

## BIBLIOGRAPHIC INFORMATION SYSTEM

**Journal Full Title:** [Journal of Biomedical Research & Environmental Sciences](#)

**Journal NLM Abbreviation:** J Biomed Res Environ Sci

**Journal Website Link:** <https://www.jelsciences.com>

**Journal ISSN:** 2766-2276

**Category:** Multidisciplinary

**Subject Areas:** [Medicine Group](#), [Biology Group](#), [General](#), [Environmental Sciences](#)

**Topics Summation:** 133

**Issue Regularity:** [Monthly](#)

**Review Process:** [Double Blind](#)

**Time to Publication:** 21 Days

**Indexing catalog:** [IndexCopernicus ICV 2020: 53.77](#) | [GoogleScholar](#) | [View more](#)

**Publication fee catalog:** [Visit here](#)

**DOI:** 10.37871 ([CrossRef](#))

**Plagiarism detection software:** [iThenticate](#)

**Managing entity:** USA

**Language:** English

**Research work collecting capability:** Worldwide

**Organized by:** [SciRes Literature LLC](#)

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SHORT COMMUNICATION

# What Does Garlic Smell Like?

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Garlic (*Allium sativum*) is an old cultivated plant that has been used by man for millennia for its extraordinary taste and great healing power [1]. The earliest records of the use of garlic come from Egypt. The ancient Egyptians were well aware of its healing properties and ate garlic in large quantities. A Papyrus from 1600 BC depicts a strike by workers working on the construction of the pyramid, protesting that they were not given garlic. The well-known Ebers papyrus, a collection of medical prescriptions 3500 years old, mentions the use of garlic in many diagnoses such as heart weakness, headache, intestinal parasites, eczema, gynecological problems, etc. [2]. The ancient Greeks and Romans also highly valued garlic as a medicinal vegetable. They were convinced that garlic cures coughs and clears the lungs of phlegm and pus. Doctors in China and India consider garlic to be a versatile medicine, treating everything with it: from colds to "aging" [3]. Garlic was first subjected to scientific investigation by Louis Pasteur in the mid-19th century when he studied its bactericidal effects [4]. Since then, garlic has been the subject of constant interest for many researchers.

Garlic has a characteristic pungent smell, which is caused by the content of a number of volatile substances that contain sulfur in their molecule (alliin, allicin, diallyl sulfide, diallyl disulfide, diallyl trisulfide, ajoenes, and others) [5]. These substances have a sharp, irritating smell that spreads long distances [6]. However, many people appreciate garlic not only for its aroma but also for its delicious taste and many positive health effects. The smell of garlic can be powerful and lasts a long time, so many people like it, while others may find it unpleasant.

Garlic also contains several organic selenium compounds that are also biologically active and have potentially beneficial effects on health [7]. It is mainly selenomethionine and selenocysteine [8]. Selenocysteine is found in trace amounts in some proteins and in the body and plays an important role in antioxidant processes. Selenium is an important element for protecting cells from oxidative stress and supporting the proper functioning of the immune system [9], but the amount of selenium in garlic is relatively small.

Another chalcogen, tellurium, was also found in minute amounts in

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**Email:** toxicology@toxicology.cz

**DOI:** 10.37871/jbres1803

**Submitted:** 13 September 2023

**Accepted:** 19 September 2023

**Published:** 21 September 2023

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**OPEN ACCESS**

BIOLOGY GROUP

BIOCHEMISTRY

VOLUME: 4 ISSUE: 9 - SEPTEMBER, 2023



garlic. This metalloid is often used in industry due to its unique chemical and physical properties [10], but information on its presence and biological activities in plants and animals is very limited. It is expected to be rather toxic. Using HPLC coupled with Inductively Coupled Plasma Mass Spectrometry (ICP-MS) or Electrospray Tandem Mass Spectrometry (ESI-MS-MS), methyltellurocysteine oxide and cysteine S-methyltellurosulfide were detected in garlic [11].

## Acknowledgement

This work has been supported by the Project of Grant Agency of Czech Republic N<sup>o</sup> GA22-07635S.

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**How to cite this article:** Patočka J, Havel J, Peña-Méndez EM. What Does Garlic Smell Like? *J Biomed Res Environ Sci*. 2023 Sep 21; 4(9): 1346-1347. doi: 10.37871/jbres1803, Article ID: JBRES1803, Available at: <https://www.jelsciences.com/articles/jbres1803.pdf>