# κακ(κ)άβη

## Lexicalia / Containers

var. κάκ(κ)αβος; dim. κακ(κ)άβιον

lat. caccabus; dim. caccabulus

**Deep casserole**, earthenware or metallic (of bronze or tin), used in the Greek (Gr. κακ(κ)άβη, κάκ(κ)αβος) and Roman (Lat. *caccabus*) world to cook and boil any kind of food over (low) heat, and in medicine for the preparation of therapeutic remedies. Originally attested almost exclusively in comedy as a type of cookware (V-IV BCE), the term appears to have acquired a certain degree of technicality in medical literature starting from around the first century CE.

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# A. Linguistic section

## 1. General linguistic commentary

Originally the word was written with double consonant. Starting from around the time of Galen the fluctuation between double and single consonant form becomes widespread in medical authors, papyri and Byzantine literature in general.

Both feminine κακ(κ)άβη and masculine κάκ(κ)αβος are common. Only in the manuscript transmission of Alexander of Tralles occurs the feminine ἡ κάκαβος.¹ Latin *caccabus* is borrowed from the masculine κάκ(κ)αβος.²

The ordinary diminutive in Greek is κακκάβιον and in Latin cac(c)abulus.<sup>3</sup> τὸ κακάβιν is found twice in Aëtius (see **[10]**).

 $<sup>^1</sup>$  Cf. Alex. III 7 (II 113,2 and 4, as well as 123,8 Puschmann), IV 1 (II 131,11 Puschmann) and VIII 2 (II 351,6 Puschmann). On the forms of the term, see LSJ $^9$  861 s.v. A and ThGL IV 826C-827A s.v.

<sup>&</sup>lt;sup>2</sup> Cf Ernout-Meillet, DELL 80 s.v.; Walde-Hofmann, LEW 126 s.v.; Beekes, EDG I 619 s.v.

None of the derivatives and compounds of the term is attested in medical texts.4

The noun  $\kappa\alpha\kappa(\kappa)\dot{\alpha}\beta\eta$  is perhaps a loanword of uncertain provenance.<sup>5</sup> Semitic origin has been proposed, comparing Akk. kukkub(b)u, whence Hitt. khukhubu,<sup>6</sup> which denotes a container used during the libations.<sup>7</sup> In spite of the phonetic proximity of the words, the Semitic etymology has been rejected<sup>8</sup> or considered possible but with doubts and reservations.<sup>9</sup> A connection with the pre-Greek stratum has also been hypothesized.<sup>10</sup>

The possibility that the name of the cooking vessel is somehow inspired by the name of the bird κακκαβίς (Alcm. fr. 39,3 Page = 91,3 Calame) and κακκάβη (Athen. IX 390a) «partridge», <sup>11</sup> has been raised. <sup>12</sup> On the other hand, probably due to the concave shape of the object, ancient Greek grammarians (para)etymologically connected the word with the verb κάπτω, «gulp down» (LSJ $^9$  876 s.v.), in the sense of κοιλαίνω, «hollow out» (LSJ $^9$  966 s.v.), hence \*κάβη and κακ(κ)άβη with reduplication. <sup>13</sup> Another paraetymological explanation of the name is based on the noise produced while boiling, see Isid. *Orig.* XX 8,3 caccabus et cucuma a sono fervoris cognominantur.

The Latin *caccabus*<sup>14</sup> and its cognates live on in the vocabulary of Spanish and of Italian dialects, *e.g.* in the Neapolitan 'caccavella' (< *caccabellus*).

The lexical and functional continuity of the term in Greek is confirmed by the neuter  $\kappa \alpha \kappa(\kappa) \dot{\alpha} \beta \iota$  (<  $\kappa \alpha \kappa \kappa \dot{\alpha} \beta \iota ov$ ) in modern Greek,<sup>15</sup> denoting a sizeable container of bronze usually employed as a cooking vessel or for other uses in daily life.

The Greek word was borrowed into Sahidic Coptic, as is testified by κακκαβήΤΘ in P.Mon.Epiph. 549,7 (VII CE, Thebes), an ostracon preserving an inventory of items, which may conceal a form \*κακκαβητιον *vel sim*. 16

 $<sup>^3</sup>$  Cf. TLL III 5, 14-26 s.v. Another later form is caccabellus, cf. TLL III 5,4-6 s.v. and Du CANGE, GMIL II 10~s.v. cacavellus.

<sup>&</sup>lt;sup>4</sup> For a list of them see BONATI 2014 s.v. 2[1].

 $<sup>^{5}</sup>$  Cf. Frisk, GEW I 757 s.v. «technisches LW aus unbekannter Quelle» and Beekes, EDG I 619 s.v. «technical LW of unknown origin».

<sup>&</sup>lt;sup>6</sup> Cf. esp. Lewy 1895, 106 and 1927, 137; GRIMME 1925, 19; SZEMERÉNYI 1968, 194-5.

<sup>&</sup>lt;sup>7</sup> Cf. SCHROEDER 1930-1931, 111-2 and EBELING 1951, 404.

<sup>&</sup>lt;sup>8</sup> Cf. Chantraine, DELG I 481 s.v.

 $<sup>^9</sup>$  MASSON 1967, 84-5 states: «l'état actuel de nos connaissances ne nous permet pas d'accepter l'étymologie akkadienne pour le mot  $\kappa\alpha\kappa\kappa\dot{\alpha}\beta\eta$ ».

<sup>&</sup>lt;sup>10</sup> Cf. BEEKES, EDG I 619 *s.v.* Contra MASSON 1967, 84: «ce mot n'appartient pas au fonds le plus ancien du vocabulaire grec».

<sup>&</sup>lt;sup>11</sup> Cf. LSJ<sup>9</sup> 861 s.v. B.

<sup>&</sup>lt;sup>12</sup> Cf. Hemmerdinger 1970, 53; Lewy 1927, 137.

 $<sup>^{13}</sup>$  Cf. e.g. Orion 87,26-30 Sturz s.v. κακκάβη ἐπὶ θηλυκοῦ. ἀπὸ τοῦ κάπτω δηλοῦντος τὸ κοιλαίνω κάπτω κάβη τὸ ἡηματικὸν ὄνομα καὶ ἀναδιπλασιασμῷ κακάβη καὶ πλεονασμῷ τοῦ κ κακκάβη. σκεῦος ὁ πρὸς ἕψησιν ἐπιτήδειον. κάκκαβος ἐπὶ ἀρσενικοῦ, as well as Et.Gud. κ 293,1-6 Sturz; EM 485,1-6 Gaisford; Ps.-Zonar. κ 1154,33-1155,4 Tittmann.

 $<sup>^{14}</sup>$  Cf. Meyer-Lübke, REW 134 noo. 1444-5 and Rohlfs, LGII 196 s.v., as well as Ernout-Meillet, DELL 80 s.v., Walde-Hofmann, LEW 126 s.v. and Shipp 1979, 293 s.v.

 $<sup>^{15}</sup>$  Cf. Dimitrakos, MA VII 3537 and NA 725 s.v.; Stamatakos, ANEF II 1506 s.v.; Babiniotis, ANEF 810 s.v.; Shipp 1979, 293 s.v.

<sup>&</sup>lt;sup>16</sup> Cf. CHERIX, IGC 79 s.v.; FÖRSTER, WGW 366 and n. 6 s.v.

#### 2. Abbreviation(s)

The word is not found abbreviated in any text, medical or other.

## B. *Testimonia* – a selection of representative sources

## 1. IC I xvii 2 *a*,9 – II BCE

χύτοας λ, κακά[βος17

«Thirty pots, [x number of] **casserole(s)** ...».

### 2. Col. RR XII 42 1,1 – I CE

Compositio medicamenti ad tormina, quod uocatur διὰ ὀπώρας. In caccabo fictili nouo uel in stagneo coquitur musti arbustiui Aminnei urna.

«Preparation of a remedy, called "fruity", against colic: an urn of must from Aminean grapes grown on trees is boiled in a new ceramic or tin casserole».

## 3. Scrib. Comp. 45,4-8 (30,6-10 Sconocchia) – I CE

Spumam, cerussam, salem per se et cum aceto terere oportet mortario, deinde oleo admixto traicere in caccabum amplum [...]. cum haec super ignem posita habuerint emplastri temperaturam mollis, deponere oportebit caccabum.

«Triturate in a mortar silver-spume, ceruse and salt, first in themselves and then adding vinegar. Mix with oil and transfer **into a large cooking pot** [...]. Put the mix over fire and, when they become like a doughy plaster, remove the pot from heat».

### 4. Gal. De comp. med. per gen. III 5 (XIII 629,2-6 K.) – II CE

βέλτιον δὲ ταύτην ἐπὶ διπλοῦ σκεύους τήκειν. ὀνομάζομεν δὲ οὕτως (sc. τηκτὸν φάρμακον), ὅταν ἐν κακκάβη θερμὸν ὕδωρ ἐχούση σκεῦος ἕτερον ἐνίσταται μετὰ τῶν τηκτῶν ἔχον καὶ τὴν χαλβάνην, ὑποκαιομένης τῆς κακκάβης.

«It is better to melt it in a double vessel. We call it thus (*sc.* melted remedy), when another vessel is placed **in a casserole** of hot water, containing the ingredients to be melted, together with galbanum, and the casserole is being heated slowly».

### 5. Id., De comp. med. per gen. II 8 (XIII 509,6-8 K.)

ὅταν λυθῆ καλῶς ταῦτα, θὲς **κάτω τὴν κακκάβην** καὶ ἔα ψυγῆναι καλῶς [...], καὶ [...] ἕψε πάλιν ἐπὶ μαλακοῦ πυοὸς, ἄχοις ἂν μηλοειδὲς γένηται.

«When they have melted well, remove **the casserole** from heat and allow to cool completely [...] cook then again over low heat, until it assumes a quince-yellow colour».

<sup>&</sup>lt;sup>17</sup> Other supplements are κάκ[καβος, κάκ[αβος / -ας, see comm. ad l. p. 154.

## 6. Ps.-Gal. De remed. parab. III (XIV 548,2 K.)

βαλών ἐν κακκαβίω γανωτῷ ἢ ἐν χύτοα...

«Put in a small lined casserole or pot ...»

## 7. Orib. Coll. V 33, 3,2-4 (CMG VI 1,1, 152,7-9 Raeder) – IV CE

ἕψει τὸ ὕδως ἕως βράσεως καὶ κουφίσας **τὸ κακκάβιον** βάλλε τὸ ῥόδον πωμάσας **τὸ κακκάβιον** ἕως τελείας πέψεως, καὶ ἑψήσας τὸ μέλι χωρὶς καὶ ἀπαφρίσας καὶ διυλίσας τὸ ῥόδον μῖξον τὸ μέλι τῷ ζέματι τοῦ ῥόδου.

«The water shall be brought to the boil and, emptying (some water of) **the casserole**, add the roses. Cover **the casserole** with a lid until the roses become completely soft. Boil the honey separately and skim it. Strain the rose and mix the honey with the decoction of the rose».

## 8. Marc. De med. XXII 31 (CML V, 388,11-2 Liechtenhan) – IV-V CE

*In olla uel* **caccabo rudi**, **sed excocto** [...] decoques.

«Boil [...] in a pot or in an unburned, air-dried casserole».

## 9. P.Ant. III 132 Fr. 2a,2 (LDAB 6320, MP3 2391.2) – VI CE

εἰς κακάβ[ην

«In a casserole».

## 10. Aët. I 131,33 and 48 (CMG VIII 1, 66,8 and 23 Olivieri) - VI CE

σπογγισθη τὸ κακάβιν...

«... so that the pot be wiped with a sponge».

#### 11. *Id.* XV 46,17-8 Zervos

ὅταν σύστασιν καταχοίστου λάβη, κατάχεε εἰς κάκαβον καινὸν καὶ ἕψε ἐπ' ἀνθοάκων μαλακῶν ἀδιαλείπτως κινῶν.

«When it assumes the texture of an ointment, pour it **into an unused casserole** and cook over low heat moving continually».

## 12. Paul. VII 20, 26,10-1 (CMG IX 2, 387,12-3 Heiberg) – VII CE

ήμέρας γ ἄφες τὸ ἔλαιον ἐν τῷ κακκάβῳ ἀγανώτῳ ὄντι...

«Leave the oil for three days in an unlined casserole».

### 13. *Id.* VII 20, 33,13 (CMG IX 2, 389,19 Heiberg)

έψε ἐν κακκάβη γεγανωμένη...

«Boil in a lined casserole».

# 14. *Hippiatr*. *Lugd*. 81,3 (II 294,1 Oder-Hoppe) – IX CE βάλλε εἰς χαλκοῦν κακκάβιον...

«Put in a small casserole made of bronze ...».

# 15. Typicon monasterii Christi Pantocratoris in Constantinopoli, ll.1060-2 (= Gautier 1974, 93,7-9) – 1136 CE

ἀποκείσονται δὲ καὶ τρουλλία χαλκᾶ καὶ **κακάβια τοῦ μαγειρείου καὶ ἕτερα μικρὰ τῶν σκευασιῶν** καὶ μοχλία καὶ ὅλμοι εἰς τὴν τοῦ ξενῶνος χρείαν καὶ λέβης μέγας εἶς καὶ μικρὸς ἕτερος.

«Small cups of bronze and casseroles for the kitchen will be kept in reserve, and other small ones for the therapeutic preparations, and little pestles and mortars for use in the hospital, and one big kettle and another small one».

## C. Commentary

## 1. κακ(κ)άβη and its medical sources

The word κακκάβη / κάκκαβος / κακκάβιον, initially mentioned almost exclusively in comic writers (V-IV cent. BCE) as a common cookware, is a term belonging to the colloquial register of the Greek language. Its earliest possible appearance in a medical context is in an inscription (II BCE) from the temple of Asclepius at Lebena, Crete [1], among σκεῦα κεράμινα ἀκώνατα (l. ἀκώνητα), «unpitched ceramic containers», probably representing votive gifts (l.4 τὰ λ]οιπὰ παρδιδῶι τὰ τῶ θιῶ σκεῦα). A practical, medical use of these casseroles may be only assumed on the basis of the medical associations of the worship at Lebena. In the context of the context is in an inscription (II BCE) from the temple of Asclepius at Lebena. Orete [1], among σκεῦα μεθεία τὰ τῶ θιῶ σκεῦα). A practical, medical use of these casseroles may be only assumed on the basis of the medical associations of the worship at Lebena.

In Latin the noun *caccabus* is attested from the first century CE, mainly in the collection of cooking recipes De re coquinaria which bears the name of Apicius,<sup>20</sup> and in medical literature where the term becomes widespread in the vocabulary of medical prescriptions as a container used in the intermediate phase of preparation of remedies, see Columella [2] and especially Scribonius Largus (15 occurrences, see e.g. [3]).

Perhaps as a result, the noun was revitalized in written Greek, especially in works of *materia medica*. In the beginning of this process stand the works of Galen, who lived and worked as a physician in Rome, a fact which may have played a determining role in the

<sup>&</sup>lt;sup>18</sup> For a detailed discussion on the term and its chronological history see BONATI 2014 s.v., esp. 2[3].

<sup>&</sup>lt;sup>19</sup> On the possible practical uses of the pottery vessels found in Greek sanctuaries see STISSI 2009, 25-30.

 $<sup>^{20}</sup>$  On the date and the transmission of the text, cf. FLOWER-ROSENBAUM 1958, 12-4 and GROCOCK-GRAINGER 2006, 13-20.

renewed use and technicalization of the word in Greek, well attested in all principal medical writers and in the *Hippiatrica*.<sup>21</sup>

It would thus seem that the technicality of the word in Greek was mediated by Latin. An indirect proof that the term did not belong to the specialized language of medical literature before that time is provided by its absence in earlier medical works, especially in the Hippocratic corpus, more or less contemporary with the recurring use of it in comedy.

The word is attested with certainty only on a meagre fragment of a medical codex from Antinoopolis in Middle Egypt [9], containing pharmacological prescriptions, too damaged to reconstruct the context. It is also a possible supplement in a passage of the Michigan Medical Codex, P.Mich. XVII 783 Fv,5-6 (IV CE; LDAB 430, MP3 2407.01) ἔνβαλλε εἰς τὴν | [κακάβ]ην, containing the instructions for preparing the juice of date-palm wood used in the remedy called φοινικίνη.

The permanence of word and vessel also in the field of medicine is testified by **[15]**, where "small casseroles for preparation of remedies" (κακάβια μικοὰ τῶν σκευασιῶν) are recorded in the *typicon* of the monastery of Pantocrator in Constantinople (1136 CE) in explicit connection with the hospital of the monastery.

Material and features Only one passage ([14]), containing a prescription against cough, mentions bronze as the material of which the  $\kappa\alpha\kappa(\kappa)\alpha\beta\eta$  is made. Otherwise the material is never explicitly mentioned in Greek medical literature,<sup>22</sup> unlike cases such as  $\chi \dot{\nu} \tau \rho \alpha$  and  $\pi \nu \xi i \varsigma$ .

Latin medical sources, on the contrary, provide some information. The most common adjective signifying the material is *fictilis* «made of clay».<sup>23</sup> This is often combined with *novus*<sup>24</sup> as ceramic vessels should be "not previously used" (or at least "clean") in order to prevent fusion with substances previously absorbed by their walls<sup>25</sup>. When *novus* 

<sup>&</sup>lt;sup>21</sup> The word occurs in Galen and Ps.-Galen (II CE) 7 times as  $\kappa\alpha\kappa\alpha\beta$ - and 20 as  $\kappa\alpha\kappa\kappa\alpha\beta$ -, in Oribasius (IV CE) twice as  $\kappa\alpha\kappa\alpha\beta$ - and 17 as  $\kappa\alpha\kappa\kappa\alpha\beta$ -, in Aëtius (VI CE) 13 times as  $\kappa\alpha\kappa\alpha\beta$ - and 5 as  $\kappa\alpha\kappa\alpha\beta$ -, in Alexander of Tralles (VI CE) 9 times ( $\kappa\alpha\kappa\alpha\beta$ -), in Paulus of Aegina (VII CE) only once as  $\kappa\alpha\kappa\alpha\beta$ - and 5 as  $\kappa\alpha\kappa\kappa\alpha\beta$ -, in the *Hippiatrica* (IX CE) 10 times ( $\kappa\alpha\kappa\kappa\alpha\beta$ -).

 $<sup>^{22}</sup>$  Mentions to the material are also rare in the rest of Greek literature, cf. Eust. Hom. Ψ 1290,41 (IV 693,8 Valk) δὲ κακκάβη καὶ σκεῦός ἐστι χαλκοῦν and Gp. VIII 25, 1,1 (223,2 Beckh) βάλε [...] εἰς κάκαβον ὀστράκινον.

<sup>&</sup>lt;sup>23</sup> Elsewhere the container is qualified as *aeneus* (cf. Col. *RR* XII 48, 1,6) and *argenteus* (cf. Iustin. *Dig.* XXXIV 2,19; 12,3). See TLL III 5, 35-42 *s.v.* and BLÜMNER 1911, 156.

<sup>&</sup>lt;sup>24</sup> Cf. *e.g.* Scrib. *Comp.* 220,15 (100, 27 Sconocchia); Plin. Iun. *De med.* III 30,11 (CML III, 91,2 Önnerfors); Marc. *De med.* XX 42 (CML V 340, 33 Liechtenhan); Pelag. *Veter.* fr. 491,7 (129,16 Ihm = fr. 515,6 [88, 6 Fischer]); Cass. Fel. *De med.* I (8,2 Rose) *coques in novo cacabo testeo*.

<sup>&</sup>lt;sup>25</sup> This aspect is clearly explained by PEÑA 2007, 57-8 regarding the cooking vessels for food, but the same can be said for the pots used in medicine: «the repeated use of vessels such as *ollae* (cookpots) and *caccabi* (casseroles) for coking/heating of food or drink may have resulted in the absorption into the vessel wall of food residues and/or the buildup on the interior surface of incrustations of charred food or, if a vessel was used for the boiling of water, a layer of calcium carbonate. These eventually may have rendered a vessel unsuitable for further use, due either to its poor heat transfer characteristics or to the bad taste that it imparted to any food or drink prepared in it». So, the frequency with which ancient authors call for the use

is the only qualifier, the ceramic nature of the object is probably implied. The same may be assumed for  $\kappa\alpha\iota\nu\delta\varsigma$  in Aëtius ([11]). Finally, in [2] the pharmacist may choose between an earthenware (*fictilis*) and a tin (*stagneus*) casserole.

In [8], a potion against hepatic diseases, it is recommended cooking the ingredients – *decoquo* is verb often used for the cooking of medicines<sup>27</sup> – in a *caccabus* described as *rudis* («unrefined», «raw») and *excoctus*.<sup>28</sup> The adjectives could indicate a *caccabus* manufactured shortly before its use, and thus not well-finished and only air-dried, in the stage preceding the firing process in the kiln when unbaked clay is turned into *terracotta* (compare the comments on the meaning of  $\omega\mu\eta$  as a qualifier of  $\chi \dot{\nu} \tau \varrho \alpha$ , see *s.v.* C.1).

In [3] the *caccabus* is described as *amplus*. Nothing is said in Greek medical literature about the dimensions of the container. On the other hand, in [15] the  $\kappa\alpha\kappa\dot{\alpha}\beta\iota\alpha$  for cooking the therapeutic preparations are  $\mu\iota\kappa\varrho\dot{\alpha}$ , *i.e.* smaller than the ones used in the kitchen.

The participle  $\pi\omega\mu\dot{\alpha}\sigma\alpha\varsigma$  in [7] implies the presence of a lid.<sup>29</sup>

The adjectives γανωτός in **[6]**, which describes the preparation of a kind of γάρος, ἀγάνωτος in **[12]**, a recipe for the κύπρινον, an oil made from the flower of the henna tree, and the participle γεγανωμένος in **[13]**, a recipe for a remedy made with unripe grape, all derive from the verb γανόω, «tin, lacquer» (LSJ $^9$  338 s.v. II), which most likely is a generic term for "lining", so that γανωτός / γεγανωμένος and ἀγάνωτος may be respectively rendered as «lined» and «unlined». These terms are employed in medical texts in relation to ceramic or bronze containers, $^{30}$  but in the passages concerning the κακκάβη the material of the vessel is not specified. Containers employed in medicine often had the internal surface lined. This had the specific functional purpose to prevent unintentional chemical reactions and contamination between the volatile substances of the medicines and the material of the vessel in which they were prepared.

of "new" cookwares «suggests that it may have been a common practice to employ a previously unused cooking vessel when preparing certain recipes, presumably because food residue absorbed in the course of any previous use was held to render a vessel unsuitable. This raises the possibility that cookwares were regarded to some extent as disposable items, to be used once and then either discarded or relegated to some other role».

- <sup>26</sup> Cf. *e.g.* Plin. Iun. *De med.* II 27,10 (CML III, 60,2-3 Önnerfors); Pelag. *Veter.* IX 166, 3,2 (65,20 Ihm = 28,27 Fischer), XXIV 309,2 (96,28 Ihm = 54,11 Fischer) and XXVI 357,2 (103, 25 Ihm = 60,20 Fischer).
- $^{27}$  Cf. *e.g.* Scrib. *Comp.* 62,5 e 66,4 (37,2 and 38,2 Sconocchia), 117,4 (62,13 Sconocchia). Further references in TLL V/1 201, 55-202, 30 s.v.
- <sup>28</sup> The verb *excoquo* is employed *«quasi technice de terra»* (see TLL V/2 1281, 35 and 45-6 *s.v.*) with the value *«*to dry», such as in Lucr. VI 962 *principio terram sol excoquit et facit are* and Verg. *Georg*. II 259-60 *his animadversis terram multo ante memento / excoquere*.
- $^{29}$  A πῶμα κακκαβίου features in two inventories on papyrus, P.Lond. V 1657,6 (IV-V CE ?) and P.Berl.Sarisch. 21,19 (V-VI CE, Hermopolis ?).
- $^{30}$  Cf. Gal. De comp. med. sec. loc. I 8 (XII 490, 11 and 491,10-1 K.) εἰς ἀγγεῖον χαλκοῦν γεγανωμένον and εἰς ἀγγεῖον γεγανωμένον; De ther. ad Pis. 13 (XIV 266,11-2 K.) εἰς λέβητα γεγανωμένον καλῶς; Aët. VI 58, 58 (CMG VIII 2, 208,15 Olivieri) εἰς ἀγγεῖον χαλκοῦν γεγανωμένον; VIII 3, 3-4 (CMG VIII 2, 405,19-20 Olivieri) ἐν ἀγγείω χαλκῷ γεγανωμένω; Aët. XII 1,250 (19,5 Kostomiris) βάλε εἰς ἀγγεῖον ὀστράκινον γανωτόν. Especially noteworthy is Aët. XII 55,28-9 (95, 18-96,1 Kostomiris) εἰς ἕτερον ἀγγεῖον γεγανωμένον τῷ κασσιτέρω where the participle and the instrumental dative explicitly convey the presence of a tin enamel, i.e. «sealed with tin».

Use The verbal indicators confirm the use of the κακ(κ)άβη during the stage of preparation and cooking of remedies, sometimes over low heat (see *e.g.* Orib. *Syn.* III 38, 2,4 [CMG VI 3, 80,29 Raeder] βαλὼν εἰς κάκκαβον ἕψε μαλθακῷ πυξί). The most common one is βάλλω («throw, put») and compounds supplemented by εἰς + acc., ἐν + dat. or plain dative. Other verbs used in medical texts are καίω («burn»), ὀπτάω («bake»), ἕψω («boil»), καταχέω («pour»), χλιαίνω («warm up») as well as Lat. *coquo* and compounds. Also μείγνυμι («mix») is used.

The verb  $\sigma\pi\circ\gamma\gamma\iota\zeta\omega$  («wipe with a sponge», LSJ<sup>9</sup> 1628 s.v.) in **[10]**, describing the boiling and the preparation of the spikenard, designates the accurate cleaning of the container when it is reused.

The case of the so called τηκτὰ φάρμακα (medicamenta liquabilia) in [4] illustrates the function of the  $\delta\iota\pi\lambda$ ον σκεῦος: a κακ(κ)άβη full of water is placed over heat and used as a steamer having a smaller vessel with the substances inside.<sup>31</sup>

Finally, the verb  $\tau(\theta\eta\mu)$  and compounds supplemented by  $\kappa\acute{\alpha}\tau\omega$  or  $\kappa\alpha\tau\grave{\alpha}$   $\gamma\~{\eta}\varsigma$  and in Latin *depono* (*sc. de igne*)<sup>32</sup> describe the break in the boiling process or the conclusive stage in which the pan is removed from heat (see [5] describing the preparation of the  $\mu\eta\lambda\acute{\nu}$ ) of Menetius).<sup>33</sup>

## 2. κακ(κ)άβη word and object

The shape of the  $\kappa\alpha\kappa(\kappa)\dot{\alpha}\beta\eta$  cannot be identified with certainty as no direct evidence (*e.g. dipinti* inscriptions) is available pointing at a specific object. Furthermore, it is likely that the basic typology of the  $\kappa\alpha\kappa(\kappa)\dot{\alpha}\beta\eta$  had variations in form and dimension according to time and geographic area.<sup>34</sup>

However, comparison between its description in Greek sources and archaeological finds provides grounds to formulate some hypotheses.  $\kappa \alpha \kappa(\kappa) \dot{\alpha} \beta \eta$  is compared to the  $\chi \dot{\nu} \tau \rho \alpha$  (see s.v.)<sup>35</sup> and the  $\lambda o \pi \dot{\alpha} \varsigma$ ,<sup>36</sup> a wide, shallow, lidded casserole with two handles,<sup>37</sup>

 $<sup>^{31}</sup>$  Cf. Gal. De comp. med. per gen. I 4 (XIII 383,10-3 K.) καὶ διὰ ὁοδίνου δὲ ἐπὶ τούτων ἔτηξα πολλάκις αὐτὸ, προϋποκειμένης τῷ ἀγγείφ καθ' ὁ τήκεται κακκάβης, ὕδωρ μὲν ἐν αὐτῆ ἐχούσης θερμὸν, ἄνθραξι δὲ διαπύροις ἐπικειμένης ἢ κατὰ φλογὸς ἀκάπνου and De alim. facult. III 22 (VI 707,3-5 K.) ὲντιθέασι τὸ ἀγγεῖον ὕδωρ ἐχούση κακκάβη θερμόν, εἶτα πωμάσαντες ἄνωθεν ὅλην αὐτὴν ὑποκαίουσι μέχρι συστάσεως μετρίας (see also Orib. Coll. II 45 6,2-4 [VI 1,1, 42,13-4 Raeder]).

<sup>&</sup>lt;sup>32</sup> Cf. Scrib. *Comp.* 210,6-7 (98,1-2 Sconocchia); 212,7 and 213,7 (98,15 and 25 Sconocchia); 214,11 (99,12 Sconocchia).

 $<sup>^{33}</sup>$  A similar boiling process is described for the μηλίνη of Serapion in Gal. De comp. med. per gen. II 9 (XIII 510,11-4 K.) προείρηται δ' ὅτι καὶ μαλακῶς ἔψεσθαι χρὴ, μάλιστα ὅταν ὁ ἰὸς ἐμβληθῆ. καὶ μέντοι καὶ ὅτι βάλλειν αὐτὸν χρὴ καθέντα κατὰ γῆς τὴν κακκάβην καὶ μικρὸν ἀποψύχοντα καὶ μᾶλλον ἐὰν μικρὸν ἦ τὸ ἀγγεῖον, ἐν ῷ ἡ ἔψησις γίνεται. See also Gal. De comp. med. sec. loc. VI 3 (XII 914,6-10 K.) τὴν σμύρναν δὲ καὶ τὸν κρόκον ἄμεινον ἐπὶ τῷ τέλει τῆς ἑψήσεως προσεμβάλλειν, ἄχρι τοσούτου μετὰ τῶν ἄλλων ἕψοντας ἢ μετὰ τὸ θεῖναι κάτω τὴν κακάβην κινοῦντας, ἄχρις οὖ πάνθ' ἑνωθῆ καλῶς, and Orib. Syn. III 173, 3,3-4 (CMG VI 3, 109,17-8 Raeder).

<sup>&</sup>lt;sup>34</sup> Bonati 2014 s.v. 3.

 $<sup>^{35}</sup>$  Hesych. κ 313 L. s.v. κακκάβη $^{\circ}$  [...] ἢ χύτρα, ἢν ἡμεῖς κάκκαβον and Phot. κ 83 Th. s.v. κακκάβην $^{\circ}$  [...] σημαίνει δὲ τὴν χύτραν.

 $<sup>^{36}</sup>$  See  $\it e.g.$  Hesych. κ 314 L.  $\it s.v.$  κάκκαβος· ἢ λοπάς and Phot. κ 84 Th. (= Dionys. Gramm. κ 4 Erbse)  $\it s.v.$  κακκάβη· ὃν ἡμεῖς κάκκαβον· ἔστι δὲ λοπαδῶδες, ἔχων ἐξ ἑαυτοῦ τοεῖς πόδας. See also Poll. X 106,2-107,1.

identifiable with *e.g.* item P 14655 from the *Stoa* of Athens.<sup>38</sup> The  $\kappa\alpha\kappa(\kappa)\dot{\alpha}\beta\eta$  may then have been intermediate in shape between the  $\chi\dot{\nu}\tau\varrho\alpha$  and the  $\lambda o\pi\dot{\alpha}\varsigma$ , with features of both, and functionally interchangeable with them: a casserole with a deep<sup>39</sup> and maybe rounded body like the  $\chi\dot{\nu}\tau\varrho\alpha$ , though probably bigger than it,<sup>40</sup> but furnished with a wide mouth, flaring rim flanked to receive the lid and handles rising to the level of the lip, if any, like the  $\lambda o\pi\dot{\alpha}\varsigma$ .

In addition, the ancient botanical term *caccabus* designating the rounded berries of the *Solanum nigrum* L. (also dim. *caccabulus*) and the large, pretty round, or rather slightly heart-shaped leaves of two *species* of water lily (*Nymphaea alba* L. e la *Nuphar lutea* Sm.)<sup>41</sup> suggest that the body of the vessel was globular.

The medical κακ(κ)άβη was in all likelihood identical to its cooking counterpart in shape. In terms of dimensions it may have been smaller in size when used for the preparation of remedies, like the κακάβια μικρά in [15], but bigger when used as a διπλὸν σκεῦος to contain a smaller vessel, like in the case of the *medicamenta liquabilia* (see [4]).

## D. Bibliography

#### 1. Lexicon entries

ThGL IV 826C-827A s.v.; TLL III 5,15-70 s.v.; LSJ $^9$  861 s.v. A; Chantraine, DELG I 481 s.v. 1; Frisk, GEW I 757-8 s.v. 1; Beekes, EDG I 618 s.v. 1; Walde-Hofmann, LEW 126 s.v.; Ernout-Meillet, DELL 80 s.v.; Babiniotis, ANEF 810 s.v.; Dimitrakos, MA VII 3537 and NA 725 s.v.; Stamatakos, ANEF II 1506 s.v.; Shipp 1979, 293 s.v.; Saglio, DA I/2 774 s.v.; Kipfer 2000, 87 s.v.

### 2. Secondary literature

Lewy 1895, 106; Mau 1897, 1164 s.v.; Blümner 1911, 156; Hug 1919, 1526 s.v.; Koukoulès 1948, 99-100; Masson 1967, 83-5; Bonati 2014 s.v.

#### E. CPGM references

P.Ant. III 132 Fr.2a,2 P.Mich. XVII 783 Fv, 5-6 (?)

<sup>&</sup>lt;sup>37</sup> Cf. AMYX 1958, 197 n. 74 and 210 n. 76; SPARKES 1962, 130 and 1991, 84; SPARKES-TALCOTT 1970, 227-8.

<sup>&</sup>lt;sup>38</sup> Ca. 375-350 BCE; height 9 cm, diam. 22, 6 cm. See <a href="http://www.agathe.gr/id/agora/object/p%2014655">http://www.agathe.gr/id/agora/object/p%2014655</a>.

<sup>&</sup>lt;sup>39</sup> Cf. Antiph. fr. 216, 3 K.-A. κοίλοις ἐν βυθοῖσι κακκάβης.

<sup>&</sup>lt;sup>40</sup> See the (comic) adjective ἰσοτράπεζος in Antiph. fr. 180,2 K.-A.

 $<sup>^{41}</sup>$  References to ancient Greek and Latin literature in ANDRÉ 1956, 63 and 1985, 43 s.vv. On the metaphorical origin of the term see also ERNOUT-MEILLET, DELL 80 s.v. and CHANTRAINE, DELG I 481 s.v.