

# 'Pound pepper and lovage': The Use of Spices in the Apician Recipe Text

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158 ABSTRACT: The use of spices in ancient food and particularly the *Apicius* recipe text has long been taken in historical and archaeological studies to indicate that the collection represents a high-status cuisine. 'Spice' is often used as a blanket term to signify elite and exclusive recipes, yet few culinary spices were actually prohibitively expensive. Many were local to Italian fields and hedgerows, and with the empire's spread spices such as dill, fennel, coriander, and mustard seed became local to Romano-British farms. These particular spices are common in the surviving recipes and common in the archaeology of the northern empire. The fact that few recipes in *Apicius* give specific quantities for the spice that they stipulate has led many to conclude that the spices were used to excess. A poor understanding of how spices were used and who was responsible for deciding how much to use – clearly the cook not the host made these decision – has even led to assumptions, in anthropological Food Studies, that some elite ancient food was essentially unpleasant both to ancient as well as modern tastes. Feldman (2015) has claimed that Roman food was a combination of excessive amounts of acrid spices with 'rotten urine smelling' fish sauce which resulted in a cuisine that was such an acquired taste that few were able to appreciate it. This view holds that Roman food as epitomised by *Apicius* was invented as a covert strategy to maintain class boundaries. Ideas such as these need to be fundamentally challenged as they are simply wrong.

Further considerations are that many of the valued spices were in fact aromatics used for their perfume in unguents, and, in the case of cinnamon, used on the funeral pyre to mask unpleasant odours, rather than in the kitchen. It is also clear that the use of any kind of spice in food was as important for their anti-bacterial properties as for their culinary or cultural capital value. It becomes clear that the use of spices was a highly complex concept and care should be taken to differentiate between those items that truly signify extravagant expense and those that were both ubiquitous and essential in any ancient kitchen. In this paper the use of spice in *Apicius* will be subject to a full analysed to highlight these issues.

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Spices are defined as aromatic substance of vegetable origin obtained from tropical plants which necessarily means long distance trade. As commodity they are generally distinct from herbs but there is a fine line between the variety of components parts of the plant that are defined as spice i.e. dried flower bud, bark, wood, resin, seed capsule and crucially the oil derived from any of these. In most cases these are non-European plants but the

cost and value of each is often quite variable as the distances involved in their trade also varies considerably. Problems arise when the numerous seeds that are native and common place within the Mediterranean are also classed as expensive spices. Spices such as dill, fennel, coriander, cumin, lovage, celery, caraway, parsley and mustard were in widespread cultivation in the Mediterranean and it is these spices that dominate within the *Apicius* recipe collection despite the intermittent use of the more valued foreign spices. Despite this variety of components used and diversity of geographical origin of spices the term continues to invoke foreign shores and expense and particularly in Roman archaeological studies (Van der Veen 2011:39). As these condiments do not represent staple foods but rather appear to denote an improvement and therefore refinement in taste, there is an association with luxury cuisines and as a consequence an expectation that anyone who was not rich could not consume them. Spices almost have no substance at all in much food studies and are seen as ‘goods whose principle use is rhetorical and social, they are’ incarnated signs’ (Appadurai 1988) and speak entirely of the signifier i.e. the consumer rather than the signified i.e. the spice itself and the people who grow, trade and utilise them. These anthropological perspectives are often a distortion of reality and should always be tempered with other practical considerations.

The only commonly used exotic spice is pepper and as we will see this was a spice with a much wider social distribution. I prefer not to associate ‘spice’ with luxury and prefer a socially neutral term such as ‘novel,’ meaning new, original and desirable but also to a certain extent necessary and even commonplace. There is even an implication in some anthropologically inspired studies that this refinement in taste was not within the mindset of those that we, in modern research, consider ‘the poor’ of the Mediterranean and the native communities in the northern empire, but what the increasing inclusion of spices indicates is rather an improvement in taste or keeping quality. We have also long recognised that there are other motivations for adding condiments to food such as for their antibacterial properties and research has demonstrated that it is the widely cultivated *Apiaciae* family of seeds in combination with herbs that has the most antibacterial effect on cooked foods stored over time. Research clearly demonstrates that those cuisines derived from countries closer to the equator with higher temperature use many more spices in their food while those cuisines from colder climates use far fewer spice in terms of number and variety (Sherman and Billing 1999) The use of spices in Roman cuisine is most widely illustrated by the well-known *Apicius* recipe text. The recipe book has long been used to epitomise the excessive decadence and over indulgence of the Roman elites. This collection of recipes was understood to have been compiled and designed for a very small group wealthy Romans (Flower and Rosenbaum 1958; Brandt 1927). This assumption was based on many factors discussed in our edition (Grocock and Grainger 2006: 13-35) The collection survived with no authorial voice and is utterly devoid of literary merit and

reads as an aid memoir to the cooks, Greek or Roman, slave or free, who clearly developed the cuisine that we now consider Roman Food. The recipes themselves are very diverse in nature with easy simple widely accessible recipes and hugely rich dishes using wild meats, offal. The desirable recipes for meat and fish in books 6-10 accounts for possible half the book. The remainder of the recipes from books 1 preparations in advance (*mis en place*), Book 2 pounded meat dishes, Book 3 on vegetables, Book 4 on eggs dishes and Book 5 Pulses, represent recipes that are fairly simple in style and which represent accessible dishes that are largely seasoned with the more commonplace Mediterranean spices along with the occasional exotic condiment. We attributed the recipes in *Apicius* to an urban, aspirational and cosmopolitan milieu from the first to fourth century AD. There continues to be other views which attribute the *Apicius* recipe collection to a narrow elite haute cuisine and to a single writer/compiler who collected the recipes from a number of other such books but the actual origin of the individual recipes is to some extent brushed over (Lindsay 2012:177). These views inevitably tend towards a denial of the agency and literacy of slave cooks, though Lindsay does acknowledge that the ‘assumptions behind the work are of professionalism’ (Lindsay 2012:179). Robin Nadeau claims that Greek and Roman slave cooks were disinclined to read and write even at a functional level and that ‘anyone who could actually read it probably never when near a stove’ (Nadeau 2008:55). Nadeau’s view is an *a priori* assumption which can readily be challenged, especially if we consider what the book was for, based on its contents, structure and style. Crucially now there does seem to be a growing body of evidence for functional literacy in all areas of the empire among the lower orders and particularly for those who were skilled in the practical arts, including cooks (Bagnall 2011; Woolf 2015). This issue is hugely important because we have to understand who was responsible for the selection of the ingredients, including spices, their order and quantities and how they are incorporated. Such skills were not those we should associate with a consumer. The recipes themselves were also judged to be ‘excessive’ by early scholars who had little understanding of the nature of the cooking process itself, never mind the intricacies behind the use of spice to enhance and preserve cooked food. Historical accounts of the Apician style were often couched in terms of fear and dread though it seems it is the combination of what was believed to be too many spices along with the little understood fish sauce which caused most of the trepidation (Fisher and Reardon 2004:33; Feldman 2014 see below). Some modern scholars continue to judge the *Apicius* style of spicing as excessive and ‘heavy’ a style which is said to anticipate medieval spicing (Wilkins and Hill 2006:28; 2011:32). As Phyllis Pray Bober acknowledged ‘we cannot know with how heavy a hand cooks added their seasonings’ (Bober 1999:242, n.64). Others make a more careful assessment of the nature of the Roman sauce (Solomon 1995: 122). I would counter that the Apician spicing style (if one can think in those terms) was very different from the medieval use of spice as many of the aromatics used in that period were unknown

in Roman cuisine and represent spices that were first and foremost rich sweet aromas in highly sweetened almond rich dishes. Roman food resembles is distinctly different sweet and sour with Asian food spicing techniques, particularly Indian with its use of multiple spices but dominated by cumin and coriander and asafoetida, which as we all surely know, has always been a delicate balance leading to complexity and density of flavour rather than something culinarily excessive.<sup>1</sup> This view of excessive spicing is still largely motivated by a belief that their use was not determined by culinary or even humoral rules but by the need for display and social signalling which seems to me illogical on simple practical level as the cook will always be responsible for what was suitable and desirable at the level of the recipe.

We fully accept that to turn the recipes in *Apicius* into successful dishes is a tricky business. Spices like lovage and asafoetida are not easy to use but they are used with moderation and their very subtlety is easy to misinterpret, and the results of such misinterpretation would support the myth of over spicing. Over half the recipe call for no more than 3 or 4 seasonings, one of which is pepper which occurs over 368 times. Pepper will be dealt with in a separate section below. The next 5 spices in term of occurrence are lovage with 192 (*Levisticum officinale*), cumin with 111 mentions (*Cuminum cyminum*), Coriander (*Coriandrum sativum*) occurs 43 times, celery seed (*Apium graveolens*) at 59 and dill at 34 occasions. All these spices are members of the family *Apiaceae* and though, now valued when cultivated in India and Asia, were readily grown in a Mediterranean climate. These spices when they are used together, as they often are, create a taste profile very reminiscent of a modern Indian curry paste and it is this popular and highly desirable flavour that we should be uppermost in our minds when defining Roman food. These combinations of spices require a balance of judgement and skill. One cannot throw handfuls of spices at a sauce and expect success. A successful sauce requires care to balance the sweet, hot, sour, sharp and yes even bitter has its place. Lovage is notorious for its bitterness but I would not leave it out as its absence reduces the success of many a Roman sauce that I have made. A brief scan of recipe in Madhur Jaffrey's *Curry Bible* reveals that the average curry paste, contains between 7-10 spices. These pre-ground spice balls or pastes have clear parallels with examples in *Apicius*, where nuts fruits herbs and spices are prepared in advanced and blended with wine and fish sauce at the last minute (*Apicius* 8.1.5; 8.8.4). One does not often find value and quality judgements levelled at Asian food in the same way as they are still levelled at Roman food. Feldman has written a modern critique of Apician sauces and believes that the spices used in Apician recipes were acrid, harsh and unpleasant. He cites dill and anise and pepper as examples of this and he goes so far as to suggest, along with Bourdieu, that their use was a 'covert strategy to maintain class boundaries' (Bourdieu 1987). He suggests that the Roman elite deliberately served foods that were generally perceived as distasteful and that those that wanted to stay within the group had to pretend to like it (Feldman 2014: 416). This rejection is understood to be due to the combination

of too many acrid spices and ‘urine smelling’ fish sauce which he claims was also invented as a means of reducing access to the group. Space prevents me from a complete analysis of this nonsense suffice to say he clearly utterly fails to understand the nature of ancient fish sauce (Grainger 2018) and clearly these spices are not acrid and harsh when used correctly. Ultimately, he demonstrates a naïve and unsophisticated palate. His, not theirs!

The Mediterranean *Apiaceae* spices are widespread from archaeobotanical reports in the northern empire and all contexts, reflecting an increasing use of these spices in native cuisine as Rome’s influence spread north (Livarda and Van der Veen 2008:202). However, there is a retrieval bias linked to seed survival on archaeological sites that means that seeds only survive in exceptionally dry conditions such as the desert or in waterlogged and sealed environments which means that sites with evidence to collate are relatively rare in themselves. Spices are consumed obviously and the more expense is involved the less likely we are to find casually discarded finds. Even today when peppercorns fly out of my mortar I retrieve them! There are nevertheless what appears to be statistically significant absences in that lovage appears nowhere from any reports. Given that lovage was a Mediterranean plant, it was definitely a seed and not the leaf, and it was exceptionally common in *Apicius* it should represent the preparation of a Roman style of cooking yet it has not turned up even in exceptionally rich sites such as Pompeii.<sup>2</sup>

### How Much Pepper?!

162 Few recipes give quantities and of those that do they tend to be remedies designed to ease stomach and digestive complaints. The multiple spices are listed in large quantities (6 scruples of each see below) and they are rendered into a paste and then diluted with wine or fish sauce and honey to be taken as a medicine. The quantities of different spices are high in these circumstances (*Apicius* 1.27 has 27 spices and herbs while at 3.18.2 the ingredient for a stomach easing mixture amount to almost 1lb of seeds which are then mixed with honey and stirred into fish sauce and vinegar and taken by the teaspoon). In the case of culinary sauces we do not know how many people the average cook prepared meals for. We might simply imagine that sauces were meant to feed 9 people as this is the number of people on a single *triclinia* couch. The remaining recipe that use any kind of quantities are small but highly indicative of pepper being used with some abandon. There are also rare indications of the quantities of the other spices utilised in the recipes such as the following:

7.5.2. **Another roast meat recipe:** 6 scruples of parsley, 6 scruples of *laser*, 6 scruples of ginger, 5 scruples of bay berry spice, 4 6 scruples *laser* root, 5 6 scruples oregano, 6 scruples of sweet rush, a little *costum*, 3 scruples pyrethrum, 6 scruples celery seed, 12 scruples pepper, sufficient *liquamen* and oil.

This might appear excessive but as we have noted there is simply no way to judge the quantity of liquid or the amount each guest would expect to consume. At 8.4.2 a sauce for

game involves a similar quantity and variety of spices blended with honey and stirred into an *oxygarum* = fish sauce and vinegar and I would guess by the teaspoon too. The mixture is designed to last!

The following demonstrates the quantities of pepper utilised in a fairly simple frittata:

4.2.4. **Another soft *patina*:** take alexanders, trim, wash, cook, refresh and wring them out. Take 4 brains, remove the sinews and cook them. Put in a mortar 6 scruples of pepper, pour on *liquamen* and pound; next add the brains and pound again; add the alexanders and pound all together. Next break 8 eggs (into the mix), add a *cyathus* (45 ml.) of *liquamen*, a *cyathus* of wine, and a *cyathus* of *passum*. Blend thoroughly with the pounded mixture. Grease a dish, (pour in the mixture), place in the hot embers; then afterwards when it is cooked sprinkle with pepper and serve.<sup>3</sup>

A Roman scruple is understood to represent c. 1 gm., and this would mean the dish requires c. 6 gm of pepper which represents c. 90-100 corns. This does appear to be rather excessive but the term is derived from the idea of a small pebble and we are by no means sure that *scripulus* was used with the absolute precision that the term can imply. It is quite possible that it meant the smallest amount and roughly equivalent to a fingers pinch added six times as no cook would weigh the pepper each time and the personal taste of the guest and hosts would have been far more important. If we take it to mean a pinch of corns this corresponds to about 4 gm and results in a dish that is sufficiently peppery but not unbearable. However a number of recipes that define an *oenogarum* are designed to pour on (or possibly make a similar dish with) and one cited in full will suffice: 4.2.29: Patina of fish: 1 oz. pepper, ½ pt. *garoenum* (a blend of fish sauce and a reduced must), ½ pt. spiced wine, 2 oz. oil. A similar mixture with the same amount of pepper is at 6.8.4; 6.8.7. These do make quite an eyewatering sauces but one that is no more hot than a chilli sauce today and a good deal more interesting. Pliny does not value pepper very much 'it's only desirable quality being a certain pungency' is wrong to me, as the aromatic qualities of pepper are immense (Pliny XII.14.7). Other recipes call for a pepper mash *piperatum*, where the corns are pre-soaked and then pounded in the mortar before being diluted with sweet wines (*Apicius* 2.2.8). These sauces were made as dipping sauces that were meant to be shared among up to nine guests and the amount of sauce actually consumed was slight with each mouthful. It was intensity of flavour that was the aim clearly. Modern criticism of such sauces seems to be based on the idea that these were consumed in the same volume as a modern sauce today which would be false. The reference to *piperiu* among the liquids in the *brevis pimentorum* in Vinidarius may also refer to these pepper sauces which we also find are served up in Trimalchio's feast (Petronius *Satyricon* 33,36). An issue of relevance here may be the type of pepper required as long pepper is considerably heavier by volume (slide) and the recipes



do not stipulate which are required. Pliny tells us that long pepper was the more valued and 'is very easily adulterated with Alexandrian mustard; its price is fifteen denarii per pound, while that of white pepper is seven, and of black, four (Pliny XII.14.7), (we note that if pepper was adulterated with mustard then the long pepper was likely broken up and did not retain its catkin shape). Long pepper may have been the pepper of choice in elite recipes while black pepper sufficed for the majority. Andrew Dalby tells us that Indian sources describe long pepper when 'fresh' as sweet and only hot and pungent when dry (Dalby 2000: 89). Long pepper's flavour is by no means just heat it has a delightful flowery aroma reminiscent of grains of paradise and Apician sauces prepared with it are very different from those made with black pepper. It is also of relevance that the quality and pungency of any pepper depend on how long it was stored. I have in the past purchased long pepper with weak flavour and little heat which must have been very old and we can guess that long years of storage would clearly result in a loss of pungency. What does the practice of soaking the pepper, as described in recipe 2.2.8 have on its pungency? In a normal year of the Oxford symposium some of these questions could have been answered with a live tasting session but sadly you will have trust to my taste testing at the presentation.

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Evidence of a more widespread use of pepper among ordinary people can be found In Egypt. A shopping list in the form of a letter preserved on a ostraca (reused broken tile), from the early second century AD, list wine cabbage peas beans vinegar and ends with 'farewell, about the small amount of pepper', do not forget it' (*Ostrakon* 28; Van der Veen 2011:44). After 30 BC and the annexation of Egypt by Augustus trade with the east became much simpler and there is a suggestion that many items particularly pepper become an essential and effectively a staple commodity in 'respectable homes' (Van der Veen 2011:45). The development of *piperaria* understood to be pepper warehouses in AD 92 by Domitian is indicative of vast quantities being stored and even utilised as a form of money. Black pepper was not taxed on importation, as long and white was, and its cost was clearly not at all prohibitively expensive. One ounce of pepper was equivalent to 5-6 asses. To access the true value of this we can see that a weaver working on a cloak in Diocletian's price edict some 150 years later could get 12 Denarius per day for her work<sup>4</sup> (XX.1). That pepper was perceived as being consumed more widely seems clear from a story recounted in Persius of a miser who ate nothing but vegetables all year but was able, or allowed himself as he was a miser, to sprinkle pepper on his food on his birthday (Persius *Satires* 6.21). It is even disparaged as too common by Martial who describes someone of low rank being proud of the gifts given at Saturnalia from his patron, namely beans sausages and half a pound of pepper and frankincense (Martial *Satires* 4.46); and finally the clincher in terms of peppers accessibility, we find that Martial has received a gift from a friend of pepper instead of the usual silver and he says 'nobody pays that much for this' (Martial *Sairst* 10.57). This is all relative of course as the rural peasant farmer probably didn't see pepper from one years end to the next but we are looking

at widespread use among urban and the middle rank and we are also seeing it consumed on the periphery of the empire among middle and lower rank non Romans (McLaughlin 2014:185). This is readily understood by the details preserved in the Vindolanda tablets from Hadrian's wall from the late 1<sup>st</sup> century AD which preserve the purchase of a small amounts of pepper worth 2 *denarii*. These soldiers are clearly not high status as they are described as ordinary ranks (Tab. Vindol. 2. 184; 10.25 Bowman 1998:35). Archaeobotanical evidence for pepper is rare but it does occur sufficiently regularly on military sites across the Roman north to demonstrate its widespread trade and they also survive in much larger quantities in Egypt. There is rare evidence of cumin from Herculaneum, where a sewer revealed cumin seeds and pepper (Beard 2008:37) and we also have a suggestion that while cumin could grow in the Mediterranean it was clearly also imported as Persius makes reference to traders bringing from India 'wrinkled pepper and pale cumin seeds' (Persius 5.53-5).

## The Exotic Spices

Many commodities begin as luxuries and over time, sometimes a very short time, become widespread and more accessible. This would seem to be particularly true of pepper as we have seen. Pepper aside, ginger which was one of the most long travelled spice from the Moluccas can be found in *Apicius* (16) along with cardamom (2). The use of *silphium* and asafoetida in Roman food is a special case beyond the tiny word count allowed! However, Cyrenaican *silphium* was valued but when the crop failed it was replaced with a weaker and less valued resin from Parthia and we may guess this was much more widely available in Rome and not quite so prohibitively expensive.

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There are also very small numbers of recipes which require the use of exotic 'spices' that were not originally considered a culinary spice at all but valued for their smell, used in the ancient world as today for perfume and incenses before they became popular as a culinary spice in the Byzantine period. These included cassia = Chinese cinnamon (*Cinnamomum cassia*), which though very common in Roman trade was not a culinary spice in *Apicius*. The bark was predominantly used to burn at funerals to mask the smells. Martial 3.63 also tells us that well-groomed dandies always used a hair oil perfumed with balsam and cinnamon. Cinnamon leaf (*folium malabathrum*) was a more frequent culinary spice, occurring 9 times in the text and is probably best replaced by the bay leaf. It was used in wine and also in a number of meat sauces. *Costus* (*Saussurea lappa*) occurs just 3 times in the recipes and is known today as putchuk. According to Pliny it had a burning tastes and exquisite scent 'but is otherwise useless' (Dalby 2008:85). *Costus* was originally from Kashmir and was the least expensive unguent according to Pliny at 5.5 *Denarii* per lb (*Pliny HN. 12.41-2*). Spikenard (*Nardostachys jatamansi*) or nard occurs 4 times in the text. This resin was also associated with funerals and burial. Nard oil was the perfume that Jesus was anointed with by a Mary Magdalen. He subsequently said that 'She poured perfume on my body beforehand to prepare for my burial' (Mark 14:3-9).



These roots and resins from roots are described as contributing to the flavouring of wine but never food in the early empire. This is a habit that even Pliny in c.50 AD considers unsuitable, 'But good heavens! Now days some people actually put scent in their drinks and it is worth the bitter flavour for their body to enjoy the lavish scent both inside and out' (Pliny *HN* 13.4.25). Pliny recounts that 'the finest wines in the early days were sometimes just spiced with the scent of myrrh' (Pliny *HN* 14.92).

In a Roman law from AD 533, under Justinian, we find a lists of the passage of items subject to duty when arriving in Alexandria and they include cinnamon, long pepper, white pepper, *folium pentaspaerum*?, barberry leaf, *costum*, spikenard, Tyrian cassia, cassia bark, myrrh, *amomum*, ginger, cinnamon leaf, *aroma indicum*, *galbanum*, *silphium*, *alewood*, barberry, cardamom, cinnamon bark...' *Digest* 39.4.16.7; Parker 2002:42). These clearly represent the 'spice' of value and prestige. Spikenard also from India according to Pliny came in leaf, root and new shoots and it was the root that gave the foremost perfume but it also had an acrid taste. Nard or spikenard was the most values at 100 *denarii* per lb. (Pliny *HN* 12.41-2).

The tiny number of recipe in *Apicius* that use these perfumes are without exceptions designed for exotic meats, offal and sea food and their use in Byzantine cookery is well attested.<sup>5</sup>

**1.30.b** Another *laser* sauce: pepper, caraway, dill, parsley, dried mint, *silphium*, *folium*, *malabathrum*, ***spikenard***, a little ***costum***, honey, vinegar, *liquamen*.

**7.5.2. Another roast meat recipe:** 6 scruples of parsley, 6 scruples of *laser*, 6 scruples of ginger, 5 scruples of bay berry spice, 6 scruples *laser* root, 5 6 scruples oregano, 6 scruples of sweet rush, a little ***costum***, 3 scruples pyrethrum, 6 scruples celery seed, 12 scruples pepper, sufficient *liquamen* and oil.

**7.6.8.** Sauce for meat morsels: pepper, lovage, caraway, mint, ***spikenard***, *folium*, egg yolk, honey, *mulsum*, vinegar, *liquamen* and oil. Stir it with savory and leek, and thicken it.

**8.2.6.** Sauce for roast venison: pepper, spikenard, *folium*, celery seed, dried onion, green rue, honey, vinegar, choice *liquamen*, date, raisins, and oil.

**9.8.2.** Another recipe for sea-urchins: pepper, a little ***costum***, dry mint, *mulsum*, *liquamen*, ***spikenard*** and *folium* (cinnamon leaf).

The presence of spikenard and costus as well as the entirely unknown clove<sup>6</sup> in the *Brevis Pimentorum*, 'a summary of the flavourings which ought to be in the home so that nothing is missing from the seasonings' from the Vinidarius collection of recipes also points to a Late Roman/early Byzantine era for these ingredients (Grocock and Grainger 2006:313). We do not have unambiguous use of clove in food until the mention of it in a beef recipe

alongside *costus* and spikenard and pepper in Anthimus (3) in the 6<sup>th</sup> century (Grant 1996:51). I have prepared this recipe a number of times and do find it immensely odd and truly to be a sauce that smells and tastes of incense. It is an odd experience entirely and not to my taste but surprisingly the guests at a Byzantine feast prepared for the Byzantine society were delighted with it.

And finally ... my favourite Roman sauce. It is very similar to a peanut satay sauce and exceptionally good. I am only sorry you won't be able to taste it with me.

**8.1.4. You make hot sauce for roast boar like this:** pepper, roasted cumin, celery seed, mint, thyme, savory, safflower, roasted pine nuts or roasted almonds, honey, wine, *liquamen*, vinegar, a little oil.

## Notes

1. There are a few recipes that give precise quantities for spices but rarely if ever do we find that we can calculate a ratio as the weight and volume of the other ingredients are never stipulated, though one may imagine that the number of diners would correspond to the number of guests on a triclinia couch, roughly nine guests.
2. Iovage is always listed in order among the spices in a recipe and invariably separated from the herbs, fruits, nuts by other seeds, and we also find it listed among the seeds in the *Brevis Pimentorum*.
3. 4.2.4. Another soft patina; 4.2.5. Another patina, of asparagus (served) cold; 4.2.8. Another hot or cold patina of elderberries; 4.2.9. Deluxe patina; 4.2.31. Patina of dentex, gilthead bream, and grey mullet; 4.2.33. Patina of sorb apples served hot or cold; 4.2.36. Nettle patina served hot or cold.
4. [https://www.academia.edu/23644199/New\\_English\\_translation\\_of\\_the\\_Price\\_Edict\\_of\\_Diocletianus](https://www.academia.edu/23644199/New_English_translation_of_the_Price_Edict_of_Diocletianus)
5. Cf. A. Dalby, *Flavours of Byzantium* (Totnes, 2003; A. Dalby *Dangerous tastes*, 2000, 85.86)
6. Clove appears for the first time when in 350 AD Constantine the Great sent to Pope Sylvester 150 lb of clove sealed in a vessel from Byzantium but this does not necessarily suggest food. An excerpt from a c. 4th century *liber pontificalis* tells us that the church in Rome imported from India cinnamon clove and pepper and nard oil (Tomber 2008:170).

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