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Acts of Improvement: On the Use of Tonics and Elixirs in Sanskrit Medical and Alchemical Literature

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Acts of Improvement: On the Use of Tonics and Elixirs in Sanskrit Medical and Alchemical Literature

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Both Sanskrit medical and alchemical works describe procedures and formulations called “rasāyana”.¹ The term “rasāyana” is a compound of two words, “rasa” (liquid, juice, flavour, nutritive juice, essence) and “ayana” (path, way) or “āyana” (reaching, attaining). Because of the polyvalent meanings of its elements, in particular of “rasa,” there are different valid possibilities for interpreting the meaning of rasāyana.² Fenner (1979: 69) suggested that “(u)sing the term rasa in its general sense of essence, the term rasāyana could be taken to mean the act of preparing what is of value in something, or simply the act of improvement.”³

¹ The differentiation between Sanskrit medical and alchemical literature is not clearcut in all cases. I generally follow the convention of differentiating between them as proposed by Meulenbeld (1999–2002: IIA, 581–769), who separately lists a series of works under the rubric of “rasaśāstra.” As the inclusion of these works in a history of Indian medical literature indicates, the relationship between them and medical treatises, i.e., works predominantly dedicated to health and healing, can be very close. Meulenbeld (1999–2002: IIA, 4) notes that: “Rasaśāstra (alchemy and iatrochemistry) and ayurveda are overlapping areas and became intimately connected with each other in the course of time. Many texts can only be classified as intermediate between the two or as belonging to both at the same time. For this reason my survey embraces the literature on rasaśāstra.” See also White 2012: 491 for a useful list of common elements found in alchemical works not found in medical works.

² Consider, for example, White’s (1996: 184) “way of rasa,” Palit’s (2009: 18): “path that rasa takes,” Palit’s (2009: 18): “path that rasa takes,” rasa being defined as “primordial tissue or plasma” here, and Rāy’s translation of rasāyana substances and medicines as “Elixir Vitae” (Rāy 1903: 80).

³ Based on a definition of rasāyana in the Carakasamhita, Fenner (1979: 69) concluded that “rasa can be viewed generally in its meaning as the nutrient fluid which spreads through the body, and specifically as one of the tastes or active principles which makes up this fluid. The term ayana in rasayana can now be understood as the art or way (from ayana = path) of preparing (or, as the Tibetans put it, extracting) the rasa.”
In Sanskrit medical literature, rasāyana is defined as one of eight subject areas of medicine. The proclaimed aim of rasāyana therapies is to preserve or promote health and well-being, but also to prolong life, to halt degeneration caused by ageing, to rejuvenate and to improve cognitive function. The term “rasāyana” describes the therapies that together constitute this branch of medicine; the methodology and regimen of treatment; and the medicinal substances and formulations used in these therapies.

Many Sanskrit medical works dedicate chapters to the subject of rasāyana. These typically contain lists of recipes and descriptions of their applications, but also definitions of rasāyana; expositions on the characteristics and properties of single raw materials; instructions on the methodology of treatment; descriptions of who is suitable for treatment; and prescriptions for behaviours and diet before, during or after treatment, or even in lieu of treatment. The oldest medical works’ presentations of rasāyana are quite unlike each other: the Carakasaṃhitā and Suśrutasaṃhitā do not share a single rasāyana recipe, though there is some overlap in raw ingredients. There is also a marked difference in their perspectives on the functioning of rasāyana as anti-ageing or rejuvenating therapy. The treatises do, however, share ideas about treatment methodology. Both describe two general methods of treatment: a multi-layered treatment that takes place in a purpose-built hut under particular circumstances, and a simpler version that takes place without the special therapy structure. Both involve preliminary treatments of internal cleansing, followed by a mild diet for regaining strength, and then treatment proper with the chosen tonic over a period of time. The Carakasaṃhitā embeds its description of rasāyana in a narrative about ancient seers (ṛṣi) who are presented as the first consumers of rasāyana as well as the first human physicians and authors of the medical texts. This narrative framework is, however, absent in the Suśrutasaṃhitā and only briefly alluded to in later medical works in the context of particular formulae, as for example, “Cyavana’s food” (cyavanaprāśa), a rasāyana formula associated with the Vedic seer Cyavana. Later works, starting

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4 The following Sanskrit medical works were consulted for this article: the Carakasaṃhitā (early centuries ce), Suśrutasaṃhitā (early centuries ce), Aṣṭāṅgahṛdayasamhīta (ca. seventh century), Aṣṭāṅgasangraha (ca. seventh century ce), Kalpaśānakaraka (ca. ninth century ce), Siddhayoga (ca. tenth century ce), Cakradatta (ca. eleventh century ce), Vanigasenasanbhīta, (ca. eleventh/twelfth century ce), Sārīragadharasamhīta (ca. thirteenth/fourteenth century ce), Bhāvaprakāśa (sixteenth century ce), Yogaratnakara (eighteenth century ce), Bhaisajyaratnīvali (eighteenth/nineteenth century ce). Apart from the Sārīragadharasamhīta, all of these works contain separate chapters on rasāyana.

5 On the methods of treatment in the hut (kuṭipraveśika) and the alternative “wind and heat” treatment (vatatāpika), see the works of Roșu (1975), Dominik Wujastyk (2003: 76–78, 125–30) and Dagmar Wujastyk (2015).
with the Siddhayoga (ca. 10th century), present simplified versions of the more detailed expositions of the classical works, focusing more on lists of formulae than on descriptions of treatment methods. There is nevertheless a strong continuity with the older works, reflected in the reiteration of classical rasāyana formulae and in quotations from the older works. However, the newer works also added new materials to the canon of rasāyana substances and formulations, and increasingly introduced new methods of preparing medicines that are closely related to procedures for preparing raw materials and compounds described in alchemical works.

In alchemical literature, the term rasāyana occurs in different contexts. It is sometimes used to denote tonics that seem to have a similar function to those described in medical literature. As in medicine, one can also find the term rasāyana with the implication of a process, in the sense of a method of treatment or regimen. Most prominently, this regimen is associated with the culmination of alchemical operations, i.e., the intake of the mercurial elixir and its effects. Here, rasāyana seems to encompass the preparation of the practitioner for the intake of the mercurial elixir through various cleansing techniques; the formulation and the intake of preparatory tonics and their effects; the formulation and intake of the final mercurial elixir; and the outcomes of that intake.

In the following, I will first examine how the Sanskrit medical treatises dealt with the subject of rasāyana. I will consider a number of definitions of the term “rasāyana” and how the medical writers envisioned its role as a branch of Ayurveda. I will also explore what areas of application the medical treatises conceived for rasāyana. I will then examine how rasāyana is presented in alchemical literature. Using the oldest alchemical work’s chapter on rasāyana as a starting point for comparison with other alchemical works’ expositions on the subject, I will attempt to delineate alchemical perspectives on rasāyana, highlighting both commonalities and divergences between alchemical works. In the final section of this article, I will discuss whether or how medical and alchemical conceptions of rasāyana connect in terms of aims, methods and procedures.

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6 Among the works that I consulted for this paper, the Vangasenasamhitā is the exception to this rule in that it does not just present a pared-down version of rasāyana with lists of formulae. Its rasāyana chapter is long and varied and contains a number of elements not present in any of the other works’ rasāyana chapters, such as recipes for different kinds of vinegar, a description of treatment using a head pouch, an enumeration of vital spots, and a list of diseases caused by the humours wind, bile and phlegm, respectively. The presence of these elements is somewhat puzzling as they are not necessarily presented as part of rasāyana, but are in the middle of the chapter between recipes and prescriptions that are more commonly found in rasāyana chapters.
1. RASĀYANA IN SANSKRIT MEDICAL LITERATURE

The medical treatises offer some definitions of *rasāyana*, or rather, of what is meant to be achieved through *rasāyana*. Let us consider a few such definitions, two from the earliest medical treatises, and one from a later one, the Siddhāyoga (ca. 10th century), and its elaboration in the Bhāvaprakāśa (16th century).

**DEFINITIONS**

In its description of the eight subject areas of Ayurveda, the *Suśrutasaṃhitā* explains *rasāyana* as follows:

रसायनतत्त्व नाम वयःस्थापनमायुमंधाबलकरं रोगापहरणसमथं च

The “system of rasāyana” concerns preserving youthful vigour, promoting longevity, mental power and strength, and eliminating disease.

Several terms of this definition deserve some discussion. The first of these, translated here as “preserving youthful vigour” is “vayasthāpana.” “Vyas” is often used in the sense of “youth,” and its characteristics of “vigour,” or “power.” However, the *Suśrutasaṃhitā* also uses the term “vayas” in the broader sense of “age” in three stages: childhood, maturity, and old age. Fixing, or preserving (“sthāpana”) *vayas*, therefore, may mean preserving youthful vigour, but it could also mean preserving whatever stage of life a person is in. Here, another rule is relevant, namely for whom *rasāyana* treatment is appropriate, defined in the *Suśrutasaṃhitā* as those in the “early or middle” stages of age. The use of “sthāpana”: “fixing,” “preserving,” “maintaining,” shows clearly that the aim of *rasāyana* as defined in the *Suśrutasaṃhitā* is not rejuvenation, but rather anti-ageing, i.e., halting the progress of ageing rather than reversing it.

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7 *Suśrutasaṃhitā*, Sūtrasthāna 1.8. (part)
8 A definition of the three stages of life can be found in *Suśrutasaṃhitā*, Sūtrasthāna 35.29. See also Barois in this volume.
9 See *Suśrutasaṃhitā*, Cikitsāsthāna 27.3: पूर्व वयस्मच्च मयेः व मनुष्याय रसायनम् || प्रदुःखीत निमित्तः-ः िश्रुषुषुलोकैश्च सदा || १ ॥ “A wise physician should apply rasāyana treatment to a man in his early or middle age, always after his body has been cleansed and oleated (3).” In this rule, the *Suśrutasaṃhitā*, whose rasāyana formulations are described as having anti-ageing and life-extending, but not rejuvenating properties, contrasts with the *Carakasaṃhitā*, which attributes rejuvenating powers to many of its rasāyana formulae and gives several examples of very old men regaining their youth through rasāyana therapy. The most famous of these formulations is *cyavanaprāśa*, described in *Carakasaṃhitā*, Cikitsāsthāna 1.62–74.
In the Carakasamhitā, we find a longer discussion of what rasāyana is in the beginning of its rasāyana chapter.\textsuperscript{10} The chapter starts out with defining medicine:

\begin{quote}
िचिकिΨतं ӝािधहरं पμं साधनमौषधम ्।
ूायिӡ΋ं ूशमनं ूकृ ितԚापनं िहतम ्॥ ३ ॥
िवϞाϗेषजनािन भेषजं िϡिवधं च तत्।
Ԫԧੋज€ غالبं ُ
किच ُ
;िचदात€ԧ रोगनुत ्॥ ४ ॥
\end{quote}

One should know “therapeutics,” “that which removes disease,” “wholesome,” “cure,” “herbal medicine,” “expiation,” “calming,” “supporting the natural condition,” and “beneficial” as names for medicine. And medicine is of two kinds: whatever promotes strength in the healthy, and whatever eliminates disease in those who are ill.

The treatise defines rasāyana, together with vṛṣya (virility therapy) as belonging to the first category, the promotion of strength and vigour in the healthy. However, this is explained as a matter of emphasis rather than as an absolute difference: While rasāyana may mostly be concerned with promoting strength in the healthy, it can also be employed to alleviate disease. A more detailed definition of rasāyana follows:

\begin{quote}
दीघ€मायुः ԥृ ُ
त मेधामारोðयं तȚणं वयः।
ूभावण€Ԫरौदाय~ देहेिКयबलं परम ्॥ ७॥
वािʏ ُ
ूण ُ
त का ُ
zeलभते ना रसायनात्।
लाभोपायो िह शԒानां रसादीनां रसायनम ्॥ ८॥
\end{quote}

Through rasāyana, a man gains longevity, memory, mental power, health, youthful vigour, a great radiance, complexion, and voice, an extremely strong body and keen senses, mastery of speech, respect and beauty. Rasāyana assuredly is a means for attaining the proclaimed principal asset, etc.\textsuperscript{12}

\footnotesize
\textsuperscript{10} See Cikitsāsthāna 1.1. 1–8. In the edition of the Carakasamhitā used here (Carakasamhitā), the rasāyana chapter is located in the section on therapeutics (Cikitsāsthāna) and it is divided into four subchapters: 1. abhayāmalakīyo rasāyanapāda (“the rasāyana section dedicated to the chebulic and emblic myrobalsans”), 2. prāṇakāmīyo rasāyanapāda (“the rasāyana section dedicated to the desire for vital breath”), 3. karapracitīyo rasāy-anapāda (“the rasāyana section dedicated to hand-plucked (emblic myrobalan fruits)”), and 4. āyurvedasamutthānīyo rasāyanapāda (“the rasāyana section dedicated to the uplift of the science of life”).

\textsuperscript{11} Carakasamhitā, Cikitsāsthāna 1.1.7–8.

\textsuperscript{12} I follow Philipp Maas’ analysis of rasa as here being used in the sense of “principal asset,” which in this case refers to the main function of rasāyana of providing longevity (dīrgham āyus). See Maas’ detailed discussion of this passage in this volume.
This passage recurs in a number of later medical texts, albeit with some variations. For example, “praṇati” (“respect”) is sometimes replaced with “vṛṣya” (“manly power,” “sexual vigour”) and the reference to rasāyana as “a means for attaining the proclaimed principal asset, etc.” is omitted.¹³

A third definition of rasāyana, first found in the Siddhayoga and repeated in several later texts, reads:

यरा琇तिधिवϝििस भेषजं तिसायनम्।¹⁴

A rasāyana is a remedy that removes ageing and disease (or: that removes disease caused by ageing).

This statement is typically followed by directions adapted from Suśrutasaṃhitā, Cikitsāsthāna 27.3–4 on the appropriate condition and age of someone who wishes to undertake rasāyana treatment, i.e., that the body should be purified before treatment¹⁵ and that treatment is appropriate for those in the early and middle stages of life.

The Bhāvaprakāśa supplements the Siddhayoga’s short definition:

यरा琇तिधिवϝििस वयःस्मभंतरे। तथा।

This variation is already found in Aṣṭāṅgahṛdaya, Uttarasthāna 39.2 and Aṣṭāṅgasangraha, Uttarasthāna 49.2. The reading is also adopted in Siddhayoga 69.2–3, Bhāvaprakāśa, Uttarakhanda 2.2–3 and Bhaisajyaratnāvalī, Uttarakhanda 73.1. A slightly different reading is found in Vangasenasaṃhitā 77.371–372: यस्सिद्धि प्रणता कानित्य करत्येवन्यायानां (372 cd). And an alternative reading is found in Yogaratnakara 76.2: दीषेत्रेच अमुयः स्वरूपितं भाषारे तयम् वथः। देहेन्त्रिपैत्य कानित्य नास किन्द्रसायनम्। A further variant is found in Rasaratnasamuccaya 26.1–2, which reads “vṛṣatāṁ” for Caraka’s “praṇatim.”

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¹⁴ See Siddhayoga 69.1; Cakradatta 66.1; Vangasenasaṃhitā 77.371; Bhaisajyaratnāvalī, Uttarakhanda 73.1. Saṅgadharasamhitā 1.4.13 gives a similar definition: सशम्य च तज्ञाचे वज्रायनमिनानं। “Rasāyana is known as that which removes disease and ageing (or: disease caused by ageing).”

¹⁵ In the Suśrutasaṃhitā (Cikitsāsthāna 27.3), readying the body for rasāyana therapy includes oleation and purification. Purification is not defined further, but probably means that the patient has undergone emesis and purgation. Later texts add self-restraint and blood-letting to the necessary preparations for rasāyana treatment. For example, Aṣṭāṅgahṛdayasamhitā, Uttarasthāna 39.3 reads: युं व्यया भम्या च तज्ञाचे विद्यायत:। निधिः व्ययाक्षितं तस्य सायनात॥ ३॥ “It should be applied in early or middle age to one who has self-restraint, always after he has been oleated, his blood has been let and he has been purged.” Omitting the limitations regarding the appropriate age for rasāyana, the reading of the second half of this verse is also found in Siddhayoga, chapter 69, 4.

¹⁶ The edition of the Bhāvaprakāśa used here reads stambhakakaram instead of stambhakaram. Since this adds one syllable too many to the verse, which otherwise consists of eight syllables per quarter, I have emended it to stambhakaram.

¹⁷ Bhāvaprakāśa, Uttarakhanda 2.1. Yogaratnakara 76.1 has the same reading as the Bhāvaprakāśa.
A rasāyana is a remedy that removes ageing and disease (or: that removes disease caused by ageing) and produces that which supports youthful vigour, aids eyesight, nourishes, and bestows sexual vigour.

APPLICATIONS

A complex picture of the variety of goals pursued with rasāyana treatment emerges when we look at the various rasāyana sections of the medical works and examine what effects are attributed to their formulations. The described effects of rasāyana medicines and procedures can be broadly divided into five, partly overlapping, thematic groups:

**Lifespan and ageing** This includes medicines and procedures attributed with effecting rejuvenation, anti-ageing, or the increase of lifespan. In this context, medicines may, for example, be described as providing life-span/vitality (āyuṣkara). Phrases concerning the typically male patient often describe him as one who has a long or indeed unlimited life-span (amitāyu); or as one who will live for a long time (jīvati kālam vipulam). A standard life expectancy of one hundred years (jīvati śataṃ varśam) is often mentioned, but we also find several instances in which several hundreds of years of life are promised. The anti-ageing benefits of medicines are often described with expressions like “that liberates from ageing” (jarāvimukti), or “preserving youthful vigour” (vayassthāpana). Patients are described as “not subject to old age” (ajara), “renewed” (punarnava) and “free from wrinkles and grey hair” (nirvalīpalita), or as “reaching youthfulness” (yauvanam eti).

**Health** This includes medicines and procedures used for the prevention or cure of disease and for the establishment of overall well-being, including the proper functioning of the body and senses. Many rasāyana formulations are described as “destroying all disease” (sarvarogaṇghin, āmayanāśana), while the patient who takes a rasāyana medicine becomes “disease-free” (anāmaya, aruja, niruja, vigataroga, vyādhimukta). There is also frequent mention of specific diseases or disease groups that can be treated by rasāyana medicines and methods. Many of these can be categorized as diseases caused by the ageing process, or else as diseases the elderly would be either particularly prone to or vulnerable to. However, almost all of the named diseases are also serious diseases considered particularly challenging to treat.\(^8\)

\(^8\) See Hellwig (2008) for a discussion of the disease categories found in the rasāyana chapters in the Carakasamhitā and Suśruta-samhitā.
Cognitive power This includes medicines and procedures that restore, establish or enhance memory power, memorization ability and intelligence. Keywords here include “memory (power)” (smṛti), “intelligence” (medhā), and “understanding” (dhi) as effects of medicines, while the patient is supposed to become “clever” (matimat), or “intelligent” (medhāvin), or “one who retains what he has heard” (śrutadhārin).

Virility This includes medicines and procedures which restore or enhance sexual stamina, bodily strength and fertility. Such formulations are described with terms such as “producing sexual vigour” (vṛṣya). A patient becomes “one who indulges in sexual pleasures” (kāmacārin), who has intercourse with one hundred women (strīśatāni vrajati).

Special powers While these are only indirectly alluded to in the definitions of rasāyana, medicines and procedures that provide the patient with bodily and mental perfection and with extraordinary capacities, such as the ability to manipulate the world according to their wishes, frequently occur in the medical works’ rasāyana chapters. Bodily perfection can encompass extraordinary beauty, but also extreme strength and agility; a stable and firm body that resembles a diamond (vajrakāya) or a stone (gātram aśmavat sthirībhavati) and that is impervious to the elements or to disease; and extreme longevity.

Rasāyana formulations most often unite a range of benefits from several, and in some cases all, thematic groups. However, there are many examples of rasāyana that have a specific focus or a bias towards one group, such as the “medhyaarasāyana,” medicines for the improvement of cognitive faculties. It is also not always possible to neatly discern one group from the other. Ageing and health could both be considered the overarching category, since the occurrence of certain diseases, or the loss of cognitive or sensory powers or problems concerning sexual stamina may be understood in terms of health problems, but also in terms of ageing, i.e., health problems caused or exacerbated by the ageing process. As we have seen, these are also the dominant terms in the definitions of rasāyana in later medical literature, ambiguously presented in a compound (jarāvyādhividhvams) that allows to understand them as the separate categories of “ageing and disease,” or as a combined category of “disease caused by ageing.”

The medical treatises vary in how much weight they assign to the different elements, though there is a general bias towards addressing longevity and the ageing process in all rasāyana chapters that I examined. As noted above, the early texts, i.e., the Carakasāṁhitā and the Suśrutasāṁhitā, differ from each other in that

19 See Dagmar Wujastyk forthcoming.
the Carakasamhita presents rasayana as a method that can be used for the rejuvenation of the aged, while the SushrutaSamhita defines rasayana as an appropriate method for anti-ageing, i.e., halting rather than reversing the progress of ageing for the young to middle-aged. This division, however, is subsequently superseded in later works, which build upon both the older treatises’ materials on rasayana and therefore integrate or at least juxtapose both perspectives.20

The eradication of disease plays a particularly important role in the Astangasamgraha, where eighty-eight out of ca. 183 recipes and prescriptions are described as effective against specific diseases or disease groups; and the Vanagasenasmhita, where forty-eight out of ca. 106 recipes concern specific disease groups.21 For comparison, out of the ca. fifty-two recipes of the Carakasamhita’s rasayana chapters, only four address specific diseases.22 And only eight of the Astangahridayasamhita’s sixty-seven recipes apply to specific diseases. This is an interesting difference to the closely-related Astangasamgraha.

As can be seen in the table in the Appendix, page 30 below, the most commonly mentioned disease or disease group is that of “kustha,” diseases whose symptoms present primarily on the skin, including what might today be dia-

20 A number of later medical treatises reiterate the dictum from SushrutaSamhita, Cikitsasthana 27. 3: पूवः वर्षसि माते वा मनुष्यस्य रसायनम्। प्रमुखदशेषाशः (…) – “A wise physician should apply rasayana treatment to a man in his early or middle age (…),” but then nevertheless list recipes that promise to make someone old young again.

21 This statement is based upon a rough count of recipes and prescriptions in the Sanskrit medical works’ rasayana chapters. It is difficult to arrive at an absolute count of recipes, as distinctions between recipes and indeed what counts as a recipe are not always clear. To give some examples: Sometimes, the expected outcome of a recipe changes depending on the length of intake. This is a common feature in the SushrutaSamhita’s rasayana chapter. That would mean that one could count one recipe as several, but I have opted to count such recipes as one formulation. Further, in the SushrutaSamhita (Cikitsasthana 27.6), cold water, milk, honey and clarified butter are prescribed as anti-ageing substances. The four substances can be taken in different combinations: all together, and in combinations of two or three, or on their own. This would mean a total of fifteen possibilities, all of which have the same effect. Here again, I have counted this as one recipe. Then, many recipes are described as having “the mentioned qualities” (prakrtin gunan), which could refer to a preceding recipe with details on its application, or otherwise to general rasayana properties. Therefore, while the counts may give a rough idea of the general patterns within rasayana chapters, they are somewhat inexact.

22 The Carakasamhita’s rasayana chapters have an official count of fifty-nine recipes, listed at the end of the first three quarter chapters (i.e., Cikitsasthana 1.1–3): six recipes in the first, thirty-seven in the second and sixteen in the third. The text does not give numbers for the final quarter chapter. It is not quite clear to me how these numbers are arrived at. In my own count, I arrive at six recipes for the first quarter, twenty-seven for the second, seventeen for the third, and a further two recipes in the fourth. This makes a total of fifty-two recipes.
gnosed as leprosy. Other common conditions include cough (kāsa), dypsnoea (śvāsa), and piles (arśa). Typically, one medicine is described as effective against a whole group of diseases, so that the list of diseases that can be tackled with rasāyana is quite long. Several rasāyana medicines may be indicated for the same disease.

We have seen from the Carakasamhitā’s definition of rasāyana that rasāyana was primarily considered a method of supporting health in the healthy, i.e., preventing disease and promoting well-being. However, the ways in which diseases are mentioned in the recipes suggests the eradication rather than the prevention of disease. For example, rather than stating that diseases will not arise due to the use of a rasāyana, terms for “removing,” such as “vināśāna,” “hara,” or “āpaka-krṣ” are used to explain the function of a rasāyana tonic.

It is not immediately obvious in what ways rasāyana treatment against diseases differs from “regular” treatment described in the other branches of Ayurveda, since all of the diseases mentioned in the rasāyana chapter are also mentioned in other contexts in the medical works. Hellwig (2008) has tackled this question to some extent for the Suśrutasaṃhitā and the Carakasaṃhitā. According to his findings, the therapeutic application of rasāyana in the Carakasaṃhitā “emphasises the connection between the rasāyana therapy and the cycle of food, digestion and the building of dhātus” and thereby follows the treatise’s standard understanding of pathology and treatment. By contrast, rasāyana therapy in the Suśrutasaṃhitā is associated on the one hand with a special class of disease, the so-called “self-arising” (“svābhāvika”) diseases. These are conditions such as hunger, thirst, ageing, death, and sleep that are inherent to human bodily existence, but also linked with a linear understanding of the passing of time.

23 Kuṣṭha is both the name of a specific disease, i.e., one that presents with leprous-like symptoms; and an overarching category that comprises a range of diseases primarily presenting on the skin. In modern ayurvedic practice, kuṣṭha is most often used as a synonym for leprosy, but it is worth remembering that this disease category long predates any idea of bacterial infection and that the Sanskrit medical works define kuṣṭha on humoral principles. I will in the following refer to kuṣṭha as “serious skin diseases.”

24 See, for example, Carakasamhitā, Cikitsāsthāna 1.3.40, where a long pepper tonic is attributed with removing disorders of the spleen (pithoduravivāśāna), or Carakasamhitā, Cikitsāsthāna 1.1.40 and 41, where the rasāyana called cyuscaturāpaśa is declared a “remover of cough and dypsnoea” (kāsaśvāsahara) and attributed with removing (apakarṣati, “it removes”) a whole number of diseases.

25 Hellwig 2008: 63.

26 The svābhāvika diseases are defined in Suśrutasaṃhitā, Sūrasthāna 1.24–25 as: स्वाभाविकाः स्वोपौपयाःसत्तानांत्यायिन्योधर्मानुमिताः – “Arisen by themselves’, then, are natural conditions such as hunger, thirst, ageing, death and sleep.” Hellwig (2008: 37–39) discusses the interpretation of this passage in Dalhana’s tenth-century commentary at some length. Dalhana differentiates between svābhāvika diseases that arise from the humours (dosa) and those that are inherent to human existence. See also Roșu (1975:107) on this passage.
the other hand, the *Suśrutasaṃhitā* describes *rasāyana* as a particularly powerful emergency therapy that can be applied with success in the case of the failure of regular medical treatment.27 The relevant statement is found in *Suśrutasaṃhitā*, Sūtrasthāna 33.3, a chapter on incurable conditions that discusses how to handle major diseases (mahāvyādhi) and especially their complications (upadrava). The general advice here is that, once complications have arisen, diseases can no longer be treated, except for through *rasāyana*.28 Notably, there is a significant overlap (though not a complete match) between the diseases listed in this chapter and those mentioned in the chapters on *rasāyana*.29

Strengthening the argument for *rasāyana* as the last hope in desperate cases, Hellwig (2008: 48) also makes note of a passage in the *Suśrutasaṃhitā*’s chapter on the signs of death in wounded patients, which states that once signs of death have appeared, death is certain, but can be warded off by faultless brahmans or by persons engaged in *rasāyana*, austerities and repeated recitation of mantras.30 This seems to suggest an equality in power of the named groups: brahmans on the one side, and persons engaging in *rasāyana*, austerities and/or recitation on the other. It is not entirely clear whether the second group’s practice comprised *rasāyana*, austerities and recitation as one combined practice, or whether different specialists undertook them as alternative and equally efficacious practices. The tenth-century commentator Dalhaṇa seems to have considered them separate practices (and practitioners) and defines “persons engaged in *rasāyana*” as “those familiar with medicinal herbs that specifically prevent *svābhāvika* diseases”.31

27 “Notfallmedizin” in Hellwig 2008: 62.
28 *Suśrutasaṃhitā*, Sūtrasthāna 33.3: उपदेशः तु येज्ज्वत्स्या धार्मिकतमया स्वस्थ्यायि। स्वस्थ्यायि विना धन श्वेतसंसारम् मन्। – “Diseases that have become accompanied by complications, however, are incurable, except for through *rasāyana*. Listen carefully to what I say about them, son.” Dalhaṇa interprets this to mean that *rasāyana* therapy can cure otherwise incurable disease. रसायनानि स्वस्थ्यायी व्यक्तिपि यथाय: साधनत्यैः। – “‘Except for through *rasāyana*’ means that through *rasāyana*, even an incurable disease is cured as a general rule.” See also Hellwig (2008: 48) on this passage and Dalhaṇa’s commentary on it.
29 The *mahāvyādhi*, as defined in *Suśruta-samhitā*, Sūtrasthāna 33.4–5 are *arśa*, *āśmarī*, *bhagandara*, *kuṣṭha*, *mūḍhagarbha*, *prameha*, *udara* and *viṣamajvara*. Their untreatable complications include *atiśāra*, *chardi*, *hikkā*, *jvara*, *vātavyādhi*, *prāṇamāṃsaśāya*, *śoṣa*, *śvāsa*, and *tryā*. The disease groups mentioned in the *Suśrutasaṃhitā*’s *rasāyana* chapters include the *mahāvyādhi* and also include *apas-māra*, *arśa*, *chardi*, *kṛmi*, *kuṣṭha*, *pāṇḍuroga*, *raktapitta*, *śoṇita*, *śoṣa*, *svāra*, *svāra*, *tṛṣṇā*, *udara*, *unmāda*, and *viṣamajvara*.
30 *Suśrutasaṃhitā*, Sūtrasthāna 28.5: तो वै मरणं इति धार्मिकसाय संवदितः। रसायनायेकोषधितघातीयायिन्यं निवारये॥
“When the sign of death has occurred, death is certain. It can possibly be averted by faultless brahmans, or by those fully engaged in *rasāyana*, austerities and repeated recitation of mantras.” See also Hellwig 2008: 48.
31 Dalhaṇa on *Suśrutasaṃhitā*, Sūtrasthāna 28.5: रसायनविभेद धार्मिकसाय संवदितः। रसायनायेकोषधितघातीयात्यायिन्यं निवारये॥
Also see Hellwig (2008: 48) on this passage.
It should be noted that while svābhāvika conditions play a prominent role in the quoted statements in the Suśrutasaṃhitā and also are declared the subject of one of the four rasāyana chapters, the svābhāvika conditions are not often referred to in descriptions of the effects of rasāyana formulations. Indeed, several svābhāvika conditions, namely hunger, thirst, and sleep, are not addressed at all. The topic of ageing, however, is prominent, particularly if we consider conditions such as loss of bodily strength, cognitive power or virility as subcategories of ageing. Overcoming death, by contrast, is only directly alluded to once in the context of the use of soma in rasāyana therapy, where soma is defined as a substance created for the eradication of ageing and death.

Here, we can hardly speak of medical intervention, as the Suśrutasaṃhitā associates the use of soma as well as of divine herbs with overcoming the normal parameters of the human condition. Rasāyana with soma or divine herbs is described as an extreme intervention, both in terms of what patients undergo during treatment and in terms of expected outcomes. During treatment, patients experience an almost complete disintegration of their body, while successfully completed treatment results in the attainment of special powers and of a superhuman body. The Suśrutasaṃhitā describes the spectacular outcome of rasāyana with soma thus:

The visionary man who makes use of the king of plants, Soma, wears a new body for ten thousand years. Neither fire, nor water, neither poison, blade nor projectile are powerful enough to take his life. He gains the strength of a thousand well-bred, sixty-year-old, rutting elephants. If he wants to go to the lands of northern legend, to the milky ocean, or even to the abode of the king of the gods, nothing can

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32 The Suśrutasaṃhitā’s rasāyana section is divided into four parts. Each part is headed by the phrase “I will now explain [a certain kind of] rasāyana, thus spoke Lord Dhanvantari” (athāto […[रसायनं इत्या॥ यथो-वाच भगवान् ध्यानं॥]). The different kinds of rasāyana are divided into the following: 1) rasāyana that pacifies all disorders (sar-vopaghātaśamanīyam rasāyanam, Cikitsāsthāna 27), 2) rasāyana for those desiring enhanced mental functioning and vitality (medhāyuṣkāmīyaṃ rasāyanam, Cikitsāsthāna 28), 3) rasāyana for the prevention of self-arisen disease (svabhāvyādhipratiṣedhanīyaṃ rasāy-anam, Cikitsāsthāna 29), and 4) rasāyana for the cessation of afflictions (nivṛttasantāpīyaṃ rasāy-anam, Cikitsāsthāna 30). The headings only marginally reflect the contents of the last two chapters, which deal with the use of soma and celestial herbs, respectively. These are attributed with letting the consumer overcome the human condition altogether, gaining superhuman powers.

33 See Suśrutasaṃhitā, Cikitsāsthāna 29.3. On the identification of the soma plant, see Falk 1989.

34 This is discussed in more detail by Dagmar Wujastyk (forthcoming). See also White (1996: 26–27) for a translation of the passage describing the disintegration of the body and its gradual reshaping during soma rasāyana.
stand in his way. He is as beautiful as the god of love, as attractive as the second moon. He is radiant, and brings joy to the hearts of all creatures. He truly knows all sacred knowledge, with all its branches and sub-branches. He moves like a god through the whole world, with infallible power. Later medical works no longer describe the use of soma and divine herbs in *rasāyana* and generally describe less spectacular effects of treatment. However, the idea of attaining extended bodily powers continues to feature as a minor, but recurring theme in the *rasāyana* chapters of the medical works.

2. RASĀYANA IN ALCHEMICAL LITERATURE

When conducting any study on the contents of Sanskrit alchemical texts, one is confronted with the problem that many of the works are only available in incomplete or unreliable editions, if indeed any edition is available at all. Omissions in the text are sometimes due to the condition and partial availability of the manuscripts the editions are based on. However, sometimes they occur due to a conscious decision on part of the editors, as for example in the case of the edition of the *Rasārṇavakalpa* by Roy and B. Subbarayappa (1976). Here, the editors left out a large chunk of the opening section (verses 1–52), because it presented the subject of the text in religious terms and they wished to highlight the scientific elements of the text. In the case of one edition of the *Rasaratnākara*, we have the opposite problem: The editor seems to have added materials. The *Rasaratnākara* is a fairly large compendium and its materials are divided into five separate sections (*khaṇḍa*), each dealing with a different main subject. The second of these is the *Rasendrakhaṇḍa*, which is devoted to medicine. Manuscript evidence shows this section to consist of some twenty chapters, but the Kṣemarāja Śrīkṛṣṇādāsa edition (1909) gives seventy-one, including a chapter on *rasāyana* (chapter 69). In light of how unreliable some of our source materials are, any

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35 Translation of *Suśrutasaṃhitā*, Cikitsāsthāna 29, 14–19 by Dominik Wujastyk (2003:130). Compare also similar outcomes through *rasāyana* therapy with divine herbs in *Carakasaṃhitā*, Cikitsāsthāna 1.4.7.

36 See Roy and B. Subbarayappa 1976:i. This text was not used for this article.

37 See Dominik Wujastyk (1984:72) for an outline of the contents of the *Rasendrakhaṇḍa* based on manuscript evidence from the Wellcome Library collection. The contents of the *Rasendrakhaṇḍa* as presented in Kṣemarāja Śrīkṛṣṇādāsa’s edition are briefly summarized in Meulenbeld 1999–2002:IIA, 654–655 and 661–662, which unfortunately does not mention the problem that many of the chapters probably stem from another work. Currently, a study of the digital copies of twenty-five *Rasaratnākara* manuscripts from the Berlin State Library collection is being undertaken by Madhusudan Rimal, a PhD student at the University of Alberta. Preliminary results confirm the findings in Dominik Wujastyk 1984.
A statement made on what constitutes rasāyana in alchemical literature must therefore necessarily be considered somewhat tentative. Nevertheless, some broad trends in how the subject is dealt with in this literature are fairly evident.

Several alchemical works have chapters or large sections dedicated to the subject of rasāyana, while references to rasāyana, both as a characteristic of a substance or compound and as a procedure, can be found throughout. I have centred my examination of rasāyana on early alchemical texts, such as the Rasahṛdayatantra, the Rasārṇava and the Rasaratnākara, but have also consulted later texts such as the Ānandakanda and the Rasaratnasamuccaya. These texts are linked through extensive intertextual borrowing. I also spot checked further alchemical works for occurrences of the term rasāyana, using a keyword search in the digital collections of SARIT and the Digital Corpus of Sanskrit (DCS). Of the main works consulted, the Rasahṛdayatantra, Rasaratnākara, Ānandakanda and Rasaratnasamuccaya have chapters presented as expositions on rasāyana. The relevant sections in these works are: Chapter nineteen of the Rasahṛdayatantra; the Rasāyanakhaṇḍa of the Rasaratnākara; Part one (amṛtīkaraṇaviśrānti), chapters six, eight and nine of the Ānandakanda; and chapter twenty-six of the Rasaratnasamuccaya. In the case of the Rasārṇava, its eighteenth and final chapter can be understood as a description of rasāyana, albeit under a different heading. It is presented as a description of how to achieve the transformation of the body (dehavedha), but the described procedures are similar to what is described in the Rasahṛdayatantra’s final chapter on rasāyana. Large parts of the Rasārṇava’s eighteenth chapter are also reiterated in the Ānandakanda’s sections on rasāyana (whose sixth chapter also starts under the heading of “dehavedha” rather than of “rasāyana”). It is worth noting that while the title of a chapter or part of a work may indicate the subject matter as rasāyana, not all content is necessarily dedicated to it.

The dating of alchemical works is very uncertain. According to Meulenbeld (1999–2002), the Rasahṛdayatantra may be dated to about the tenth or eleventh century, the Rasārṇava to about the twelfth and the Rasaratnasamuccaya to around the fifteenth or sixteenth century. The dates of the Rasaratnākara and Ānandakanda are even more uncertain. Hellwig’s study of the relative chronology of alchemical works suggests that the Vādakhaṇḍa of the Rasaratnākara is placed among the oldest strata of alchemical works, while its Rasakhaṇḍa may be later (Hellwig 2009a: 62–64). The relation of the different parts of the Rasaratnākara to each other is not yet resolved.

The results from the keyword search, while very helpful for finding relevant passages, are limited by the fact that the number of alchemical works is small in SARIT, while the DCS contains a substantial number of alchemical works, but often only incomplete versions.

For example, the eight chapters of the Rasaratnākara’s Rasāyanakhaṇḍa have different foci that are not always clearly connected to rasāyana. The first chapter describes the conditions needed for the intake of mercurials, and some preparation methods and tools for mercury processing. Chapter two
Outside of such chapters, the term “rasāyana” sometimes occurs in definitions of the characteristics of substances or formulations. The meaning of rasāyana here seems to follow the usage in medical literature of characterising substances and formulations as tonics that are health-inducing, fortifying, invigorating, or rejuvenating. See, for example, the Rasārṇava’s description of chalcopyrites (māksika):

मािÈकं ितɫमधुं मेहाश€ःÈयकुӺनुत ्॥ कफिप΋हरं बӏं योगवािह रसायनम्॥

Chalcopyrites, which are bitter and sweet, (act as) a catalyst and a tonic that destroys urinary disorders, piles, wasting disease and skin disorders, removes the humours phlegm and bile, and confers strength.

Or see the Rasahṛdayatantra’s definition of the eight minerals (mahārasa):

वैबाϿकाϿसԧकमािÈकिवमलाििदरदरसकाӡ अӴौ रसाԒथैषां सΑािन रसायनािन

Tourmaline, iron, copper sulphate, chalcopyrites, iron pyrites, cinnabar, shilajit, and calamine: these eight substances and their essences are tonics.

gives instructions on how to prepare the body for rasāyana, and then lists mercurial elixirs in liquid form that may be used for rasāyana. Chapter three provides recipes for mercurial pills used in rasāyana, but also in mercury processing procedures, while chapter four describes mercurial compounds, oils and powders. Chapter five describes unguents against wrinkles and grey hair for external application, oral intake and nasal application. Chapter six and seven are dedicated to the subjects of virility and sexual stamina. And finally, chapter eight describes how to acquire a divine body and how to turn base metals into gold. Of these, chapters one to four seem to follow the theme of rasāyana most closely.

I use “chalcopyrites” for māksika to distinguish it from vimala, another kind of pyrites, here rendered as “iron pyrites.” This identification is, however, uncertain.

Rasārṇava 7.140c–14ef. The DCS notes parallel passages in Rasamañjarī 3.84, Rasaratnasamuccaya 1.213 and Yogaratnākara 1.166. One could also read the text as:

“Chalcopyrites are bitter and sweet, and destroy urinary disorders, piles, wasting disease and skin disorders. They remove the humours phlegm and bile and confer strength. They are a catalyst and a rasāyana.”

In this case the question is left open as to what the characteristics of a rasāyana would encompass. See Hellwig (2009b: 460) on the concept of “yogavāhin” as a substance’s characteristic of assimilating and strengthening the action of any substance it is grouped with. References to this term are already found in the earliest medical works (see Carakasaṃhitā, Vimānasthāna 1.16, Suśrutasaṃhitā, Sūtrasthāna 45.142, Aṣṭāṅgasaṃgraha, Sūtrasthāna 12, 25) and are often juxtaposed with the described substances’ action as a rasāyana.

Rasahṛdayatantra 9.4.

The identification of several of the eight substances is less certain than my translation implies. I have generally oriented myself on Nadkarni 1954, sometimes updating the English term.
Consider also the Rasamañjarī’s description of a multi-component formulation:\(^{45}\)

कासथासमहातिसारामणे मन्दाश्रिपर्येण वातावृद्धिकरं रसायनवर्ये नास्त्तन्त्रदस्मात्य-रसम्.\(^{46}\)

It calms cough, dyspnoea, and severe diarrhoea, kindles weak digestive fire and it stimulates the growth of the tissues. It is the best tonic, there is no other better than it.

More often, the term rasāyana is used to denote an action, or a series of actions, perhaps in the sense of Fenner’s “acts of improvement.” When the term occurs outside of chapters dedicated to rasāyana, it is not always clear what these actions entail. See, for example, Rasārṇava 7.44cd, where the use of copper sulphate (sasyaka, tuttha) as part of rasāyana is attributed with anti-ageing effects.

रसायनेतु योग्यः स्वाह्यःस्तम्भकरोभवेत्/ /

If applied in rasāyana, it halts ageing.

This passage could be understood to propose the use of copper sulphate for rasāyana treatment or as part of rasāyana regimen in the medical sense, i.e., in this case as an anti-ageing treatment or regimen. The difference to the rasāyana treatment or regimen described in medical works would then simply lie in the use of copper sulphate as the rasāyana substance, since copper sulphate was known to the early medical authors, but not used in the context of rasāyana. I have also not found it as a rasāyana ingredient in the examined later Sanskrit medical works. However, rasāyana could here also refer to the regimen and procedures associated with the intake of mercurial elixirs as the culmination of the alchemical endeavour. In that context, it would be one of many preparations taken during the rasāyana process rather than a central substance used on its own. However, while the Rasārṇava describes the use of copper sulphate in various metallurgical contexts, it does not feature its intake in its eighteenth chapter.\(^{47}\)

Notably, none of the examined works use the term “rasāyana” to denote the subject of their expositions as a whole. We find terms such as “rasavidyā” or “rasaśāstra” as umbrella terms for the discipline of alchemy instead, though one

\(^{45}\) The Rasamañjarī by Śālinātha is a ca. fifteenth-century alchemical work. See Meulenbeld (1999–2002: IIA, 636–638) for a summary of its contents.

\(^{46}\) Rasamañjarī 6.313. This is part of a larger description of the effects, which begins in 6.312.

\(^{47}\) Rasārṇava 17.75–77, for example, describes the use of tuttha in the colouring of lead (a step in aurifaction).
must also keep in mind that the different works offer differing versions of what elements their discipline comprises. In the following, I will present a detailed description and analysis of the rasāyana chapter of the Rasahṛdayatantra (RHT), which, as the earliest alchemical text we have access to, may serve as a base text for comparison with the presentation of rasāyana in alchemical and medical literature.

RASĀYANA IN THE RASAHRDAYATANTRA

The Rasahṛdayatantra by Govinda consists of 506 verses that are divided into nineteen chapters. Laying the groundwork for the final stages of practice, chapters one to seventeen introduce the substances used in the alchemical operation, with a particular focus on the central substance mercury, and delineate the metallurgical processes each substance undergoes before it is used in the making of the mercurial elixirs. Chapter eighteen describes the use of these altered substances in processes for transmuting base metals into gold or silver. The nineteenth chapter is the last chapter in the work, and it presents the culmination of alchemical practice: the rasāyana process and its effects.

The chapter begins with:

अधुना ूोɫानिप वʌािम रसायनेयोगान ्
//

It then describes a series of activities and recipes, broadly consisting of the preliminary treatment of cleansing the body (śodhana) through purgation, sweating, and emesis; a process called “the preparation of the body” (kṣetrikaraṇa).

48 The term “rasavidyā” is found in Rasahṛdayatantra 19.79 and Rasaratnasamuccaya 6.27, “rasāśtra” in Rasaratnasamuccaya 6.61. A further term, rasavāda (“the doctrine of mercury,” e.g., Rasāṛṇava 1.44) could also be understood as an umbrella term for alchemy. However, it seems to mostly be used as a subcategory, as in Rasendracintāmaṇi 7.19, where it is juxtaposed with dhātuvāda (“the doctrine of metals”) and viṣavāda (“the doctrine of poisons”). The Rasendracintāmaṇi is attributed to Dhunḍukanātha and dates to about the fifteenth or sixteenth century according to Meulenbeld (1999–2002: IIa, 705).

49 The edition and translation by B. V. Subbarayappa et al. (Rasahṛdayatantra) is divided into twenty-one chapters. It does not contain extra materials, but splits chapter nineteen into three separate chapters. Here, the edition digitized by Oliver Hellwig in the Digital Corpus of Sanskrit is used (Hellwig 1999–). For information on the dating of this text, refer to footnote 38.

50 A partial translation of this chapter was published by B. V. Subbarayappa et al. (Rasahṛdayatantra).

51 Rasahṛdayatantra 19.1cd.
involving the intake of herbal and mercurial elixirs; and the intake of a final (?) mercurial elixir that triggers the ultimate transformation of the practitioner’s body.\textsuperscript{52} However, these stages are not well distinguished from each other and it is not always clear whether the described herbal and mercurial elixirs are meant to be taken in succession or whether they are alternatives to each other.

\textbf{Cleansing}

The internal cleansing of the body through purgation etc., which is very similar to what chapters in medical works prescribe for preparing for medical rasāyana treatment, is not clearly distinguished from the kṣetrikaraṇa process and may, in fact, form part of it. According to Rasahṛdayatantra 19.2–4, the cleansing first involves three days of drinking clarified butter with rock salt in the morning, followed by three days of taking a decoction of screw pine (ketakī).\textsuperscript{53} The body should be made to sweat and then thoroughly cleansed with black hellebore (kaṭurohiṇī). Once the body has thus been rid of the humoral substance “phlegm” (śleṣman), the persons undergoing treatment recover from the cleansing during three days in which they may eat barley and clarified butter. The following verses (RHT 19.5–7) may describe either an alternative to the above, or a continuation of the cleansing regimen for the next three days, in which one would drink hot water with chebulic myrobalan, rock salt, emblic myrobalan, black pepper, sweet flag, jaggery, and false black pepper in the morning and also turmeric, dried ginger and long pepper.\textsuperscript{54} This, the author promises, cleanses the body and makes it strong through overcoming any pathological combination of the humours. This passage is echoed in Rasārṇava 18.3–7, while a similar, though not identical, list is found in Rasaratnākara Rasāyanakhaṇḍa 1.4–6.\textsuperscript{55}

The Rasahṛdayatantra’s passage also has a number of parallels in the rasāyana chapters of medical works. Its list of substances used for internal cleansing corresponds closely with that of Carakasaṃhitā, Cikitsāsthāna 1.1.25–28, though it uses vacā (sweet flag), guḍa (jaggery), vidāṅga (false black pepper), rajāṇī (turmeric), śuṇṭhī (dried ginger) and pippalī (long pepper).\textsuperscript{56} The Anandakanda’s detailed description of preparing the body in 1.6 mentions the use of ketakī (screw pine) (1.6.18–19 and 21); vacā (sweet flag), and vidāṅga (false black pepper) (1.6.23); and guḍa (jaggery) (1.6.24). The Rasaratnasamuccaya’s twenty-sixth chapter, which starts with the definition of rasāyana from Carakasaṃhitā, Cikitsāsthāna 1.1.7–8, does not include instructions on cleansing the body before rasāyana.

\begin{footnotes}
\item[52] White (1996: 266) also proposes “making (oneself master of) the field” for kṣetrikaraṇa. Hellwig’s dictionary does not have a separate entry for kṣetrikaraṇa, but explains it as “Vorbereitung des Körpers auf den dehavedha” – “preparation of the body for dehavedha” in the entry on “kalkabandha,” the fixation of mercury into a paste (Hellwig 2009b: 188).
\item[53] Rasahṛdayatantra 19.2.
\item[54] The Sanskrit terms for these used in the Rasahṛdayatantra are: pathyā (chebulic myrobalan), saindhava (rock salt), dхаṭrī (emblic myrobalan), marica (black pepper), vacā (sweet flag), guḍa (jaggery), vidāṅga (false black pepper), rajāṇī (turmeric), śuṇṭhī (dried ginger) and pippalī (long pepper).
\item[55] The Anandakanda’s detailed description of preparing the body in 1.6 mentions the use of ketakī (screw pine) (1.6.18–19 and 21); vacā (sweet flag), and vidāṅga (false black pepper) (1.6.23); and guḍa (jaggery) (1.6.24). The Rasaratnasamuccaya’s twenty-sixth chapter, which starts with the definition of rasāyana from Carakasaṃhitā, Cikitsāsthāna 1.1.7–8, does not include instructions on cleansing the body before rasāyana.
\end{footnotes}
different names for them: pathyā instead of harītakī, dhātrī instead of āmalaka, śuṇṭhi instead of viṣabhēṣaja, and it also adds marica (black pepper). While the Rasārṇava, the Rasaratnākara and the Ānandakanda also refer to the use of screw pine and the Rasārṇava includes hellebore, none of the examined medical works mention either substance. However, they do note that cleansing should be undertaken after the body has been oleated and made to sweat. This may explain the Rasahṛdayatantra’s use of screw pine, which can act as a sudative, while the use of hellebore may be seen as an alternative or additional purgative. The Carakasaṃhitā and the later medical works following its prescriptions on cleansing techniques also recommend a diet of barley and clarified butter for the three days following the cleansing.

Preparing the Body (kṣetrīkaraṇa)
The Suśrutasaṃhitā emphasises that rasāyana treatment without prior cleansing of the body cannot be successful, comparing such a partial treatment to dyeing a stained cloth. Its argument about the efficacy of treatment is reiterated in many of the later medical works. The Rasahṛdayatantra concurs in the importance of assuring the efficacy of rasāyana treatment through proper preparation, but also highlights the issue of safety:

अकृत्रेत्ते रसायनं यो नरः प्रयुः।
तस्य कामति न रसः स रसः सवा दोषकृवित॥

Mercury will not penetrate the body of one who undertakes rasāyana without having prepared his body. The mercury will cause damage to all parts of the body.

56 Carakasaṃhitā, Cikitsāsthāna 1.1.25-28 lists harītakī (chebulic myrobalan), saīndhava (rock salt), āmalaka (emblic myrobalan), gūḍa (jaggery), vacā (sweet flag), vidāṅga (false black pepper), rajānī (turmeric), pippalī (long black pepper), and viṣabhēṣaja (dried ginger). Compare also Aṣṭāṅgahṛdayasaṃhitā, Uttarasthāna 39.21 and Aṣṭāṅgasamgraha, Uttarasthāna 49.14, which list harītakī (chebulic myrobalan), āmalaka (emblic myrobalan), saīndhava (rock salt), nāgara (dried ginger), vacā (sweet flag), haridrā (turmeric), pippalī (long black pepper), vella (false black pepper) and gūḍa (jaggery) as the substances used for cleansing. The same list is found in Siddhayoga 69.4–5.

57 See Rasārṇava 18.3 and Rasaratnākara Rasāyanakhaṇḍa 1.5 on the use of screw pine, and Rasārṇava 18.5 on the use of hellebore.

58 Aṣṭāṅgahṛdayasaṃhitā, Uttarasthāna 39.3, Aṣṭāṅgasamgraha, Uttarasthāna 49.3, and Siddhayoga 69.4 also mention bloodletting as a cleansing method.

59 See Suśrutasaṃhitā, Cikitsāsthāna 27.3–4. Carakasaṃhitā, Cikitsāsthāna 1.4.36–37 also states the importance of cleansing the body prior to rasāyana treatment. Works that quote the Suśrutasaṃhitā’s comparison with dyeing a stained cloth include Aṣṭāṅgasamgraha (Uttarasthāna 49.4–5), the Siddhayoga (69.6) and the Cakradatta (66.2).

60 Rasahṛdayatantra 19.8.
None of the medical works warn of potential damage caused by *rasāyana* substances. This may partly be due to the nature of substances used: mercury is arguably more toxic than the classical medical *rasāyana* substances. The use of mercury as a *rasāyana* ingredient is attested relatively late in ayurvedic medicine, occurring first in a single recipe in the ca. seventh-century *Aṣṭāṅgahṛdayasamhitā* and *Aṣṭāṅgasamgraha*. Mercury is found more often as a *rasāyana* ingredient in later medical works, starting with the eleventh-century *Cakradatta*, but typically not as a central ingredient. Ideas concerning the need to purify substances before they are used medicinally enter medical works around the time the first alchemical works articulate the concept of purifying or perfecting (*śodhana*) mercury and other substances. However, it should be noted that even those medical works that refer to the various procedures for perfecting substances do not explicitly associate the procedures with making the use of mercury or other substances safe for medical use.

To return to the procedures outlined in the *Rasahṛdayatantra*, the cleansing of the body is followed with a period of regaining strength through taking various grain- and pulse-based liquids. From the text it appears that this is the moment in which the preparation of the body (*kṣetrīkaraṇa*) concludes. But what follows is a description of various deodar cedar oil preparations that might be understood to still be part of *kṣetrīkaraṇa*, either as an alternative to the preceding or as an addition. The first recipe (RHT 19.10–11) is attributed with first cleansing out the abdomen, and then effecting an increase in beauty and mental vigour and allaying all disease, until finally, the body becomes immortal (*amaravapus*) and endowed with great vital power (*mahātejas*). The second, slightly different recipe

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61 Note, however, the use of the poisonous leadwort (*citraka*) as a *rasāyana* substance in *Aṣṭāṅgahṛdayasamhitā*, Uttarasthāna 39.

62 *Aṣṭāṅgahṛdayasamhitā*, Uttarasthāna 39.36 and *Aṣṭāṅgasamgraha*, Uttarasthāna 49.392. See Dagmar Wujastyk 2013:18.

63 See Dagmar Wujastyk 2016 on the use of mercury as a *rasāyana* substance in medicine.

64 Procedures for purifying (*śodhana*) mercury are already described in the ninth-century *Kahjānakāroka*, and some procedures are also described in the eleventh/twelfth-century *Vaṅgasenasamhitā*, while the thirteenth/fourteenth-century *Śāṅgadharasamhitā* gives more detailed expositions on the topic. See Dagmar Wujastyk 2013.

65 The possibility of poisoning with unprocessed metals and minerals is first discussed in the sixteenth-century *Bhāvaprakāśa* in the “chapter on the rules concerning the purification and calcination of metals, etc.” (*dhātvādiśodhanamāraṇavidhiprakaraṇa*) in the *Pūrvakhaṇḍa*. However, even though various methods of processing mercury are described, there is no discussion on the properties of unprocessed mercury here.

66 *Rasahṛdayatantra* 19.9 reads: “Thus, one who is cleansed, who has become strong through boiled rice, barley grains and mung bean soup, and whose body has been prepared, should undertake *rasāyana* according to rule.”
(RHT 19.12) has less dramatic outcomes: it promises the cure of eye disorders. The third recipe (RHT 19.13) is for eliminating colds (pañasa), and also the group of skin diseases (kuṣṭha), while the fourth (RHT 19.14) details the use of deodar cedar juice with different carrier substances (either clarified butter, oil, jaggery or honey) to overcome diseases caused by each of the humoral substances.

Deodar cedar is not featured as an ingredient in any of the Sanskrit medical works’ rasāyana chapters, though it is already found in other contexts in the Suśrutasamhitā, Aṣṭāṅgahṛdayasamhitā and Aṣṭāṅgasamgraha.

After some dietary advice (RHT 19.15), instructions on which kinds of mercury should be consumed follow (RHT 19.16–20). These begin with “Afterwards” (tadanu), which may either refer to the dietary advice, or otherwise may indicate that the intake of mercury follows on from the use of the deodar preparations. In the Rasārṇava (18.9–10), the protracted use of deodar cedar is clearly followed by the intake of processed mercury. In the Anandakanda, deodar is featured in 1.6.25–26 as the last of the preparatory preparations before rasāyana with processed mercury (āroṭa) begins. In any case, Rasahṛdayatantra 19.18–20 (and also Rasārṇava 18.10) place the use of the mercurials in the context of kṣetrikarana again.

Here, we have another connection with medical literature. The Rasahṛdayatantra’s recipe reads thus:

मािकिशलाजतुलोहचूण€पμाÈिवडʾघृतमधुिभः।
संयुɫं रसमादौ Èेऽीकरणाय यु̥ीत॥
इित कҽीकृ तसूतं घनकाϿमधुघृतािदसंयुɫम ्।
भुɯामरतां ग˵े΃ेऽीकरणं ूधानिमदम ्॥

In the beginning, one should apply mercury mixed with chalcopyrites, shilajit, iron filings, chebulic and belleric myrobalans, false black pepper, clarified butter, and honey for the purpose of preparing the body. Thus, having eaten the mercury that has been made into a paste mixed with mica, iron, honey, clarified butter etc., he attains immortality. This is the best preparation of the body.

Compare this ingredient list with the recipe in Aṣṭāṅgahṛdayasamhitā, Uttarasthāna 39.161 and Aṣṭāṅgasamgraha, Uttarasthāna 49.392:

शिलाजतुलोहचूण€पμाÈिवडʾस
आपूय€ते ब€लदेहधातुिԖप̚राऽेण यथा शशाʰः॥

The depleted tissues of the body of one who eats shilajit, honey, false black pepper, clarified butter, iron, chebulic myrobalan, mercury, and pyrites are replenished within fifteen nights like the moon.

67 Rasahṛdayatantra 19.19–20.
The same wording appears in *Rasārṇava* 18.14 and in *Rasaratnasamuccaya* 26.13. In the *Rasārṇava*, it is followed by a recipe of mica and iron and various herbal ingredients and animal products. Using similar phrasing to *Rasahrdayatantra* 19.20, the *Rasārṇava*’s mica and iron recipe is then described as the best kṣetrīkaraṇa through which one would attain immortality. In the medical works’ version, mercury appears only as one of several ingredients, not as the main one, as in the *Rasahrdayatantra*. And significantly, the promised effects do not include the attainment of immortality. Also, the replenishment of the bodily tissues seems to be understood as an end in itself in the medical works, whereas both the *Rasahrdayatantra* and the *Rasārṇava* place the recipe within the context of readying the body through kṣetrīkaraṇa, implying a further step.

The next section of the *Rasahrdayatantra* is concerned with various mica (ghana, abhira, gagana) preparations (RHT 19.21–27) and mica and iron compounds (RHT 19.28–36), including one with a certain kind of processed mercury (āroṭa) applied in kṣetrīkaraṇa. Mica is presented as a substance that prolongs life: RHT 19.23 speaks of a person living for one hundred years. However, the treatise also warns of the detrimental effects of the wrong kind of or badly prepared mica, which would cause decrepitude and death. Mica with iron is said to remove obesity, various eye diseases, swellings, pain in the ears and nose, piles, haemorrhoids, urinary disorders and grey hair. Taken for a year, it wards off death and ageing. The section concludes with the following statement:

एषांमेकं योगं कश्चित्त्वा ऐरीकरणाथमािदतः कृ ताः। संवΨरमयनं वा निःौेयसिसुये योंम्॥

Having first made one of these compounds for the purpose of preparing the body, one should use it for a year or half a year for the attainment of ultimate bliss.

In medical literature, mica is first mentioned as a *rasāyana* ingredient in the *Cakradatta*, where it is used as part of the *Cakradatta*’s complicated *rasāyana* recipe for “immortality-essence iron” (*amṛtasāralauha*). In this context, the purification and calcination of mica are briefly described as involving maceration with herbal juices and sour gruels, baking in a pit, and bringing the mica to a glow over a fire and then dipping it in milk and washing it. This is already more complicated

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68 Rasārṇava 18.15ef: भुिा गच्चेदकर्तरं कश्चित्त्वा ऐरीकरणमुमुम॥ “Having eaten it, one would attain immortality. It is the best preparation of the body.”
69 See Rasahrdayatantra 19.32.
70 Rasahrdayatantra 19.36. The preparations alluded to are āroṭa with mica and two types of iron (RHT 19.35)) and mica with iron, mercury, gold and some organic substances (RHT 19.35).
71 Cakradatta 66.92–97. The complete procedure for making amṛtasāralauha is described in 66. 34–125.
than what is described in the *Rasahṛdayatantra* (19.21), which merely states that a pre-processed mica should be made red hot over a fire and then sprinkled with camphorweed (*surabhī*) and milk. The *Vaṅgasenasamhitā’s rasāyana* chapter has quite a long section on various mica preparations. However, there is no overlap at all with the *Rasahṛdayatantra*’s mica recipes.

The next section of the *Rasahṛdayatantra’s rasāyana* chapter (RHT 19.37–58) discusses what kind of mercury should be used for rasāyana, namely mercury that has undergone processing and has amalgamated with other metals and minerals; what kind of mercury ought not to be used (mercury amalgamated with poison, tin or lead); what happens if such mercury is eaten (skin diseases and trembling); the processes of mercury “digesting” other substances and how this relates to the dosage of the end product; the regimen and diet during the period the mercurial is taken; what happens if these rules are not followed; the symptoms of not being able to digest mercury (faintness, sleepiness, fever, burning sensations, sharp abdominal pain, apathy and destruction of the body); and how to treat the arising disorders.

Within this section, RHT 19.49 offers an interesting interlude, as it seems to describe mercurial-enhanced meditation practice that culminates in arriving at a state called “rasānanda,” “bliss of mercury”:

![Verse in Sanskrit](image)

He has become absorbed in the highest being. With a stilled mind, he has achieved equanimity. Controlling his breathing, having mastered the three goals, he has become completely content in the bliss of mercury.

**The Conclusion of the Rasāyana Process**

Finally, the successful intake of a mercurial elixir with sulphur and its outcomes are described (RHT 19.61–64). The effects include producing beautiful offspring, enhanced virility, rejuvenation, increased mental power and bodily strength, and prolonged life-span. There is a sense of gradual improvement over time. The conclusion of the *rasāyana* process is described thus:

![Verse in Sanskrit](image)

72 *Vaṅgasenasamhitā* 77.121–238.
The divine intelligence and divine qualities of one who has attained them grow further. (62cd)

One who has thus become fully perfected through mercury, who has left behind misery, ageing and death and is endowed with good qualities, continually roams all the worlds through moving in the sky. (63)

He will also become a giver and creator here in the triad of worlds, like the lotus-born; one who maintains [the world] like Viṣṇu; and a destroyer like Rudra. (64)

The chapter does not end here, but continues with recipes for several pills: a mercurial pill called “immortal beauty” (amarasundarī) for protection against weapons and diseases; a pill called “raising the dead” (mṛtasaṃjīvanī) against injuries, fear, grief, disease, ageing, unhappiness, and indeed, for raising the dead; three kinds of “diamond pill” (vajriṇīguṭikā), said to confer the strength of nine elephants, make the body indestructible and free it from death, ageing and disease;⁷³ and one “roaming the sky pill” (khecarīguṭikā), through which one would become “highly revered by gods, demons and perfected beings, beginning with Indra”.⁷⁴ All of these are either placed in the mouth or worn as an amulet.

ON THE STRUCTURE OF THE RASĀYANA PROCESS

As we have seen, the Rasahṛdayatantra’s rasāyana chapter shares a number of features with the rasāyana and dehavedha chapters of the other examined alchemical works, both in terms of general structure of the rasāyana process and the required conditions for it. All the examined works prescribe cleansing procedures that precede the intake of the elixirs, though there are significant differences in how much detail is given on how to proceed. Ānandakanda 1.6.4–26 gives the most detailed description of the applied procedures, presenting them as “five procedures” (pañcakarman) of stimulating digestion (pācana), oleation (snehana), sweating (svedana), emesis (vamana) and purgation (virecana), to which procedures for eradicating disorders associated with vitiated flavours are added.⁷⁵ The Rasaratnākara’s depiction of cleansing procedures (in Rasāyanakhaṇḍa 1.4–8) is

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⁷³ Rasahṛdayatantra 39.74: एष मुखतुरात्सुलतेन नवनागमुत्त्युमकम्। तत्रेषु दुमेष्यमुगुणसहितमुक्तम॥
⁷⁴ Rasahṛdayatantra 39.76cd: देवासुरिसूगणैः पूखुमो भवित चेरका॥
⁷⁵ Sweating and oleation are more typically considered preliminary treatments in ayurvedic texts, whose “five procedures”
comparatively brief, considering that the Rasāyanakhaṇḍa is the longest and most elaborate presentation of the subject of rasāyana with its 951 verses. It is similar to the Ānandakanda’s presentation of the subject (in 1.6.18–25) in that it specifies what the body is cleansed of, namely disorders due to salty taste (lonadosa), to sour taste (amladosa) and to all kinds of disorders (doṣa), categories that are not further explained. And finally, the Rasaratnasamuccaya’s rasāyana chapter does not set out a method of commencing rasāyana therapy with cleansing treatments, only very briefly referring to cleansing through “five procedures” in 26.44.

Most of the examined alchemical works also include the concept of “the preparation of the body” (kṣetrikaraṇa) in their presentation of rasāyana, a procedure that is not always clearly differentiated from the cleansing procedures, but that often includes the intake of mercurials, particularly a kind of mercury preparation called “āroṭa”. The concept of kṣetrikaraṇa deserves a study of its own, but here, it will perhaps suffice to note that the Rasahṛdayatantra associates kṣetrikaraṇa with a wide range of effects, including overcoming disease, getting rid of wrinkles and grey hair, prolonging life, or even attaining immortality in a physical body. And even further: As we have seen, RHT 19.36 claims that the described kṣetrikaraṇa preparations, taken for half a year to a year, eventually lead to the attainment of ultimate bliss. This suggests, therefore, that a substance used for kṣetrikaraṇa, and one used following kṣetrikaraṇa may be one and the same, the difference lying only in the amount of time they are taken. In any case, it is notable that the attainment of immortality is considered part of “preparing the body,” suggesting that it is not the final aim in the alchemist’s endeavour. The step beyond immortality would appear to be the attainment of for purification comprise emesis, purgation, two different types of enema and the use of errhines. The disorders mentioned in the Ānandakanda here are “disorders caused by saline flavour” (kṣāradoṣa) (1.6.20), “disorders caused by sour flavour” (amladosa) (1.6.21 and 23), worms (krimi) (1.6.24) and “all diseases” (sarvaroga) (1.6.26).

The Rasaratnasamuccaya does not mention kṣetrikaraṇa in its rasāyana chapter (chapter 26), but makes mention of it in 11.66 in the context of the purified mercury preparation called “āroṭa” as the most suitable “preparation of the body.” Similarly, the Rasārṇava (18.10–11) associates kṣetrikaraṇa with the intake of āroṭa, though also with a number of other mercurial preparations (see 18.16, 18–19 and 21). The Rasaratnākara’s Rasāyanakhaṇḍa makes a fairly clear distinction between cleansing procedures and kṣetrikaraṇa, as it describes cleansing procedures in chapter 1.4–8 and kṣetrikaraṇa (with mica) in chapter 2.2–3.

The concept of kṣetrikaraṇa is briefly discussed by White (1996: 270–271), where he states that kṣetrikaraṇa “refers to the preparation of the body for the medicines that will be absorbed in the treatment per se” in medical rejuvenation therapy. The source for this was a personal communication from Siddhinandan Misra (White 1996: 493, n. 33). However, it should be noted that the term does not occur in any of the rasāyana chapters of the Sanskrit medical works examined for this article.
a god-like status, as described in RHT 19.63–64. However, we also need to make note of the recipes for the various pills at the end of the chapter, which offer differing effects. These point to the possibility of multiple aims of alchemists rather than one single final aim.

Since the order of sequence is not always clear in the Rasahṛdayatantra’s presentation of rasāyana, one cannot always discern whether all of the described formulations should be taken one after the other, or whether some formulations are perhaps alternatives to each other. This is similar in the Rasārṇava’s eighteenth chapter. The recipes in the Rasaratnākara’s Rasāyanakhaṇḍa and in the Rasaratnasamuccaya’s twenty-sixth chapter seem to be alternatives to each other, rather than part of a multi-step process. In this, they resemble the rasāyana procedures described in the medical works, which describe the intake of a single tonic over a period of time. By contrast, the Ānandakanda (1.8) lays out a very clear course of action, with the intake of one elixir clearly following another in an established order. Whether they use a single or multiple formulations, both alchemical and medical rasāyana seem to happen over a sustained period of time, often with months or even years passing.

ON THE EFFECTS OF RASĀYANA

If we consider the various outcomes of rasāyana in the Rasahṛdayatantra and the other alchemical works, we can see quite different emphases. The Rasahṛdayatantra’s rasāyana leads to different outcomes that include longevity, strength, beauty, mental vigour, getting rid of wrinkles and grey hair, freedom from disease, and great vital power: These are all also found as effects of rasāyana therapy in the medical works. The more specific diseases mentioned include eye disorders (nay-anavikāra), including classes of eye disorders called patala, kāca and tīmīra, colds (piṇasa), serious skin diseases (kūṣṭha), diseases arising through disorders of the humoral substances wind, bile and phlegm (vāta, pitta, kapha), swellings (arbuda), ear and nose pain, piles (arśa), anal fistula (bhagandara), and urinary (meha) and spleen (plīha) disorders. All of these are also described in the medical works’ rasāyana chapters, with the exception of the kāca and patala classes of eye disorders (compare Table 3. in the Appendix). Generally speaking, the alleviation of diseases seems a minor concern in the Rasahṛdayatantra’s depiction of rasāyana, though it is featured in the context of kṣetrīkaraṇa to some extent. Similarly, the Rasārṇava’s eighteenth chapter mentions medical cures only in passing in verse 56, referring to a mercury-mica formulation as an agent for overcoming disease in general, strengthening the body and increasing semen production. Much more detail is given on diseases arising through the improper use of mercurials (verses 136–140). In the Rasaratnākara’s Rasāyanakhaṇḍa, disease is also hardly mentioned at all. Instead, the general focus is on rejuvenation and extreme longevity; cre-
ating a superhuman, invincible body that is extremely hard (dārḍhya) or like a diamond (vajrākāya); and attaining divinity or at least a comparable condition. In a very few instances, formulations are attributed with eradicating disease in general, and in three cases, with curing specific disorders. And chapters six and seven are devoted to re-establishing or enhancing virility and sexual stamina (vājīkarāṇa, vīryastambhana). While vājīkarāṇa/vṛṣya formally constitutes a separate subject area as one of the eight branches of Ayurveda, there is an increasing amount of overlap between medical rasāyana and vājīkarāṇa both in terms of aims and of formulations in later medical works.

The Rasaratnasamuccaya’s rasāyana chapter also emphasises the rejuvenative and life-prolonging effects of its formulations, but gives equal weight to their general health benefits, and several times mentions the eradication of diseases linked with ageing. Its fairly extensive list of specific disease groups tackled by its formulations includes serious skin diseases (kustha), wasting diseases (yakṣmagada), jaundice (kāmala and halīmaka), anaemia (pāṇḍu), swellings (sopha), constipation (ānāha), fever (jvarā), all kinds of urinary disorders (prameha), hiccups (hikkā), erysipelas (visarpa), abscesses (vidradhi), itching (kaṇḍu), falling sickness (apasmāra) and disorders connected to humoral imbalance. With the exception of itching (kaṇḍu), which is not mentioned in any of the medical works’ rasāyana chapters, all of these categories of disorders also occur in the early medical works’ rasāyana chapters. The Ānandakanda’s presentation of the rasāyana process, by contrast, contains little on the health benefits of its elixirs. There is one recipe for a mercury preparation that is attributed with eradicating all disease and preventing new disease from arising. Depending on the amounts of intake, this preparation is meant to increase semen production, strengthen the body, get rid of grey hair, enhance memory and eloquence, eradicate eye diseases, boost eyesight, prolong lifespan, become a second Śaṅkara, and live for a thousand, one hundred thousand, or ten million years. The focus of the Ānandakanda’s rasāyana is generally on the attainment of extreme longevity, or quasi-immortality, special powers, and godhood. Such outcomes are beyond what the medical works typically propose as an effect of

78 See Rasaratnākara Rasāyanakhanda 2. 121–127 for a formulation against “all diseases, ageing and death” (sāruṇaṇaśāmrāmṛtyu); 3. 197–220, especially verses 215–216 for a mercury formulation that cures serious skin disorders (kustha), paralysis, wasted limbs, and generally all diseases; or 4.90–91 for a decoction that acts as a vermifuge, eradicates “royal consumption” and unspecified other diseases (rājayakṣmaṇḍīroga).

79 See Dagmar Wujastyk 2016: 109–110.

80 Ānandakanda 1.6.44–49.

81 That is, attaining a condition of “Brahmahood” (brahmātva), or “Viṣṇu- hood” (viṣṇūtā), or “Śivahood” (śivatva), etc.
rasāyana therapy, though the Suśrutasaṃhitā’s rasāyana with soma or with divine plants go into a similar direction.

The Rasahṛdayatantra’s presentation of rasāyana depicts it as a process that includes preparatory therapies for cleansing the practitioner’s body internally; a procedure (or perhaps series of procedures) that further prepare the body for the intake of the most potent mercurial elixir; and the effects of these procedures, namely the transformation of the body. The transformation of the practitioner is described as a lengthy process that is drawn out over a period of time, rather than as something that happens in an instant after taking an elixir. While the Rasahṛdayatantra gives some recipes for the formulation of both preparatory medicines and mercurial elixirs in its rasāyana chapter, its rasāyana process does not include all the work that has to go in beforehand to prepare the raw materials. This is instead described at length in the preceding eighteen chapters. Therefore, rasāyana in the Rasahṛdayatantra does not encompass the metallurgical part of alchemical operations. The same is true for the descriptions of rasāyana in the other examined alchemical works, with the exception of the Rasaratnākara’s Rasāyanakhanda, which describes a series of mercury processing procedures in its first chapter. These, however, are very brief when compared with the elaborate processes of preparing raw materials described in the Rasaratnākara’s Rasakhanda.

While there are many similarities between the alchemical works’ presentations of rasāyana, there are also significant differences between them. Mainly, the larger compilations (the Rasaratnākara and the Anandakanda) include more detail on the procedures and give more recipes for rasāyana elixirs. The Anandakanda lays out a more clearly established programme for the intake of a series of elixirs during rasāyana than the Rasahṛdayatantra or Rasārṇava. In the case of the Rasaratnākara’s Rasāyanakhanda, the listed elixirs seem to be alternatives to each other rather than part of a programme of taking multiple formulations. The Rasaratnasamuccaya’s much shorter presentation of rasāyana echoes this.

3. CONCLUSION

There is some structural agreement between the alchemical works’ rasāyana with that of the medical works, as, for example, the methods of preparing for rasāyana with the internal cleansing of the body. However, medical rasāyana therapy seems to be a relatively more simple procedure as it is conceived as the application of only one rasāyana substance or formulation after the preliminary treatments. As noted above, two of the examined alchemical works seem to similarly describe a rasāyana process with one elixir, while the others advocate more complicated procedures with multiple elixirs during, and in some cases, after the kṣetrikarana process.

There is also a substantial difference in the kinds of formulations used for
rasāyana in medicine and in alchemy, though these differences get less pronounced over time with the increasing introduction of iatrochemical methods in medical works. While the earlier medical works mostly describe the use of herbal tonics for rasāyana therapy, later medical works (from the ninth/tenth century onwards) incorporate the inorganic and organic materials used in alchemical operations, and, perhaps even more significantly, also apply the methods for processing the new substances, albeit typically in a simplified form. However, mercury, the central focus of the alchemical rasāyana process, never becomes the main focus of medical rasāyana.

Finally, the probably greatest difference between medical and alchemical rasāyana lies in the expected outcomes from the “acts of improvement.” The multiple steps of alchemical rasāyana include outcomes similar to those listed in the medical works, such as rejuvenation, longevity, and health, but then go much further, extending the effects of rasāyana to the attainment of immortality and, beyond that, of godhood. While medical works standardly present rasāyana as a method of overcoming of ageing and disease (jarāvyādhī), alchemical works describe rasāyana as a way of overcoming ageing and death (jarāmṛtyu). The alchemical works’ phrasing of overcoming ageing and death is then found in later medical works, starting with the Vaiṅgaśenasamhitā.82

This would make it seem as if alchemical rasāyana were a kind of “rasāyana plus,” an improved and maximised rasāyana, with more elaborate procedures and outcomes that are just that much more spectacular due to the special element of alchemy, the mercurial elixir. But that is not quite right, or rather, there isn’t a linear development from mild tonic to extreme elixir. In a way, the alchemical rasāyana could be understood as a return to form, in that its outcomes are reminiscent of some of the earliest depictions of rasāyana in the very oldest medical treatises. Both the Carakasaṃhitā and Suśrutasaṃhitā describe quite extreme therapies with correspondingly extreme outcomes in the context of the use of soma or divine herbs. These elements become tempered or are left out entirely in the later medical works, starting with the Aṣṭāṅgahṛdayasaṃhitā in the seventh century. It is with these early rasāyana that I see the strongest correspondence with the rasāyana of the alchemical texts in terms of expected outcomes. Perhaps we can also make the argument that there is a parallel between the central rasāyana ingredients of soma and mercury.83 However, for all correspondences, the procedures developed in the alchemical tradition for processing mercury and other substances that precede the intake of the rasāyana elixir sharply differentiate alchemical rasāyana from the medical rasāyana of the oldest medical works.

82 See Dagmar Wujastyk forthcoming.
83 See White 1996: ch. 2 on the parallels between soma and mercury and their shared association with both semen and immortality.
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APPENDIX

List of diseases in the rasāyana chapters of different Sanskrit medical works.

*Carakasaṃhitā* (Cikitsāsthāna 1.1–4)
- arśa, atibalavāta, grahanājidoṣa (pl.), gulma, hikkā, ṣrīdṛga, jathara, kāsa, kṣaya, kuṣṭha, medhāsrutijñānahararoga (pl.), mūtraṣukrasthadoṣa (pl.), galāmaya, pāṇḍutā, piṇāsa, pipāsa, plīha, ṣopha, ṣoṣa, svāsa, śvitra, udara, utoroga, vāisvarya, vātabalāsaka, vātasaṁjñita, viṣamajvara,

*Suśrutasaṃhitā* (Cikitsāsthāna 27–30)
- apaci, apasmāra, arśa, bhūtagraha, chardayatā, galagandha, kṛmi, kuṣṭha, mahāvāyādhi, pāṇḍuroga, raktapitta, ślipada, ṣonita, ṣoṣa, svarabhedha, udara, unmāda, viṣamajvara

*Aṣṭāṅgahrdayasaṃhitā* (Uttarasthāna 39)
- arśa, atibalavāta, galagraha, grahada, grahaṇi, gulma, hidhmā, ṣrīdṛga, jvara, kāsa, kilāsa, kṛmi, kuṣṭha, medodoṣa, meha, mūtraṣukrastharoga (pl.), pāṇḍutva, pāṇḍuroga, plīha (pl.), prameha, ṣopha, ṣoṣa, sudustaravāta, svāsa, śvitra, nīkhalāṣṭha (pl.), viṣamajvara, unmāda, vāisvarya, vām, vātasaṁjñita, yaksan

*Aṣṭāṅgasamgraha* (Uttarasthāna 49)
- aktāndhyakacā, āmamarut, ānāha, āpaci, apasmāra, apatancaraka, arbuda, arman, arśa, ārtavadoṣa, āruci, āṣmari, atibalavāta (pl.), atikārśya, atisāra, atisthāulya, ayāma, bādhirāya, bhagandara, dantakarnasīroja, durnāma, duṣṭavāna, galagandha, galagraha, gandamālā, garodara, ghana, grahanī, granthi, gudaja, gude klīma, gulma, halimaka, hidhmā, ṣrīdṛga, jāḍhya, jāndha, jalojara, jathara, jvara, kāmala, kaphaja (pl.), kārśya, kāsa, kālsa, kṛmi, kṣaya, śiragra, kṛṣṭā, kuṣṭha, lūtākītākhusarpadaṣṭa (pl.), mada, madhumeha, mandānalta, manodoṣa, medodoṣa, meha, mukhagada, mūrcchā, mūtraṣukrāsrayadoṣa (pl.), niliroga (pl.), netraṣīr, pāṇḍutva, pīnasā, piṭaka, plīha, prameha, raktadōṣa, ślipada, ṣoṣa, ṣopha, sthaulya, sukradoṣa, svarabhedha, svāsa, śvayathu, sveda, śvitra, taṁmira, tamas, tvagvikāra (pl.), udara, unmāda, upalaghana, ursorbla, vāisvarya, vānaya, vām, vandhyatā, vārdhama, vātabhagna, vātakphāmaya (pl.), vātaroja (pl.), vātasaṁjñita, vidradhi, vitambikā, viṣamajvara, viṣarpā, vyānga, yakṛdroga, yaksman
Although the Vanigasenasamhitā enumerates a greater number of different diseases in its rasāyana section than the other works, it should also be noted that in this list given here, the difference
none

amlapitta, arman, arša, āruci, atisāra, dāha, dṛḍhaśūlayuktarakta, dosajvara, duṣṭaśukra, ghorā, grahaṇīgada, gudāṅkura, jīrṇajvara, kaṇḍu, krimi, kṣaya, kuṣṭha, kāṣaṇāsākṣimukhavaijātya, kāsa, kasana, katiṣṭula, klāibya, ḍava, kṣaya, kuṣṭha, mada, mūḍhagarbha, mūträghāta, mūtrakṛcchra, netraroga, paktiśūla, pāṇḍu, pāṇḍutā, pīnasa, prameha, pūtana, rājāśūla, rājāśūla, rājasāsākṣimukhavaijātya, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rājāśūla, rानंदकन्दा

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