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THE USE OF PRECIOUS STONES FOR THERAPEUTIC PURPOSES IN MEDIEVAL ANATOLIAN TURKISH CIVILIZATION: THE CASE OF THE RUBY

ORTAÇAĞ ANADOLU TÜRK UYGARLIĞINDA KIYMETLİ TAŞLARIN TEDAVİ AMAÇLI KULLANIMI: YÂKÛT ÖRNEĞİ

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Abstract

Alongside narratives of the rarity, beauty, and value of rubies, owning assets (e.g. state, power) has also been expressed in the literature on medieval Anatolian Turkish literature with reference to rubies. Ruby jewelry is a means of displaying wealth and splendor. However, the use of rubies in the field of medicine explains how this wealth signifies more than just owning a precious stone. Those adorned with jewelry made of rubies were protected against deadly diseases like the plague and malaria, resisted bouts of various chronic illnesses, and lived with a joyful heart. Rubies were believed to be an antidote against poisons, and in cases of poisoning, rubies were consumed as the applied medical method. In addition, wearing ruby jewelry was one of the precautions taken against poisonings. The affinity rulers, nobles, and the very wealthy had toward rubies is also linked to preserving health. Medicines prepared using rubies were employed to treat lung, spleen, and stomach diseases, as well as paralysis and epilepsy. Rubies are one of the most expensive materials used in medicine. Medicines made from rubies demonstrate the occurrence of a luxurious treatment, but the frequency of their use remains uncertain.

Key Words: Middle Ages, Ruby, Anatolia, Medical history, Turkish civilization.

Öz

Ortaçağ Anadolu Türk uygarlığı yazınında nadirlik, güzellik, kıymet anlatılarının yanı sıra mülk (devlet, iktidar) sahibi olmak da yâkûta müracaat ile ifade edilmiştir. Yâkût takılar zenginlik ve görkemin gözler önüne serilmesinin bir yoludur. Ancak yâkûtun tıp sahasında kullanımı bu zenginliğin sadece kıymetli bir taşa sahip olmanın çok ötesinde bir anlama geldiğini açıklamaktadır. Yâkûttan mamul ziyneti üzerinde bulunduran kişi salgın hastalıkların en tehlikelilerinden olan veba ve sıtmaya karşı korunuyor; kronik çeşitli hastalıkların ataklarını def ediyor, kalbi ve gönlü hoş bir şekilde yaşıyordu. Yâkûtun zehirlere karşı bir panzehir olduğuna inanılıyor, zehirlenme halinde yâkût yenilmesi tıbbî bir yöntem olarak uygulanıyordu. Ayrıca yâkût takı takmak zehirlenmelere karşı alınabilecek önlemler arasındaydı. Hükümdarların, soyluların veya çok zenginlerin yâkûta düşkünlüğünün bir sebebi de sağlığı koruması ile ilgilidir. Yâkût kullanılarak yapılan ilaçlar ciğer, dalak, mide hastalıkları ile felç ve epilepsi tedavisinde kullanılıyordu. Yâkût tıpta kullanılan en pahalı malzemeler arasındadır. Yâkûttan hazırlanan

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ilaçlar lüks tedavinin varlığını göstermektedir ancak ne sıklıkta kullanıldığı meçhuldür.

Anahtar Kelimeler: Ortaçağ, Yâkût, Anadolu, Tıp Tarihi, Türk Uygarlığı.

Introduction

Rubies were one of the most precious and sought-after gemstones of the Middle Ages. Adorning possessions worthy of rulers, various expressions of the value of the ruby are also found in Turkish works produced in different fields. For instance, rubies have been likened to signify the ideal color of a lover's lips in poetry. The poetic verse "*Şu resme ideler Türk ile cengi / Ki yakut ola yirün yüzü rengi*" (Sarı, 1994, 221) compares blood to the ruby due to its color. In descriptions of ideal beauty, cheeks are compared to the color of rubies, such that "The faces of heavenly women are as white as coral, and the redness of their cheeks is like the ruby" (Dişçi, 2015, 78; Kulaç, 2020, 309). Rubies are among the gravel stones of paradise (Erdem, 1992, 178). Ruby-adorned crowns, rings, bracelets, and necklaces, as well as tobacco pipes and even a beloved's lips have been likened to rubies in poetry (Şahin, 2005, 25). In stories that list precious stones, the occurrence of rubies in a dream has been interpreted to indicate becoming a sultan for members of the dynasty, or becoming wealthy and marrying a noble woman for non-dynasty members. A pregnant woman who dreams of rubies will have a son. However, a person who dreams of finding a ruby, buying one, giving one away, or seeing a fake/altered one is said to indicate a negative experience and to be associated with betrayal and unlawfulness. Additionally, seeing a ruby in a dream also signifies etiquette and knowledge (Türüt, 2019, 114).

When discussing the riches of state treasuries, sources mention rubies. They are employed not only in adorning buildings but also woven into carpets. For instance, a ruby was found among the precious stones that Ghaznavid Mahmud had acquired as spoils from India, and the narrative concerning the splitting of this gemstone between the sultan and his slave has been repeated in medieval Anatolian Turkish works (Şirvânî, 1999, 121). Ruby has also been used as a first name. Among the most prominent figures bearing this name from the Middle Ages are the geographer, historian, and traveler Yakut al-Hamawi (d. 1229), the calligrapher Yakut al-Mustasimi (d. 1299), and the founder of the Yakutiye Madrasa, Emir Cemâleddin Hoca Yakut al-Ghaznavi (d. c. 14th century).

This study uses written or translated Turkish works on medieval Anatolia as its sources. These works fall under the category of Old Anatolian Turkish and have contributed to the dissemination of knowledge in academic circles to broader audiences through the works of Muslim scholars being translated into Turkish. Medieval Anatolia was a period when translation and original composition activities highlighted not only the spoken aspect of Turkish but also its role as a language of science, and the prevalence of Turkish as a written language during this period has significantly contributed to the Turkification of Anatolia and the advancement of Turkish science and art.

1. Definition

What was the ruby of the Middle Ages? Did *yakut* [ruby] also refer to sapphire and turquoise? In addition to the red ruby, our sources also mention yellow and blue rubies. A true ruby is never blue. What is referred to as a *gökyakut* [sky ruby] undoubtedly refers to the stone now called a sapphire. Therefore, a solid definition of ruby for the medieval period must be established. The statements in the sources are

actually valuable guides for helping formulate this definition. Indeed, whether rubies or sapphires, they all derive from the Corundum mineral and come in red, blue, white, and yellow colors.

Muslim scholars' definition of the ruby is fundamentally based on Aristotle. This definition has been reiterated many times, with some additions having been made. Accordingly, three types of rubies are found: yellow, red, and blackish (which Muslim authors call *kuhli* and corresponds to sapphire). The most valuable and sought-after ruby is the red one. It becomes more beautiful and shines when exposed to fire. If the stone has red spots, these spots and their color spread throughout the entire stone when exposed to heat, which adds to its value. Meanwhile, black spots diminish under heat. The yellow ruby is less resistant to fire compared to the red one. As for the blackish variety, it is not resistant to fire at all but is entirely resistant to lime. According to al-Basri, a white variety of ruby also exists; the red oneis closer in terms of temperature than the blue and the white one is colder than it (Ibn al-Baithar, 1842, 591). The sources agree that the most precious form of ruby is the red-colored one and emphasize its resistance to fire by stating this gemstone to be heavier than lead and gold. In fact, while all other gemstones melt in fire, the ruby endures (Yılmaz, 1998, 213).

In the Middle Ages, advanced mineralogy techniques were lacking, which is why many similar stones are understood to have been referred to by the same name. Nevertheless, the logical explanations devised for their distinction are remarkable. The logical framework established for explaining the natural formation of rubies occurred in this context. Accordingly, heat plays a significant role in the formation of stones. Material with high heat would form a more valuable ruby, while low heat would form a ruby of moderate value. The natural formation of rubies was directly linked to sunlight and heat. In nature, some places receive direct sunlight without any obstacles. These areas receive both sunlight and sufficient heat, making them dry. In these dry areas, the substances that form are different in nature, taste, and color and come to somewhat resemble fire. If moisture reaches such a place, the heat and dryness disrupt it, causing evaporation with vapor rising into the air. At this very moment, if dryness the becomes dominant and prevails, the vapor formed from moisture cannot rise into the air and turns into stone. The thinness and narrowness of the veins of this formed stone determine the value of the ruby. The thinner and narrower veins the stone has, the more its essence and delicacy have been trapped and preserved, making it more enduring. Thus, a stone formed in this manner is a ruby. The essence of the ruby lies within it and includes its water, radiance, value, and brightness. In places such as this, moisture tends to persist, and in this case, if the influence of the sunlight's heat is exerted, not even a trace of moisture remains within the stone. The intense heat of the sun transforms the stone by boiling it. The ruby formed in this way is the most precious red ruby. The red color arises from heat and boiling. The degree of heat has a primary impact on the color and value of the ruby. When the heat is moderate, only a white ruby can form. Meanwhile, when conditions are highly favorable for the formation of a red ruby, if cold air suddenly influences it, only the interior of the stone can become red, while its exterior takes on a blackish color. The red color from the interior mixes with the black, creating a cerulean color known as the *gökyakut* [sky ruby]. Some also believe that cold air also plays an influential role under the conditions for the formation of a yellow ruby. According to this view, the interior of the stone remains yellow while the exterior takes on a blackish color. The expression of the inner color to the outside mixes yellow and black, also giving rise to the color

of the *gökyakut* (Şirvânî, 1999, 102–103).

Various records are found regarding the types of rubies and their colors, with mention also made of the subdivision of types into subgroups. For instance, according to Şirvânî (199, 106–107), there are four types of rubies, with red one being sought after, favored, and the most expensive. The red ruby is further divided into four subtypes. The first one is called *behramani* and is pure in color, clear, and reddish like the safflower, without any flaws or defects. According to Shams al-Din Belhi, the ruby is a gem similar to the color of the *gulnar* [red pomegranate] flower. The lower quality version of this color is referred to as *hamri*, and the high-quality version is known as *behramani*. The second type of red ruby is *remmani*. Its color is reddish like the sour pomegranate seed, pure, transparent, and radiant. Its radiance is akin to the flames of fire. Like the *behramani*, this type is highly valued and expensive. According to Hoca, *behramani* is the superior ruby, followed by *remmani*. According to Shams al-Din Belhi, *remmani* is better because it is precious and rare, with *behramani* coming second. According to Ebu Reyhan, they are the same, with the difference lying only in their names. Iraqis call it *remmani*, while Khorasan people call it *behramani*. According to Tifaşi, the preferred version of *behramani* is called *remmani*, with mid-quality *remmani* being called *behramani* and low-quality *remmani* being referred to as *versi*. The third type of red ruby is called *hamri*. Its color resembles that of wine and is slightly cloudy and mostly red. The higher quality of this is known as *erguvani*, and resembles the color of the redbud flower. The lower quality is better than the *verdi* type, and in terms of value and preference, this type comes after *remmani*. The fourth type of red ruby is called *verdi*. According to Hoca, its color is akin to the color of a red rose. According to Tigaşi, it resembles the color of *hiri* flower; the lowest-quality *verdi* tends toward white, while the highest quality is a pure red rose color. According to Hoca, the best red ruby is *behramani*, followed by *remmani*, then *erguvani*, *hamri*, and *lahmi* (similar to the color of fresh meat), and finally *halli*, the color of which resembles red vinegar.

The second type of ruby is the yellow ruby, which was highly favored and esteemed among Jews and Romans. According to Tifaşi, there are three types of yellow rubies. The first is called *rakiq* and is pure, watery, and radiant with a color resembling straw; it is not dark yellow. The second is called *huluki* and has greater color, radiance, water, rays, and clarity than the first type. The third is called *culnari* and has better color, water, radiance, rays, and delicacy than the other two, and thus has a higher price. According to Hoca, there are seven subtypes of yellow rubies. The first and finest is *mişmişi* and resembles the color of an apricot; the second is *mu'asfer* and resembles the color of a safflower leaf; the third is *narenci* and has the color of a bitter orange; fourth is *za'ferani* and resembles the color of saffron; fifth is *turunci* and is close to the color orange; sixth is *berrek* and is similar to the color of molten lead; and the seventh is *tibni* and resembles the color of straw (Şirvânî, 1999, 108).

The third type of ruby is the blue ruby, also known as *gökyakut*, and is divided into six subtypes. The first and most valuable one is called *laciverdi* [navy blue] and resembles the color of verdigris. The subtype similar to the color of the sky is *asumancuni*. *Kuhli* is favored due to its color resembling the pigment of the Surma stone from *Isfahan*. The fourth subtype is *nilî* and resembles the color indigo. The fifth subtype is *zeyti* and resembles the color of olives. The sixth resembles the color of roses and is referred to as *sinnevri* (Şirvânî, 1999, 109).

The fourth type of ruby is the white ruby and is also known as *ak yakut*. It has two subtypes. The first is *ma'i* and has abundant radiance and water. The second one has

less water, radiance, and rays; it lacks value and significance, resembles a crystal, and is the cheapest form of ruby. they looked at its weight and hardness to distinguish it from crystal (Şirvânî, 1999, 109).

According to Tifaşi, flawed rubies have cracks, fractures, fissures, or insects like worms inside the stone and are considered defects. Red or yellow rubies whose color tends toward white are also deemed defective (Şirvânî, 1999, 109–110).

A ruby can cut and drill all other stones, iron, and wood except other rubies, diamonds, and agate. A ruby can drill through stone by being fitted onto the tip of a drill. No stone's radiance, brilliance, and water can match that of the red ruby, except when it comes to the *behramani* and *remmani* types. The color of ruby remains unchanged in fire and does not deteriorate; in fact, its color and beauty increase. Actually, the best way to determine if a ruby is genuine is by subjecting it to fire. For instance, a red ruby might pale under the effect of fire but will regain its red color once removed from it (Şirvânî, 1999, 111).

Sources' explanation for how rubies form concerns the attempt at a scientific explanation for the reasons behind the formation and diversification of all stones. Essentially, all stones in their respective locations could potentially become a valuable gemstone, including a ruby. However, this requires no hindrances. If hindrances arise, stones transform into another type. Precious stones are achievable under suitable conditions. The appropriate conditions and hindrances were mainly determined by factors such as sunlight and moisture. In fact, when the sun shines on a mountain in a distant location where humans rarely go, the rays of valuable gemstones, including rubies, diamonds, and sapphires, can be visibly reflected to a certain extent. Thus, not only rubies but also other precious gemstones of the medieval era such as diamonds and sapphires may be found on such a mountain (Şirvânî, 1999, 102–103).

Other information provided by sources about the formation of rubies is related to beliefs and woven with myths. According to these myths, when Adam was expelled from paradise, he descended from a mountain and wept, and these stones were formed from his tears. Some say that Allah created these stones from the blessings of Adam's footsteps. The mountain is steep and inhabited by giant snakes that devour animals and humans, along with dense forests, making it impossible for anyone to climb. Only when there is a heavy downpour does the flood carry the stones downstream, and people search for them or leave meat at the foot of the mountain. *Kerkesler* are mythical vultures that would take the meat to their nests with stones stuck to them at the top of the mountain. However, during their quarrels over the meat, some *kerkesler* would end up with stones attached to the meat. To protect themselves, some *kerkesler* would carry the meat to the mountain base and consume it there; later on, people would come and collect the stones. This mountain is located forty leagues from the island of Serendib (Şirvânî, 1999, 104). Another version of the same narrative mentions that carnivorous birds take the meat attached to the stones and carry them to their nests high above, sometimes dropping the loads, with people being able to obtain rubies in this way (105). Another legend suggested that rubies could not be found anywhere on Earth, as what exists had been "removed from darkness" by Zulqarnain (106). In essence, these faith-based narratives about the formation of rubies are connected to the essence of Allah as the Creator. Allah created seven heavens, and the seventh heaven is made of red rubies. The sixth heaven, known as *Ruqyah*, is made of yellow rubies (Göl, 2008, 51).

2. Diseases and Their Treatment with Ruby

During the Middle Ages, various methods and materials are known to have been used for treating diseases. Ruby, in fact, was recommended as one of the materials to use in the treatment of various illnesses and was even considered the most expensive. Treating a disease with ruby was a luxury. The fondness of rulers and wealthy individuals for precious stones, particularly rubies, was closely related to their desire to maintain good health and to use them to treat diseases. From surviving written records, jewelry adorned with precious stones such as bracelets, rings, necklaces, and pendants are known to have been used to signify status, display sovereignty, or showcase nobility. "The price of a gold bracelet adorned with a red gemstone weighing fifteen mithqals could reach 90,000 dinars" (Bakır, 1997, 563). The crowns, thrones, and rings used by rulers as symbols of power were also decorated with precious stones (İbn Bibi, 1996, 381–382; Ahmedî, 1966; Merçil, 2007, 86–87; İndirkaş, 2002, 48–49; Küçükaşçı, 2013, 56). The instruments used to play the *naubat* (drum) during the proclamation of the rulers' authority were also embellished with precious stones to emphasize the grandeur of power (En-Nesevi, 1344 AH, 33). Among Turks, precious stones like turquoise and ruby are known to have not only been used in the aforementioned jewelry but to have also been traditionally worn on headbands and forelocks (Süslü, 2007, 152, 207).

The use of rubies in the field of health can be classified under two categories: preventive medicine and treatment. One of the most significant reasons for rulers' keen interest in rubies was the general scientific acceptance that wearing necklaces and rings made from this precious stone could protect against poisoning. Ibn Sina noted that ruby acted as an antidote against poisons (Ibn al-Baithar, 1842, 591). Wearing ruby as an ornament acted as a preventive measure against poisoning and could also serve as an ingestible remedy when poisoned (Buçukcu, 2017, 77). Poisoning was a major health concern during the Middle Ages. Bites from poisonous creatures like scorpions and snakes had caused the deaths of many individuals. Also, adding poisons to food and beverages posed a significant threat to rulers and prominent figures and was often used as a weapon for assassination. In addition, poisoning could also occur due to consuming mushrooms or spoiled food. Taking preventive measures and treatments using precious stones, including ruby and its use in creating antidotes, found its place even in classical Turkish poetry. According to these traditions, the *tiryak-i faruk* [syrup of distinguishing between good and evil], as based on Ibn Sina's description and involving the use of powdered precious stones, was believed to be an effective antidote that rapidly expelled toxins from the body. This belief was linked to a legend attributed to Hz. Ömer (Fidan, 2022, 174–175). Numerous herbal methods were also employed to treat cases of poisoning. Early Anatolian Turkish texts provide a range of herbal recommendations for various types of poisonings. These texts mention methods such as ingestion, topical application, or induced vomiting using remedies derived from plants recorded under names such as *anduc*, hazelnut, leek, Mary's palm, neem tree, and *badıranbu*, among others (Doğan, 2009, 153, 161, 173, 182, 328). The use of ruby as an antidote was considered both costly and effective compared to herbal solutions. However, access to such remedies was evidently limited to the very wealthy.

The presence of ruby as jewelry individuals wore has also been associated with various other health concerns. For instance, wearing a ruby necklace or ring was believed to protect against the plague (Ibn al-Baithar, 1842, 591). As is known, one of the most devastating epidemics during the Middle Ages was the plague and

known as *taun* in Anatolia. In early Anatolian Turkish sources, the most frequently mentioned epidemic diseases were *taun* and smallpox, which was described as "*gey katı issi veremlerdür* [tuberculosis with hard grey waste]" (Kaya, 2008, 416). Among its prominent symptoms are spots appearing under the armpits, thighs, and the back of the neck. The patient's skin color changes, heart palpitations begin, high fever occurs, and loss of consciousness is observed (Ibn Şerif, 2017, 306; Uçar, 2009, 143). The plague is deadly. In medieval Anatolia, thousands of people died during plague outbreaks. The main cause of these epidemics was often economic. Economic disturbances due to factors such as wars, droughts, and migrations led to rising costs. This economic hardship resulted in insufficient nutrition, even starvation and an inability to live under healthy conditions. Various methods were employed to combat the plague, including quarantines, medical treatments, and dietary recommendations. Various remedies were also attempted against the plague, such as burning incense made from plants with strong scents, collective prayers, and reading the Quran. These epidemics sometimes lasted for a few months, while at other times, they persisted for more than a year, causing hardship and claiming the lives of many Anatolian people (Arık, 1991, 31–57).

The most expensive method for protecting against epidemic diseases was to wear a ruby. The protective effect of ruby against the plague has been associated with the type of ruby. The most expensive variety, the red ruby, was also the most protective (Toprak, 2019, 77). Wearing a ruby ring was indicated to be effective against epidemic diseases and malaria (Yılmaz, 1998, 213). Early Anatolian Turkish sources mention a disease referred to as *ısıtma* [heating] and *hummâ* [pyrexia/fever]. This disease was described as "*bir harâretdür ısıtma kim yürekden kopar*" [an overheating that breaks away from the heart of one with heating] (Kaya, 2008, 384).

Wearing jewelry made of ruby was also considered protective against epilepsy and paralysis (Yılmaz, 1998, 213). This article's sources refer to epilepsy as *sara* with the phrase: "*Bu renc şöyle olur kim kişinün başı degzinürken gözi kararur çok olur kim düşer bir zamândan durur*" (Demir, 2010, 64), meaning *sara* is described as a condition where a person's head moves, their eyes roll back, and they fall for a period. Paralysis is described in these sources as *fâlic* with the sentence "*Kim kişünün bir yanı süst olur deprenmekden kalur*" (76) and as *sekte* with the phrase "*sekte bir rencdür kim kişi ansuzda düşer hîç ussı ve hareketi kalmaz nefes çıkmaz gibi olur*" (Demir, 76), indicating a condition where a person's side becomes stiff, they lose their sensation and movement, and their breathing becomes difficult.

Ruby also benefits the stomach and strengthens the heart (Aydın, 2016, 169). Ruby benefits the heart and refreshes the soul and the heart (Özer, 1995, 334). Wearing ruby jewelry brings comfort to the heart of the wearer and dispels doubts and anxieties (579). This article's sources define *hafakan* [palpitations] as "*yürek oynatmasıdur*" in reference to a complaint (Kaya, 2008, 323). Furthermore, ruby's positive contributions to human psychology have been associated with health. According to this belief, wearing ruby makes a person valuable in the eyes of the public (Buşukçu, 2017, 77).

Additionally, ruby is a hemostatic (Ibn Baytâr, 2017, 393). Wearing ruby jewelry is effective at combating blood clotting issues (Ibn al-Baithar, 1842, 591). Ruby cleanses the blood, strengthens the veins, and invigorates the heart (Şirvânî, 1999, 119). Applying ruby to a painful tooth alleviates pain (Doğan, 2009, 194). Ruby has been recommended for treating chronic diseases of the brain, stomach, liver, and spleen, as well as for treating chilblain, joint pain, and persistent fever (212). Furthermore, wearing ruby was believed to be able to enhance physical strength. It

was believed to increase the range of an archer's shot and hence was recommended to be worn on the wrist (Şirvânî, 1999, 114). Holding a good ruby in the mouth was also believed to alleviate thirst (İbn Şerif, 2017, 227). A connection was made between the color of ruby and diseases, with urine resembling the color of ruby to signify certain illnesses (Çetin, 2016, 160). According to the sources, red rubies have extraordinary effects, particularly when added to pastes. When added to eye medicines, it enhances the brightness of the eyes (Şirvânî, 1999, 119). Meanwhile, blue sapphire was recommended for ear ailments (Çetin, 2016, 175).

We have not come across any records indicating direct contact with human skin to be necessary when using ruby as jewelry. Ruby-adorned jewelry, typically made from precious and expensive materials like gold, serves as the gemstone of the accessory. When worn as a ring, bracelet, or necklace, the gemstone does not directly touch the skin. From this, one can infer that possessing a ruby and carrying it on one's person was deemed sufficient for protecting against illness and maintaining good health.

3. The Preparation of Rubies for Medical Use

Various techniques and auxiliary materials have been employed to transform ruby into a medicinal remedy. The applied techniques are generally similar to those used in preparing gemstones for medical purposes. Accordingly, methods such as grinding, pounding, soaking in water to soften, drying, kneading, sifting, and sieving have been used to obtain medicine from ruby (Okumuş, 1998, 220). Proponents were also found to recommend exposing ruby to fire before using it in treatments (Doğan, 2009, 212). When left untreated, a ruby has no shelf life. It retains its effectiveness no matter how long it is stored. However, ruby remains potent for 40 days once processed; it loses its efficacy when kept beyond 40 days due to its power diminishing (Okumuş, 1998, 220).

Preparing medicines from ruby is a meticulous and careful process, with the specifications of the tools to be used having been indicated. The fundamental technique is employed as follows: a ruby is pounded in a glass mortar until it becomes like flour. If a glass mortar is unavailable, a marble mortar can also be used. The ruby is then crushed and softened with water in a marble or glass mortar, then dried. It is crushed and softened again with water repeatedly until it becomes like powdered grain. Water is added to a ceramic bowl, and the ruby is ground until no soil or impurities remain, after which it is dried and stored for future use. For these steps, copper, bronze, or brass mortars or crushers are not used, nor are these materials used in the washing (Okumuş, 220). Ruby should be gently pounded. Pieces that rise to the top of the water are taken out, while those that sink to the bottom are gently pounded further. The ruby is then dried. Ruby prepared according to this final method can be added to refreshing beverages and consumed (Bereket, 2013, 122).

The likelihood of some of the various medicinal formulations using rubies having been used is low, or they might have been prepared very rarely. This is because they are exceptionally expensive and would strain the budget of an average medieval state. For instance, one of these formulations, known as *yakut-u müferreh*, has been described but might not have been extensively utilized. This preparation is said to be effective against brain, stomach, and heart weakness, anxiety, various chronic illnesses, and joint pain, and it requires the use of red rubies. Ruby is not the only precious stone used; along with ruby, materials like agate, gold, silver, tin, and others have been

included in the preparation process for various reasons, either to enhance the effect or for the application of certain techniques. Other substances added to this formulation include *gârîkun*,[1] *eftîmun*,[2] *fülfül*,[3] *zencebîl*,[4] *karanfûl*,[5] *merzencûş*,[6] *hacerü'l-ermenî*,[7] *hacer-i laciverdî*,[8] *milh-i nebtî*,[9] *zurunbâd*,[10] *durunc-ı 'akrebî*,[11] *behmen-i ahmer*,[12] *lisân-ı sevr*,[13] *sünbül-i rûmî* (*nârdîn*),[14] *hamâmâ*,[15] *vecc*,[16] *sâdec-i hindî*,[17] *dârçîn*,[18] *sa'ter*,[19] *hâşâ*,[20] *zûfâ*,[21] *zîre*,[22] *mürr*,[23] *kündür*,[24] *za'ferân*,[25] *fülfül-ü ebyad*, and honey (Doğan, 2009, 212). These ingredients go through various stages and are added at the appropriate times during the laborious preparation process.

One of the medicinal preparations made from rubies is also called "cevaşir-i yakuti." It is described as beneficial for all strengths. In addition to ruby, the formulation includes various herbs and precious stones such as *ak sandal*,[26] *kızıl gül*,[27] *sünbül*, *kuru kişnic*,[28] *behmen*, *badrenbûya*[29] *tohumu, kâkula*,[30] carnation, and saffron, as well as valuable stones like agate, pearl, and turquoise. The composition, to which apple cider is added as a liquid, also uses *ebrişim* and *güllab* (Hızır, 1999, 196).

Pastes also hold an important place among the remedies in which rubies are used. For instance, the *macun-u nafi* was considered a greatly valuable and emphasized for its numerous benefits. Materials such as carnation, ginger, pepper, hyacinth, *hâvlincân*,[31], *lisanü's-sevr*, *ferencmüşk*,[32] *deliksiz inci*, *agac kavunu kabuğu*,[33] saffron, amber, and musk were utilized along with red ruby when preparing this paste. These ingredients had to be crushed, sieved, and finely powdered, after which it was mixed with pure honey and ready for use. This paste was consumed with food, preferably

1 *Laricifomes officinalis* and *Pleurotus dryinus*.
2 *Cuscuta epithymum*.
3 *Piper longum* and *Piper nigrum*.
4 *Zingiber officinale*.
5 *Syzygium aromaticum*.
6 *Origanum majorana*.
7 *Lapis armeniacus*.
8 *Lapis lazuli*.
9 *Vitriolum*.
10 *Zingiber zerumbet*.
11 *Doronicum grandiflorum*.
12 *Limonium narbanonse*.
13 *Anchusa azurea*, *Borago officinalis* and *Caccinia macranthera*.
14 *Valeriana celtica*.
15 *Amomum subulatum*.
16 *Iris pseudacorus*.
17 *Cinnamomum tamala*.
18 *Cinnamomum verum*.
19 *Origanum vulgare* subsp. *viridulum*, *Satureja thymbra*, *Origanum onites* and *Thymus teucrioides*.
20 *Thymbra capitata*.
21 *Hyssopus officinalis*.
22 *Cuminum cyminum*.
23 *Commiphora myrrha*, *Commiphora habessinica* and *Commiphora erythraea*.
24 *Boswellia papyrifera*, *Boswellia sacra*, *Boswellia serrata*, *Boswellia frereana*, *Boswellia dalzielii* and *Boswellia odorata*.
25 *Crocus sativus*.
26 *Santalum album*.
27 *Rosa gallica* and *Rosa × damascena*.
28 *Coriandrum sativum*.
29 *Melissa officinalis*.
30 *Elettaria cardamomum*.
31 *Alpinia galanga*, *Alpinia officinarum* and *Kaempferia galanga*.
32 *Clinopodium acinos*.
33 *Citrus medica*.

warm and moist dishes like lamb soup, sparrow, or pigeon meat (İbn-i Şerîf, 2017, 163).

This article's sources often specify the quantities for the materials used. While medieval weight measurements such as the *miskal* [~4.639 grams], *danik* [0.708 grams], and *dirham* [3 grams] were used for some materials, ratios are expressed other times in terms of the previous material's portion during the preparation stages. For instance, the recipe for a *soğuk müferrih* uses six dirhams of flawless pearl and one dirham of *mersin yemişi* [myrtle fruit] while also stating the need for one *miskal* of *kara helile* (an aromatic substance). This recipe calls for one dirham of red ruby. Quantities can be observed to be expressed as whole numbers or fractions. In addition, precise units like one half, one quarter, one sixth, and one third were used in recipes to indicate material proportions, with how many times one material should be used being occasionally noted in comparison with another material. When describing the medication dosages, the recipes also provide guidance. For example, the recommended dosage for *macun-ı nafi* and *yakut-ı müferreh* is one *miskal*. The amount of *soğuk müferreh* that should be taken was three dirhams. Another composition referred to as *beylere has* also had a recommended dosage of one miskal (İbn Şerîf, 2017, 217).

Conclusion

This study has provided information about the definition and value of the *yakut* [ruby] in the context of medieval Anatolian Turkish civilization, along with historical uses of ruby for medicinal purposes. Although four types of rubies are known in the context of medieval Anatolian Turkish civilization, the significance, demand, and medicinal properties of the red ruby variety were emphasized to surpass the other three types. According to this study's findings, the red ruby was incorporated into various medical formulations through techniques such as grinding, pounding, soaking in water, drying, and sifting. Moreover, wearing red ruby as a ring or bracelet was highlighted to not only offer protection against various diseases but to also impart physical prowess.

Conflict of Interest Statement

The author declares no conflict of interest with any institution or individual within the scope of this study.

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