

## Medieval recipes about toothpastes by Abulcasis

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**Abstract:** Abulcasis Al-Zahrāwī (c.936-c.1013) is a very important physician of Al-Andalus, besides an eminent surgeon, the first one of Medieval Islam. His main work, titled *Kitāb al-Taṣrīf* (Book of medical arrangement), contains in its 19<sup>th</sup> treatise, which deals with cosmetics and drugs for health and embellishment of body, interesting recipes of a great value to the diverse scientific fields, such as the pharmacology, dentistry dermatology, cosmetics and aesthetic medicine. This article is an approach to the study of the treatise above mentioned, and includes the translation from Arabic to English of some recipes about toothpastes, according to the 5774<sup>th</sup> Arab manuscript of the National Library at Paris.

**Keywords:** Abulcasis Al-Zahrāwī, *Kitāb al-Taṣrīf*, Medieval Arabic Science, Dentistry, Aesthetic Medicine

### INTRODUCTION

The Cordovan Abulcasis Al-Zahrāwī (c.936-c.1013) [1] is one of the most important physicians of Al-Andalus, besides an eminent pharmacist and surgeon, the first one of Medieval Islam [2].

The importance of Abulcasis is restricted not only to the history of Arabic science [3], but also to the history of the universal scientific knowledge, due to his influence in the European scientists until early the 17<sup>th</sup> century [4].

In the field of pharmacology, which this article mainly is about, Abulcasis is certainly one of the most outstanding representatives of Islamic science, for his achievements in pharmacy and pharmacopoeia [5]; and in the field of dentistry, which this paper also deals with, he takes a high place, for his advances and discoveries, such as the dental filling technique he already used late the 10<sup>th</sup> century and early the 11<sup>th</sup> century [6].

The 19<sup>th</sup> treatise of his main work, titled *Kitāb al-Taṣrīf* (Book of medical arrangement), deals with cosmetics and drugs for improvement and embellishment of body [7]; and, among other things, it contains in the 5<sup>th</sup> chapter interesting recipes for health and dental care of a great value to both the fields of pharmacology and dentistry, as well as to aesthetic medicine.

### The 19<sup>th</sup> treatise from the *Kitāb al-Taṣrīf*

The *Kitāb al-Taṣrīf*'s 19<sup>th</sup> treatise is contained in folios 74v<sup>o</sup> - 92r<sup>o</sup> of the 5774<sup>th</sup> Arabic manuscript from the National Library at Paris. It is an interesting manual of both aesthetic medicine and cosmetics about perfumes, drugs and remedies for the body health as well as for its improvement and embellishment.

Reading this handbook allows to reconstruct the aesthetic canons of Arab society in the late 10<sup>th</sup> and early 11<sup>th</sup> centuries, as well as indicates the interest showed by this society in hygiene, beauty, ornament and perfume, and how these factors are closely connected to body health, characteristics all of them still in force in today's society, eleven centuries later. For example, then the tooth whitening was so recognized, and so excellent toothpastes and other remedies for getting whiter teeth are described.

This treatise has great pharmacological value and is divided into two sections:

Section I: About perfumes. It is divided into ten chapters.

## Medieval recipes about toothpastes by Abulcasis

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Section II: About drugs and remedies for the body health as well as for its improvement and embellishment. It is also divided into ten chapters.

The 5<sup>th</sup> chapter of the section II (folios 86r<sup>o</sup>-f<sup>o</sup>88r<sup>o</sup>) is about drugs and remedies for health and dental care, and includes seventeen medieval recipes, valuable for history of pharmacology and dentistry. This chapter, as the rest of the book, incorporates many quotes to other outstanding authors, such as Ishāq b. 'Imrān (tenth century) [8], Al-Rāzī (865-925) [9], Ibn Māsawayh (d.875) [10]; etc.

The translation to English of some recipes about toothpastes, according to the 5774th Arabic manuscript of the National Library at Paris, can be seen below.

### Recipes of toothpastes for health and dental care

#### 1. *Recipe of a toothpaste to whiten teeth and perfume breath* [f<sup>o</sup>87r<sup>o</sup>]

You take borax, halcyon and rock salt, from each, 1 *mithqāl*; and ½ *mithqāl* of saffron. You crush everything and use it as a toothpaste. This remedy certainly cleanses and whitens teeth, and also perfumes breath.

#### 2. *Recipe of pills to whiten teeth and perfume breath* [f<sup>o</sup>87v<sup>o</sup>]

You take peeled China ginger, dried grapefruit peels, camphor and saffron, from each, 3 *dirhams*. You crush everything, knead it with rose water, and with this make some pills same size as chickpeas. The pills are left to dry in the shade, then you take and use them, if the Almighty wants.

#### 3. *Recipe of a toothpaste written by Ishāq b. 'Imrān to clean and whiten teeth as well as to perfume breath, and prevent and stop pyorrhea* [f<sup>o</sup>87v<sup>o</sup>]

You take rock salt mixed with honey burnt and later slaked with rose water, and also barley flour kneaded with wine and slaked with rose water, from each 20 *dirhams*; 10 *dirhams* of halcyon; 5 *dirhams* of Chinese cinnamon, licorice, *sukk*, and sedge; 3 *dirhams* of Indian wood, pomegranate flowers and myrrh; and 2 *dirhams* of clove, fennel and Indian spikenard. You crush everything, sieve it and use it as a toothpaste. For those who have a hot physical constitution, it can be added 1 *dirham* of camphor, and this will be beneficial.

#### 4. *Recipe of a toothpaste to clean and whiten teeth, as well as to perfume breath* [f<sup>o</sup>87v<sup>o</sup>]

You take burnt myrobalan, snail burned, burnt vine sticks and burnt goat hoofs, from each, 4 *mithqāls*; alcyon, faience and pumice, from each, 3 *mithqāls*; burnt deer horn, burnt date pit and bamboo manna, from each, 2 *mithqāls*; and *rāmik*, pomegranate flowers, rose seed and sumac, from each, 1 *mithqāl*. You crush everything, knead it and use it as a toothpaste in the morning. This extraordinarily whitens teeth, God willing.

#### 5. *Recipe of a toothpaste to clean, whiten and polish teeth, as well as to remove dental stains* [f<sup>o</sup>87v<sup>o</sup>]

I [Abulcasis] have already tested. You take faience, nitre burned, burnt cow hoof bone, burnt goat horn and coral burned, from each, 10 *dirhams*; 5 *dirhams* of pumice; 3 *dirhams* of licorice; 2 *dirhams* of pomegranate; and 1 *dirham* of spikenard, nitre, Yemeni alum and costus. You crush everything, sieve it and use it as a toothpaste. It is beneficial, God willing.

### Glossary: Weights, measures and remedies

1 *Dirham*= 3,12 grams

1 *Mithqāl*= 4,68 grams

*Rāmik*, in Arabic: It is a medicine made up dye gall, raisins, myrobalan and olive oil. If musk is added, it is named as *Sukk*.

### Conclusion

The pages translated in this article exemplify the high level achieved by Arab scientific knowledge in the Middle Ages, and certify the importance of Abulcasis Al-Zahrāwī in the history of Islamic science. His work *Kitāb al-Taṣrīf* is in a high-ranking place within surgery, medicine and pharmacology of Al-Andalus. For the influence exercised in Europe until the early 17<sup>th</sup> century, among other reasons, Abulcasis has a very relevant position in the history of both universal culture and science.

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