's corresponding chapters, such as in the case of medicinal earths (*SMF IX 1.2*), vitriol (*SMF IX 3.21*), or the bird called *χόρυθος* ('lark'; *SMF XI 1.37*). On the contrary, almost every medical information (e.g., on the application of the drugs, their therapeutic effects, and so on) is left aside.

Included in a collection of Syriac alchemical treatises and reshaped according to the criteria sketched above, Galen's books could represent a crucial source providing clear information on many ingredients used in the alchemical procedures. Indeed, many entries of our Syriac epitome also appear in an alchemical lexicon transmitted by two other Syriac alchemical manuscripts kept at the British Library: Oriental 1593 (15th-16th century) and Egerton 709 (16th century). The lexicon was edited by Berthelot and Duval (*CMA II 2-9*), and the relevant entries will be quoted in the footnotes to the edition of our Syriac epitome.

The Syriac text of the Epitome

In many passages, the text is either difficult to decipher or no longer readable. Indeed, the writing is faded in the manuscript, which has been damaged by the humidity, especially in the margins. In editing the epitome, I marked these lacunae as follows:

- 1) a short lacuna (1 to 2 or 3 words) is marked by [...]
- 2) a long lacuna (1 to 2 lines) is marked by [— —]
- 3) the terms that have been supplied to fill a lacuna are marked by <>
- 4) a single term that is difficult to read is followed by a question mark in brackets (?)

⁸ Sergius' translation is transmitted in the manuscript British Library ms. Add. 14,6661. See ADALBERT MERX, *Proben der syrischen Uebersetzung von Galenus' Schrift über die einfachen Heilmittel*, «Zeitschrift der Deutschen Morgenländischen Gesellschaft» xxxix 1885, pp. 237-305; IRENE CALÀ, ROBERT HAWLEY, *Transliteration versus Translation of Greek Plant Names in the Syriac Medical Writings of Sergius of Rēš 'Aynā: On the Tables of Contents in BL Add. 14,661*, «Aramaic Studies» xv, 2017, pp. 155-182: 164. For a comparison with the entries in the Syriac epitome, see MATTEO MARTELLI, *L'alchimie en syriaque et l'œuvre de Zosime*, in *Les sciences en Syriaque*, ed. Émilie Villey, Paris, Geuthner, 2014, pp. 191-214: 209-211.

froth (ἀφρός) of soda (νίτρον) [...] foam of soda, since it looks like wheat <flour> and is white. Ἀφρόνιτρον is neither flour-like nor loose, but it is solid and thick: those who scrub their bodies⁹⁴ in the baths use it every day.

(SMF IX 3.6) Γύψος, that is, lime.

(SMF IX 3.8) Διφρυγές (i.e. 'twice roasted drug'). I also collected a great amount of this drug from a hill⁹⁵ that is in the island of Cyprus, where there is a mine that is part of it, which is about thirty stadia away from the city. It (i.e. the drug) lies in a region between the house that is close to the mine and the town that is near to it. The guardian who was in charge of the mine told us that [...] is the useless residue from the burning of furnaces.

Theta, tēt

(SMF IX 3.9) Θεῖον, that is, sulphur.

Iota, yūd

(SMF IX 3.10) Ἴός, that is verdigris, i.e. ἰάριν.⁹⁶

Kappa, qūp

(SMF IX 3.11) Καδμεία (calamine). It is [121r] [...2 lines unreadable...] the burning [...] and fumes or as a vapour, [as] one will prefer to call it.⁹⁷ If you will not say earth, but you prefer to call it a stone [...] in the furnaces and copper, some <καδμεία> ('calamine') and διφρυγές ('twice roasted drug') are produced, but this is different (?).⁹⁸ [...] also in the mine from which [silver] comes out⁹⁹ [...] a similar separation or generation, as <one prefers> to call it. On the other hand, calamine is also produced from the stone that is called pyrites, when it is melted in a furnace. Calamine is produced [without]¹⁰⁰ a furnace in Cyprus. One is [right] to call it stone.¹⁰¹ As for the one produced in the furnaces, the physicians call it part βοτρυίτις, that is, 'in clusters', part πλακίτις. The 'in clusters' variety is that which is collected in the upper parts of the furnaces, when they have been fired; in contrast, the πλακίτις is that which is collected in the lower chambers.

(SMF IX 3.13) Κίσσηρις, that is, pumice stone.

⁹⁴ The Greek text as edited by Kühn reads (12.212, 15-16 K): ᾧ (i.e. ἀφρολίτρον) πάντες οἱ ῥυπῶντες ἐν τοῖς βαλανείοις ὁσημέραι χρῶνται. The Syriac text seems to agree with ms. *Monacensis* gr. 469, which reads ῥυπτόντες, rather than ῥυπῶντες.

⁹⁵ The Greek text as edited by Kühn reads (12.214, 12 K): ἐκόμισα δὲ καὶ τούτου τοῦ φαρμάκου πολὺ τι πλῆθος ἐκ τῶν ἐν Κύπρῳ Σόλων, where Σόλοι is the name of the Cyprian city also mentioned in other passages of Galen's book 9 (12.220, 1 and 226, 12 K); cf. Dioscorides 5.74,4 ἐκ τοῦ ὑπερκειμένου Σολέων ὄρους. Ms. *Urbinas* 67, on the other hand, reads ἐκ τῶν ἐν Κύπρῳ λόφων, «from the hills on Cyprus», which seems to correspond to the Greek text behind the Syriac translation. This lesson seems a trivialization.

⁹⁶ Byzantine form, see P. BOURAS VALIANATOS, *Enrichment of the Medical Vocabulary in the Greek-Speaking Medieval Communities of Southern Italy: The Lexica of Plant Names*, in *Life is Short, Art Long / The Art of Healing in Byzantium / New Perspective*, Brigitte Pitarakis, Gülrü Tanman, eds., Istanbul, Istanbul Research Institute, 2018, p. 70: θάριν-(ἰάριν corr. Grun) ὁ ἴος τοῦ χαλκ<ο>ῦ.

⁹⁷ This line is difficult to read in the Syriac ms. The Greek text as edited by Kühn reads (12.219, 10-11 K): οἶον αἰθάλόν τινα ἢ ἀσβαλον, ἢ αἰθάλην γε καὶ ἀσβόλην, ὡς ἀν ἐθέλη τις καλεῖν.

⁹⁸ See above, note 21.

⁹⁹ That is, ἐν τοῖς ἀργυροῖς μετάλλοις in the Greek text (12.219, 14-11 K).

¹⁰⁰ The Greek text reads (12.219, 17 K): χωρὶς δὲ καμίνου.

¹⁰¹ The Greek text reads (12.219, 18 K): δικαίως ἀν τις τὴν τοιαύτην ὀνομάζει λίθον.

(SMF IX 3.15) Κυανός, that is, the κύανον (*i.e.* blue) of painters, cinnabar.¹⁰²

(SMF IX 3.14) Κασία (*lege κονία*), that is, ash.

Lambda, lāmad

(SMF IX 3.16) Λεπίς, that is, <a flake>. There is (the flake of) copper that is [a drug] much useful for many things, and the flake of iron and steel. They call it and also another flake by the name of ἡλίτις (*lit.* 'like nails').¹⁰³

(SMF IX 3.17) λιθάργυρος, that is, litharge.

Mi, mūm

(SMF IX 3.19-20) Μελαντηρία, that is, μελάνη(ο)ν¹⁰⁴ [...] ink of the writers.

(SMF IX 3.21) Μίσου, that is, <vitriol> [121V] [...2 lines unreadable...] above, which is in the mountain of the city of Sūliya, there is a big <building>, and in its wall that [was on the right, but was]¹⁰⁵ on our left when we went in, there was the entrance to the mine, that [...] in this mine I saw three layers¹⁰⁶ that (were) one above the other: the lowest layer is of [red vitriol?] that is called σῶρι, the layer above is [of *kalqītīrīn*],¹⁰⁷ the third layer, the upper one, is μίσου, that is [...]. The guardian who, at that time, was in charge of the metal <mine>, when he showed us these layers, [told us]:¹⁰⁸ «just as you arrive now when we are in need of <calamine> that is produced in the furnaces, we [have] a great abundance of the three drugs that you saw». For I collected a great amount of them. At first, I came here,¹⁰⁹ and from there back to Rome, and I still have now part of these (*scil.* drugs).¹¹⁰ Indeed, when I needed to add a bit of vitriol to a remedy, I took a lump of it that could be held in the hand, even if the vitriol of this kind does not have such a de-

¹⁰² In all likelihood, the term originally represented the lemma of the following entry. In the Greek text, κιννάβαρις is described after καδμεία.

¹⁰³ This sentence reads in Kühn's edition (12.223,11-13 K): λεπίς ἡ μὲν τις ἐστὶ χαλκοῦν πολύχραστον φάρμακον, ἡ δὲ τις σιδήρου τε καὶ στομώματος. ὀνομάζουσι δὲ τινες καὶ ἡλίτιν λεπίδα (the last sentence is omitted by ms. *Urbinas* 67). In the Greek text, there is no mention of «another flake».

¹⁰⁴ Diminutive form of μέλαν ('black'), the substance described by Galen in IX 3.20: μέλαν ὄ γραφομεν κτλ. (12.226,7 K). Ms. *Urbinas* gr. 67 reads: μέλαν γραφικόν· ὄ γραφομεν κτλ. On diminutive as an input form for Greek loanwords in Syriac, see AARON M. BUTT, *Language Changes in the Wake of Empire. Syriac in Its Graeco-Roman Context*, Winona Lake (IN), Eisenbrauns, 2016, p. 101.

¹⁰⁵ See the Greek text (12.226,12-14 K): μέγας τις ἦν οἶκος, οὗ κατὰ τὸν δεξιὸν τοῖχον, ὡς πρὸς ἡμᾶς δὲ τοὺς εἰσιόντας ἀριστερόν, εἴσοδος ἦν εἰς αὐτὸ τὸ μέταλλον.

¹⁰⁶ The Syriac term ZWNY'S is the transcription of ζώνης.

¹⁰⁷ The Greek text reads (12.226,17 K): ...τὴν (ζώνην) τῆς χαλκίτεως. The term χαλκίτις (a copper ore, similar to μίσου and σῶρι) is consistently translated as ܟܠܩܝܬܝܪܝܢ (*kalqītīrīn*) in this entry as well as in the all section on *metallika*. This Syriac form, along with various spellings such as ܟܠܩܝܬܝܪܝܢ (SL 627), ܟܠܩܝܬܝܪܝܢ (BB I 859,5; 899,2) and ܟܠܩܝܬܝܪܝܢ (SL 1375), corresponds to the Arabic *qulqūṭār* (قلقطار), which usually translates χαλκίτις: see KÄS, *Mineralien*, cit., pp. 612-615; M. ULLMANN, *Wörterbuch zu den griechisch-arabischen Übersetzungen des 9. Jahrhunderts*, Wiesbaden, Harrassowitz Verlag, 2002, p. 756.

¹⁰⁸ The Greek text reads (12.226, 17 K): δεικνύς μοι ταῦτα... ἔφη κτλ.

¹⁰⁹ There is no reference to Asia, that is mentioned in the Greek text (12.227, 5-6 K): πρῶτον μὲν εἰς τὴν Ἀσίαν, ἐκείθεν δ' εἰς τὴν Πρώμην ἐκόμισα.

¹¹⁰ The Syriac epitome here omits a few lines of the Greek text, where Galen claims to be still using the minerals he collected in Cyprus thirty years after his journey. He also adds that, twenty years earlier, he had not yet written the ninth book of *On Simple Drugs*.

gree of solidity, but it crumbles into many small pieces. Then, after being amazed at its true condensation¹¹¹ and after breaking the lump, I found in a flat circle that [vitriol?] was similar to a sort of efflorescence that lays over [...]. On the top of this [...] [148r] [...] line and a half barely readable...] some *kalqītīrīn* that changes [into vitriol]. At the beginning it was a lump <of> *kalqītīrīn*. As for what is deep inside, [...] (it) was lower *kalqītīrīn* that had not yet undergone any transformation. [...] these (things), I understood that also in the mine <that is> in Cyprus vitriol forms on (the surface of) *kalqītīrīn* in the same way as verdigris on (the surface of) copper [...] I examined what was left to me of <σῶρι>, whether it had never undergone a transformation into *KLQYTS* (i.e. χαλκίτις?).¹¹³ A certain likeness to it¹¹⁴ became visible to me and perhaps σῶρι too, after a long time, can change into *kalqītīrīn*. Therefore, it is no wonder if these three drugs – that is, σῶρι, *kalqītīrīn* and vitriol – are kindred in their kind and capacity, but they differ from one another for their degree of thinness and thickness. For σῶρι is the thickest among them, vitriol the finest, while the capacity of *kalqītīrīn* is in between.

(SMF IX 3.22) Μολυβδαῖνα, that is [...]

(SMF IX 3.23) Μόλυβδος, that is, lead.

Omicron, 'ālah

(SMF IX 3.24) Ὀστρακον, that is, a potsherd.

Pi, pē

(SMF IX 3.25) Πομφόλυξ (a zinc oxide), it is produced in the furnaces in which copper is melted, like calamine. It is produced [148v] [...]. In Cyprus, then, since the guardian [...] did not gather [...] the supplies¹¹⁵ that were necessary for the furnace to melt <copper>, [...] he made calamine become this drug, i.e. πομφόλυξ, for me, when I was there and could observe (the process). In fact, calamine was broken in small pieces and it was sprinkled on fire where there was a big set of bellows, like (the bellows) of smiths. A kind of ceiling (in the furnace), which was hard and thick, received the vapour that rose when calamine was melted. I collected this (vapour) and I had πομφόλυξ. When it falls from above and settles on the ground, it is called σποδός. This is the ash that is especially (?) collected in the rooms¹¹⁶ where copper is melted. Others call it σπόδιον.

¹¹¹ The Greek text as edited by Kühn (12.227,14) reads: θαυμάσας οὖν τὴν ἀήθη πύκνωσιν αὐτοῦ, «By wandering at its unusual condensation...». If the (rare) Syriac term ܩܠܩܝܬܝܬܝܢ (from ܩܠܩܝܬܝܬܝܢ, 'to thicken', 'to make dense') is a translation of the Greek πύκνωσις, the adj. ܩܠܩܝܬܝܬܝܢ, 'firm', 'solid', 'true', does not correspond to the Greek (Kühn) ἀήθης, 'unusual', 'strange'. The Syriac text rather translates the Greek τὴν ἀληθῆ πύκνωσιν, a variant reading transmitted by mss. *Monacensis* 459 and *Urbinas* 67.

¹¹² The Greek text reads (12.228, 5 K): τοῦτο οὖν θεασάμενος.

¹¹³ Here, the Greek term χαλκίτις is not translated as *kalqītīrīn* (as in the rest of the entry), but it seems to have been simply transliterated (see *BB* I 859,5, ܩܠܩܝܬܝܬܝܢ). See below, s.v. χάλκανθος.

¹¹⁴ The expression might refer to a certain similarity between σῶρι and χαλκίτις, that would be a sign that part of σῶρι did change into χαλκίτις. The Greek text reads: καὶ βραχεῖά τις ὑπόφασις ἐφάνη τάχα.

¹¹⁵ The Syriac term ܩܠܩܝܬܝܬܝܢ (lit. 'preparation') translates the Greek παρασκευή. Indeed, the Greek text reads (12.234, 6-7 K): ἐπειδὴ τὴν παρασκευὴν οὐκ εἶχεν εἰς τὴν τοῦ χαλκοῦ καμινεῖαν ὁ ἐπίτροπος.

¹¹⁶ The Greek text reads (12.234,15 K): ἡ καλουμένη σποδός ἐστι, πλείων κατὰ τὰς τοῦ χαλκοῦ

Sigma, Semkat

(SMF IX 3.26) Σανδάρρακη, that is, sandarac.

(SMF IX 3.27) Σάνδουξ, that is, Συρικόν.¹¹⁷

(SMF IX 3.28) Σκωρία, that is, the waste product that comes from iron and from silver. Iron slag takes this name.¹¹⁸

(SMF IX 3.30)¹¹⁹ Στυπτηρία, that is, alum. Even the name of this drug accounts for astringency: indeed, a very strong (astringency) is found in it, since it is thick by nature. The one that is called s[cissile alum] is thin, and after it there is the round (alum) that is called στρογγύλη. Moist alum is quite thick [...] which is called πλιθίτις ('brick-like') and (?).¹²⁰

[122r] *Tau, Tēt*

(SMF IX 3.31) Τίτανος, that is, lime.

Ypsilon, Hē

(SMF IX 3.32) Ύδραργυρος [...] quicksilver.

Phi, Pē

(SMF IX 3.33) Φῦκος, that is, red rhubarb.

*Chi, Kāp*¹²¹

(SMF IX 3.24) Χάλλακανθος, that is, KLQDYS.¹²²

(SMF IX 3.25) Χαλλίτις, that is, *kalqītīrīn*. We talk about this (drug) in the chapter on vitriol.¹²³

(SMF IX 3.26) Χαλλικός κεκαυμένος, that is, burnt copper.

(SMF IX 3.27) Χάλλακανθος (i.e. ἄνθος χαλλοῦ), that is, flower (efflorescence) of copper.

(SMF IX 3.27) Χρυσοκόλλα [...] gold solder.

Psi

(SMF IX 3.28) Ψιμίθιον, that is, white lead (ceruse), since when lead is dissolved with fermented (?) vinegar,¹²⁴ then it becomes white lead (ceruse). When white

καμνείας (*καμίνους* in ms. *Urbinas* 67). On the building with two chambers where πομφόλυξ was produced, see Diosc. v 75.2.

¹¹⁷ The term Συρικόν is not mentioned in Galen's text. The two terms are already used as synonyms in Diosc. v 171.2; Aet. II 70 and 82, 4: καίόμενον δὲ τὸ καθαρὸν ψιμίθιον εἰς τὸ καλούμενον συρικὸν μεταβάλλει, ἔπερ οἱ ἰατροὶ σάνδουκα ὀνομάζουσι (Alessandro Olivieri, *Actii Amideni Libri medicinales I-IV*, Leipzig-Berlin, Teubner, 1935, pp. 175, 24-25 and 178, 6-8). See Kās, *Mineralien*, cit., pp. 231-232.

¹¹⁸ The Syriac text departs from Galen's entry which explains the properties of σκωρία (12.235, 17-236, 7 K).

¹¹⁹ The Syriac epitome omits Galen's entry on στίμιμι (antimony; SMF IX 3.29 = 12.236, 8-12 K).

¹²⁰ The Syriac term is unclear and not fully readable. We would have expected to find here a transcription of the Greek πλακίτις.

¹²¹ We should note that the Greek aspirated *chi* is consistently transliterated as *kāph* in Syriac, while it is usually rendered as *hā'* in Arabic.

¹²² This form (see BB I 898, 25) corresponds to the Arabic *qalqadis* (قلقدیس), which is often used to translate *χάλλακανθος*: see Kās, *Mineralien*, cit., pp. 604-612; ULLMANN, *Wörterbuch*, cit., p. 755.

¹²³ Galen here refers back to the chapter on μίσυ (SMF IX 3.21), where the term *kalqītīrīn* is consistently used to translate the Greek χαλλίτις.

¹²⁴ The Syriac entry departs from the Greek text, which insists on the medical properties of white lead. The Greek entry does not mention lead as the metal from which white lead is prepared. Galen

lead is set on fire, it becomes what is called Συρικόν.¹²⁵
(SMF VIII 16.4) Ὀποπᾶναξ, that is, milk of fennel (*īrūrā*).¹²⁶

[Second section on medicinal earths. Mm. 6.29 122r13-125v21 = Galen, *On Simple Drugs*, IX.1 (12.165-192,3 K)].

Explanation of all kinds of earths by the wise Zosimus.

(SMF IX 1.2) What is usually called 'earth' by all people is that (earth) which, when mixed with water, immediately melts and becomes mud. A kind of earth is that which is worked by men. It has also different varieties that depend on its own capacities, on its being fat and greasy. It is also [122v], by all means, black in colour. Another kind is [...], which is not fat: this is called 'clayey earth' (*ksālītā*), which is also whitish. There are these (two) varieties of earth that are of opposite kind. There are other varieties that are in between or that are closer to one or to the other. Some of them seem also to be in between [...], since they are at the same distance from both extremities. Other [...] varieties of earth, which come from the mixing of bodies of different species: these are stones (stony?) and sandy (earths).¹²⁷ They separate it (the earth)¹²⁸ from the mixed substance of these (bodies)(?) when they throw it in plenty of water until they work a clay that is completely soaked. Indeed, if this happens, the part that is of a stony and sandy substance settles on the bottom, while what settles on the top is pure earth. Something similar also happens for the earth that comes from Lemnos, which some also name Lemnian red ochre, and others call Lemnian seal.¹²⁹ This earth, in fact, has a colour similar to that of red ochre. But it differs from this (ochre) since it does not stain what gets in contact with it as it (the ochre) does. Indeed, there is a hill in Lemnos that is completely red in colour and there are no trees in it, no plants, and no stones, but (only) this earth. It has three varieties. [123r] [The first?] what is said to be [...a line unreadable...] but the priestess. The second earth is [...] red ochre, which is especially used by carpenters, [...] the (measuring) cords for making marks on woods. The third variety is the earth of [...] that

rather specifies that, even though diluted in sharp vinegar – ὑπὸ γούν ἕξους δριμέος αὐτὸ (i.e. ψιμμύθιον) διαλυόμενον (12.244, 1 K) – white lead is not sharp nor stinging.

¹²⁵ See Galen's Greek text (12.444, 4 K): καιόμενον δὲ τὸ ψιμμύθιον εἰς τὴν καλουμένην σάνδουκα (*lege sándouka*) μεταβαλὼν κτλ. On Συρικόν as a synonym of σάνδουξ, see above, note 117 and Kās, *Mineralien*, cit., pp. 231-233.

¹²⁶ This last entry is not taken from book 9 of *On Simple Drugs*. Galen deals with this plant in book 8 (12.94,15-16 K), in the entry devoted to 'Hercules' all-heal' (πάνακες Ἡράκλειον). In Sergius of Rēš' Aynā's translation of this book, we find the same identification of ὀποπᾶναξ: see BL ms. Add. 14,6661, fol. 59v4-6.

¹²⁷ The Greek text reads (12.169, 2-3 K): αἱ δ' ἐξ ἐπιμιξίας ἑτερογενῶν σωμάτων διαφοραὶ τῆς γῆς εἰσι, καθὸ λιθώδεις τε καὶ ψαμμώδεις ὑπάρχουσιν. The Syriac expression ܩܘܿܬܐ ܩܘܿܬܐ seems to be used as an adjective translating ἑτερογενῶν. See also MARTELLI, *Medicina e alchimia*, cit., p. 217, note 40.

¹²⁸ The feminine suffix pronoun (ܐܘܿܠܐ) seems to refer back to earth mentioned in the previous line. The Greek text reads (12.169,4 K): καὶ χωρίζουσί γε τῶν τοιούτων τὴν μεμιγμένην οὐσίαν.

¹²⁹ The Syriac epitome omits a section of the Greek text: 12.169,10-170, 10 K.

cleanses, what is much used by [those?] who wash linen cloths and garments. Then, since [I read?]¹³⁰ in Dioscorides's book as well as in other books that the blood of he-goats is mixed with the earth that is called Lemnian, and, from the clay that is thus produced by this mixture, the priestess cuts and shapes the seals that are given the name of Lemnian (earth), I longed to see myself the ratio of this mixture. Indeed, as I went to the island of Cyprus because of the (substances) there that come out from the earth, and I also went to Syria, the one called Coele Syria, which is part of Palestine, because of the ἄσφαλτος, that is, bitumen, and because of the many other things that are worth seeing, then I did not mind to extend my journey and go also to Lemnos, in order to see how much blood of he-goats is mixed with earth. Since for the second time I was set to depart from Asia to Rome through Thrace and Macedonia, I first travelled by sea from Troas that is called Alexandria [123v] and I arrived to the island of Lemnos. Since I found a ship leading to Thessaloniki, I [...] with the head of the sailors to bring me first to Lemnos and he agreed with me on this, as it was not known to which city among those that were in Lemnos. In fact, before this (journey), I was not aware that there are two cities in the island. I rather believed that, as Samos, Chios, Kos, Andros, Tinos, and all the islands that are in the gulf called Aegean, Lemnos as well was the only city that is called by the name of the whole island. When we reached the island and [I ?] got off the ship, I learned that Myrina was the name of the city where we arrived. And I saw that neither those things which Philoctetes talked about nor those that are in the holy hill of Hephaistos were visible in the countryside around this city. But I learned that these things were in another city that is called Hephaistos [*lege* Hephaestias] and that this city was not nearby Myrina where we arrived. But the captain of the sailors could not linger and wait for me. I desisted from this (plan) and I decided to see Hephaestias and the hill around it when I would have come back again from Rome to Asia. And this was done by me exactly as I wished and planned. In fact, after leaving Italy and coming to Macedonia, [124r] I crossed, for example, all the region [...] in my return trip, and I came [...] to the city of Philippi, which is at the border of Thrace, and from here towards the sea that is close to this region and is about 120 stadia from there. I moved downwards from there, I travelled by ship, and I came first to Thasos, about 200 stadia away. Thence I came to Lemnos, approximately a further 700 stadia from Alexandria Troas. Indeed, I did not write on the journey and the stadia by chance, but so that [...], if someone else wishes to visit Hephaestias as I did, he can learn from this (account) the position of the place and thus get well prepared for the travel leading to that (place). In the hole island of Lemnos, the city of Hephaestias was in the eastern part, while the city of Myrina was in the western part. As for what is said by the poet Homer about Hephaestus (?), namely: «he fell in Lemnos», I think he derived this story from the nature of the hill that is in this (island). It (i.e. the hill) seems to be similar to something burnt because of its colour and because nothing grows on it. The priestess came to this hill at the time when I came to the island, and she brought there a certain amount of grains of wheat and barley and she did [124v] some other things ac-

¹³⁰ The Greek text reads (12.171,1-2 K): ἀνεγνωκώς δὲ ἐγὼ παρά τε Διοσκορίδην καὶ ἄλλοις τισὶ κτλ.

ording to the religious practice of the inhabitants of the region. She loaded a whole wagon with this earth, went to the city, and moulded and prepared with it the seals of Lemnos, those that are known everywhere. It seemed good to me to ask whether, in earlier times, blood of he-goats and goats was mixed with this earth [...] a certain report in the tradition about this [...]. All those who listened to this, laughed, and they were <not> ordinary men, but men well versed in many other subjects and in the whole ancient history of their region. I also received a book from one of them, which had been written by <one> of the ancients in their region. He teaches in this (book) any use of this earth that is taken from Lemnos. For this reason, I did not neglect to test this drug. Therefore, I took 2.000 seals of it.

(SMF IX 1.4) Then the earth that is from Samos, which is called Samian and is chalk. They especially use a kind that they call ἀστῆρ, that is, 'earth star', which is chalk. The earth of Lemnos has a capacity a little stronger than the earth that comes from Samos, which is called chalk. For [125r] the 'earth star' that is also called 'chalk' is sticky and clayey. But the Selinousian earth and the earth of Chios have a very valuable cleansing capacity. For this reason, many people use them on their faces.¹³¹

(SMF IX 1.4) The (earth) that is called Cimolian (Κιμωλία) has a mixed capacity. Indeed, when [you hear of?]¹³² earth of silver, (earth) of gold, or (earth) of iron, we must know that they call this way the earth that is extracted from silver mines, gold mines, and iron mines.¹³³

(SMF IX 1.4) The earth that is called ἀμπελιῖτις, that is, (earth) of the vine. Some simply call it 'medicinal' (earth). It is called 'vine' (earth) not because a vine will be suitably planted (in it), but because, when they besmear vines with this (earth), it kills the worms that (live) on them, when the eyes of the vine shoots sprout. They call this earth ἄσφαλτος, that is, bitumen.¹³⁴

(SMF IX 1.4) There is another earth that comes from Armenia, which borders Cappadocia, that is much drying and yellow in colour. The one who gave it to us called it a stone, not an earth. It is much easily diluted like lime: as nothing [125v] sandy is found in lime, when pounded, it is neither (found) in this clod (of earth) that comes from Armenia. After pounding it with pestle in a mortar, it thus becomes smooth and without pebbles as lime and the 'earth star' that is, chalk. But it is not as light as 'earth star'. Indeed, it is thicker than this one (i.e. 'earth star') and it is not equally airy. As a result, this strengthens the opinion that it is a stone in those who look at it carelessly. But there is no difference [in] this writing whether one calls it a stone, an earth, <or> a clod (of earth).¹³⁵ In the language of the

¹³¹ This paragraph summarizes 12.178, 15-181, 1 K.

¹³² I could not read the Syriac text here, which was translated by Berthelot-Duval as follows (CMA II 303): «Quand tu prend de la terre argentée etc.». The Greek text reads (12.184,11-12 K): ὅταν ἀργυρεῖτιν ἢ χρυσίτιν ἢ σιδηρεῖτιν ἀκούσης γῆν.

¹³³ See 12.182,5 and 184,9-13 K.

¹³⁴ This section summarizes 12.186, 12-187, 9 K. There is no mention of bitumen in the Greek text.

¹³⁵ The first part of this section corresponds to 12.189, 7-190, 1 K. The last part, which deals with the different names of the Armenian earth and the places which it comes from, is not in Kühn's

inhabitants of this region, it was given the name of *zārīnā*, and *zarnikā* in the language of Syria. The mountain which it comes from belongs to the city that is called *Bāgāwanā*. The field in which this mountain lies is given the name of *ʿĀgarāqā*.

(SMF IX 1.4) The Lemnian (earth) has a capacity that is stronger than any kind of earth which is among these. But the Eretrian (earth) (Ἐρετριάς?) is even stronger than this one.¹³⁶

(SMF IX 1.4) There is also another stone that is called *πνιγῖτις*, which is similar to the earth of Lemnos in all its capacity. However, it departs from that (earth) for its colour. In fact, it is black like ‘vine’ earth.¹³⁷

[Third section on stones. Mm. 6.29 125V21-127r6 = Galen, *On Simple Drugs*, IX.2 (12.192,4-208,11 K)].

(SMF IX 2.1) First [126r], I speak about those stones that, when crushed with mortars and files, become liquid and produce a juice (*χυλός*).¹³⁸

(SMF IX 2.2) One of them is *αἰματίτης*, that is, something blood-like, which is given this name as a result of its similarity in colour. Likewise, *γαλακτίτης* <too>, that is, milk-like (stone), because, when dissolves into a juice (*χυλός*), it also becomes similar to milk. It produces a juice (*kūlrīn*) like this [...] also *μελιλίτης*, that is, honey-like (stone), is given this name from its taste that is similar to honey.

(SMF IX 2.3) Another stone that is called *μόροξος*. Others call it *λευκογραφίς*.¹³⁹ Linen cloths are rubbed with this (stone).¹⁴⁰

text. It is however preserved, along with a long discussion on digamma, in ms. *Urbinas gr. 67*: see MATTEO MARTELLI, *Galeo grammatico sui nomi stranieri e il digamma. Un passo inedito dal IX libro del trattato Sui medicamenti semplici*, «AION. Annali dell’Università degli studi di Napoli L’Orientale» xxxiv, 2012, pp. 131-147. For the Syriac translation of Galen’s discussion on digamma, which is included in the Galen Syriac Palimpsest, see NAIMA AFIF, SIAM BHAYRO, PETER E. PORMANN, WILLIAM I. SELLERS, NATALIA SMELOVA, *On Digamma and the Armenian Earth*, «Le Muséon» cxxxI, 2018, pp. 391-414.

¹³⁶ This short paragraph corresponds to 12.188, 4-6 K: τούτων δ’ ἀπασῶν ἡ Λημνία δύναμιν ἰσχυροτέραν ἔχει, πρόσσεσι γὰρ αὐτῇ τι καὶ στυψέως, ἢ δ’ Ἐρετριάς ἔτι καὶ ταύτης ἰσχυροτέραν. However, the Syriac epitome does not mention the astringent capacity of this earth.

¹³⁷ This last sentence corresponds to 12.189, 2-4 K, where Cimolian earth is mentioned rather than Lemnian earth: ἔστι δὲ καὶ ἄλλη γῆ πνιγῖτις ὀνομαζομένη, κατὰ μὲν τὴν ἕλλην δύναμιν ἐοικυῖα τῇ Κιμωλίᾳ, κατὰ δὲ τὴν χροῶν ἀφροστηκυῖα. μέλαινα γὰρ ἔστιν ὁμοίως τῇ ἀμπελίτιδι κτλ.

¹³⁸ Only the last sentence of Galen’s introductory chapter to this section (12.192, 4-195, 2 K) is kept in the Syriac epitome (12.195, 1-2 K): περὶ πρώτων οὖν ἐρῶ λίθων ἃσοι παρατριβόμενοι θυῖαις ἢ ἀκόναις εἰς χυλὸν ἀναλύονται.

¹³⁹ The Syriac text only translates the last line of chapter 3 «On split stone and many other stones» (Περὶ σχιστοῦ καὶ ἄλλων πολλῶν λίθων = 12.196, 17-198, 13 K), that is, according to Kühn’s edition (12.198, 12-13 K): τοῦτον τὸν λίθον ἔνιοι μὲν μόροξον, ἔνιοι δὲ γραφίδα καλοῦσιν. The ms. *Urbinas 67* reads *λευκογραφίδα* (rather than *γραφίδα*), the Greek term that has been transliterated in the Syriac epitome. See AFIF *et alii*, *The Syriac Text of Book Nine*, cit., p. 137.

¹⁴⁰ This last information is not included in Galen’s text, but is provided by Oribasius. *coll. 13 lamda 13* (Ioannes Raeder, *Oribasii Collectionum medicarum reliquiae, libri IX-xvi*, Leipzig-Berlin, 1929, p. 171);

(SMF IX 2.4) Among all the stones, especially the stone that comes from Ethiopia has a capacity that is very strong. This is somehow pale and is called jasper (*yaš-peh*) and Ἰασπις.

(SMF IX 2.3) And another (stone) that is called σχιστός.

(SMF IX 2.5) And another (stone) that is produced in Palestine in Syria, which is white in colour and beautiful in its shape (*σχιῆμα*). Indeed, it has lines that are as they were drawn with a chisel (*τόρνος*). They call it Ἰουδαιικός after the place from which it comes.

(SMF IX 2.6) And another (stone) is that which is called πυρίτης.

[126v] (SMF IX 2.7) And another (stone) that is called Phrygian (stone; i.e. Φρύγιος).

(SMF IX 2.8) And another (stone) is that which is called ἀγήρατος, that is, (the stone) that is not aged. We see that shoemakers make use of it.

(SMF IX 2.9) And another stone that is called Ἄσσιον. It comes from Assos, the country after which it takes its name.

(SMF IX 2.10) There is another stone that is black in colour, which gives off a smell like bitumen when it touches the fire. Dioscorides and other people [say] that this (stone) is found in the region of Lycia, in the river that is called Γαγάτης [...] from which the stone takes its name, as they say.¹⁴¹ (There is) another (stone) about which Nicander has written these words: «When lighted with fire, it drives away the reptiles, this stone that burns up when water is sprinkled on it». On the contrary, a bit of oil, when it is applied to the stone, quenches it. Shepherds collect this stone from the Thracian river that they call Πόντος.

(SMF IX 2.14) And the (stone) that is called σμυρίς, that is, emery.

(SMF IX 2.12) And another (stone) that is called Ἀράβιος, which is similar to ivory.

(SMF IX 2.13) And the (stone) that is called ὄνυξ ἀλαβαστρίτης.

(SMF IX 2.17) And another (stone) that is called ὀστρακίτης.

(SMF IX 2.17) And another (stone) that they call γεώδη, that is, [127r] earthy (stone).¹⁴²

(SMF IX 2.?) And another (stone) that [...].

(SMF IX 2.21) And ἀφροσέληνος, that is, foam of the moon.

End of the names of the stones that have healing properties of any kind and that are used by the wise physicians. Zosimus dealt with them and described them for the queen and priestess Theosebeia.

[Fourth section on animal substances. Mm. 6.29 127r6-129v = Galen, *On Simple Drugs*, x-xi (12.245-377 K)].

15.1.26, 4: καὶ οὗτος ὁ γεννώμενος (*scil.* λίθος), ὃ χρωῖνται στυλποῦντες τὰς θόνας (Raeder, *Oribasii Collectionum*, cit., p. 284).

¹⁴¹ The Syriac text seems to translate the Greek φασίν, as ms. *Urbinas* 67 reads. The Greek text edited by Kühn has φαμέν (see 12.203, 5-6 K: ἔθεν περ καὶ αὐτῷ τῷ λίθῳ τὴν προσηγορίαν εἶναι φαμέν).

¹⁴² This entry too is taken from Galen's ch. 17 of this section (12.206, 9 K): ὥσπερ γε καὶ τὸν γεώδη (γαίωδη in ms. *Urbinas* 67) καλούμενον κτλ.

Explanation of further *materia medica* that belongs to the wise Zosimus.

(SMF x 2.7-8)¹⁴³ <Γάλα>, that is, milk.

(SMF x 1.9) Τυρός, that is, cheese.

(SMF x 1.10) Βούτυρον, that is, oil of butter or butter or as you want to call it.

(SMF x 1.11-12) Πιτύα, that is, curdled milk.

(SMF x 1.13) Χολή, that is, bile.

(SMF x 1.14) Ἴδρώς, that is, sweat.

(SMF x 1.15) Οὔρον, that is, urine.

(SMF x 1.16) Σιάλον, that is, saliva.

(SMF x 1.30) Ῥύπος, that is, dirt.

(SMF XI 1.1) Σάρξ, that is, flesh.

(SMF XI 1.2) Πιμελή, that is, fat.

(SMF XI 1.2) Στέαρ, that is, suet.

(SMF XI 1.3) Μυελός, that is, marrow.

(SMF XI 1.4-7) Κεφαλαί, that are, the heads.

(SMF XI 1.8) Κέρατα, that are, horns.

(SMF XI 1.9) Πλεύμων, that is, the lungs.

(SMF XI 1.10-12 and 14) Ἥπαρ, that is, the liver.

(SMF XI 1.13) Κοιλία, that is, the belly.

(SMF XI 1.15) Ὀρχεις, that are, the testicles.

(SMF XI 1.16) Νεφροί, that are, the kidneys.

(SMF XI 1.17) Ὀνυχες, that are, nails

(SMF XI 1.18) Ὀστέα κεκαυμένα,¹⁴⁴ that are, burnt bones.

(SMF XI 1.19) [127v] Ὀφεως [...],¹⁴⁵ slough of a serpent.

(SMF XI 1.21) Λειχῆνες ἵππων, that are, chestnuts on horses.

(SMF XI 1.20) Δέρμα(τα) προβάτων [...] sheep skins.

(SMF XI 1.22) Ἀράχνη, that is, the spider that spins (its web) on a wall.

(SMF XI 1.23) Δέρμα(τα) παλαιά, that are, old skins (leathers), those that are called *ksāse* ('sandals, soles').

(SMF XI 1.24) Ὀστρεια. Some people give this name to all the animals that Aristotle calls «with the skin like a potsherd». They call it ὄστρεον and put in it [...] the letter/sign Δ (and) they say (?) that it is only one species among all the genera of ὄστρεια.¹⁴⁶ They count in this species all the (animals) such as those that are ca-

¹⁴³ After a general introduction (SMF x 1 = 12.247-253, 8 K), the first part of Galen's book 10 (SMF x 2) deals with animal liquids: the first five chapters are devoted to various kinds of blood (SMF x 2.1-5 = 12.253, 9-263, 11 K). The Syriac epitome does not include any reference to these chapters, but it is opened by an entry on milk: various kinds of milk are described in chaps. 6-7 of this Galen's section (12.263, 11-269, 15 K). The Syriac epitome condenses the rest of the book into a dry list of 8 entries, which does not include the ingredients described in Galen's chaps. 17-29.

¹⁴⁴ The two Greek words are transliterated as a single word in Syriac.

¹⁴⁵ The Greek text has ὄφεως γῆρας (12.349, 9 K).

¹⁴⁶ The Syriac sentence is sloppy and difficult to understand here. The translator (or a later copyist) may have misunderstood Galen's discussion on the spelling of the term ὄστρειον. See 12.342, 14-17 K: τὸ δ' ὑπὸ τῶν πολλῶν ὄστρεον ὀνομαζόμενον, ἐν τῇ δευτέρᾳ συλλαβῇ χωρὶς τοῦ ι λεγόμενον, εἶδος ἐν τι τῶν ὄστρειων τίθενται κτλ. Galen claims that someone spelled the term ὄστρειον by omitting the letter *iota*. On the contrary, the Syriac text seems to refer to the letter *delta*.

lled κήρυκες, πορφύρας χήμας and πίνας, and all those that are similar to these, on which I am going to speak now.

(SMF XI 1.25) Κήρυκες and πορφύραι, that are, a certain genre of shellfishes and oysters.

(SMF XI 1.29) Ἐριον, that is, wool.

(SMF XI 1.30) Τρίχες, that is, hair.

(SMF XI 1.31) Ἀυγά,¹⁴⁷ that are, eggs.

(SMF XI 1.32) Ἐχῖνοι [...] the one from sea and the one from land. But the one from land is the hedgehog (*qūpdā*), while the one from sea is small and round [...] ¹⁴⁸ thorns like the hedgehog (*qūpdā*).

(SMF VIII 16.4) Ὀποπάναξ, that is, milk of fennel (*irūrā*).¹⁴⁹

(SMF XI 1.37) Κόρυδος is a bird [128r] that is called small lark (*qūpšīnā*), which is often seen on the roads. When boiled in a soup (ζωμός), this brings relief (lit. 'health, benefit') to those who suffer from colic (lit. 'pain in the colon'). One must eat it regularly and many times with its soup. This bird has on its head a sort of crest [...] by its feathers. On this account a tale <of> Aristophanes the actor, which has been invented [...]. In fact, he said the following on this subject: «you are foolish and not clever, and you have not even studied Aesop, who said that κόρυδος, that is, the lark, was created before all the birds and even before the earth. Since its father died of illness and there was no earth, and, for this reason, he laid exposed for five days, when (the lark) realized to be pressed by its lack of means, it took its father and buried him in his head». Theocritus the poet too makes this known with what he said: «such a grave on the head of the lark», which refers to those who have graves on their heads. [128v] I have also added this information with this tale, since [I] wanted to provide a clear account on this bird, on what sort of spiky crest of feathers¹⁵⁰ it has on its head and (on the fact) that I tried the remedy for the colon which derives from it. And I want those who do not know it (i.e. this bird) to recognize it, since this bird is similar to those that <are called> Aphrodite (*lege* πυργίται, 'house sparrows'), which are also larks (*qūpšīne*). [...] (lark) is much different from those in the size [...] of its crest and, in this respect, it is a little smaller than those.

(SMF XI 2.2) Ἀδάρκη (or ἀδάρκιον). Some give the masculine name 'DRK[...] to it, others call it by the feminine name 'DRKWS. It is by nature like a kind of foam of salty water, which condenses and sticks to some trees or reeds.

(SMF XI 2.3) Ἀλκυόνιον, that is, sea foam.

(SMF XI 2.4) Ἄλς, that is, quarried salt and sea salt. They have a capacity of the same kind, but they differ especially in this respect: the salt that comes from the

¹⁴⁷ Byzantine form for ὄα: see Erich Trapp, *Lexikon zur byzantinischen Gräzität, besonders des 9.-12. Jahrhunderts*, 1 Band A-K, Wien, Verlag der ÖADW, 2001, p. 229, s.v. αὐγό(ν); CMA II 305, note 3.

¹⁴⁸ Berthelot, Duval translate (CMA II 305): «rempli d'écaillés épineuses come le coupda».

¹⁴⁹ On this entry, which does not belong to book XI of Galen's *On Simple Drugs* (however, Galen does refer to this plant in ch. 1.34 of book XI; see 12.357, 12-14 K), see above, note 126.

¹⁵⁰ The Greek text reads (12.361, 6-7 K): ὁποῖαν τινὰ τὴν ἐπὶ τῆς κεφαλῆς ἀνάστασιν ἔχει τῶν τριχῶν. The Syriac term ܐܠܥܘܢܝܘܢ translates the Greek ἀνάστασις and seems to refer to the crest of feathers that rise up on the head of larks.

earth is thick and stiff in nature and, as a result, it is denser and more astringent. In contrast, the salt that comes from the sea melts as soon as water is poured on it, while the salt that comes from the earth does not melt in this way. [129r] [... a line is not readable...] whatever salt that is produced in pools of standing water which have some saltiness, when the water boils during the summer and evaporates. They have the same capacity, like the (salt) that is called *Τραγασαῖος* (i.e. of the city of *Tragasai* in Troad), that is next to the city of *Sminthe* (?).¹⁵¹ In fact, it solidifies [in this] place from source water, when (the water) stagnates (? lit. 'is standing, firm') [...] ¹⁵² and gathers in a place that is not very big. Thus, it resolves into vapour during the summer, it is dried up by the sun, and solidifies. Since that (place)¹⁵³ has some saltiness by nature, what is left of this water becomes salt. This (salt) takes its name from the region in which it is produced and from the waters part of which solidifies, since also those hot waters from which (this salt) is produced are called *Τραγάσια*. There is also the salt *Σοδομίτης* (i.e. from the mount Sodom) that is produced in the Dead Sea, and what is called *ἀφρόνιτρον*, that is, African soda. It has a distinctive feature for this fact: it is the only one to have a juice (*χυμός*), which is particularly abundant. This is also called 'bitter' (*marīrā*).

(SMF XI 2.6) *Νίτρον*, that is, soda. It has been shown that also this medicine has a capacity [129v] between salt and African soda.

(SMF XI 2.7). Flower of salt. *Ἄλδος ἄνθος*. Some give it the single name of *ἀλόσανθος*, while others divide (the name) and give it the name of *ἀλδος ἄνθος*.¹⁵⁴ It is a moist medicine.

(SMF XI 2.8). *Ἄλδος ἄχνη*. What is called *ἄχνη* (i.e. 'froth') is a salt, and this is frothy. It is like the flower of salt. Its nature is [...] in the salt, so that you will make it thin and dispel much easier than salt. However, as for what is left [...] of matter, you cannot collect and make it dense in the same way as salt.

(SMF XI 2.11) *Σπόγγος*, that is, the sponge.

(SMF XI 2.12) *Γάρον*, that is, sauce of brine (= lat. *muria*).¹⁵⁵

(SMF XI 2.12) *Ἄλμη*, that is, water of salt. It is what is left of salted fishes, in the same way as the sauce of brine (= lat. *muria*).

End of a part from the explanation of the names of medical catalogues. Whoever works (with these ingredients), will achieve a result.

End of the book by the wise Zosimus, which is (addressed) to the queen Theosebeia. Treatises that are useful for all the bodies. He who has not tried (them) knows little, while he who tries (them) improves his knowledge. Give to the wise the chance to be taught.

¹⁵¹ The Greek text reads (12.372, 9 K): ὡσπερ καὶ οἱ Τραγάσιοι πλησίον Σμινθίου. The term *Σμίνθιος* perhaps refers to a sanctuary of Apollo *Smintheus* or to the city of *Sminthe*, in Troad.

¹⁵² Perhaps we should rather read: «when (the water) gets warm enough». See above, note 86.

¹⁵³ The feminine verb and pronouns (س, م, م) may refer back to 'place' (مكان). The Greek text (12.372, 13 K) reads: τοῦ τόπου δ' ἄλμυρίδα σύμφυτο.

¹⁵⁴ On this entry, see MARTELLI, *Medicina e alchimia*, cit., pp. 224-225.

¹⁵⁵ *Γάρος* actually refers to a sauce made of brine and small fish. See also *ThSyr* II 2050, s.v. *Γάρωσ*.