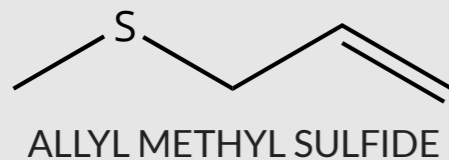
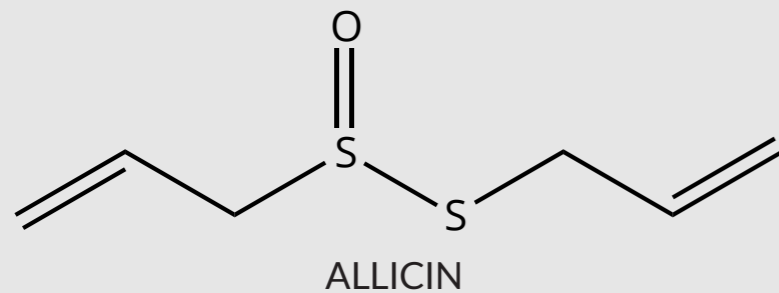


THE CHEMISTRY OF GARLIC

WHAT CAUSES GARLIC BREATH?



There are four major volatile organic compounds responsible for 'garlic breath': diallyl disulfide, allyl methyl sulfide, allyl mercaptan, and allyl methyl disulfide. None of these compounds are present in garlic until it is crushed or chopped.

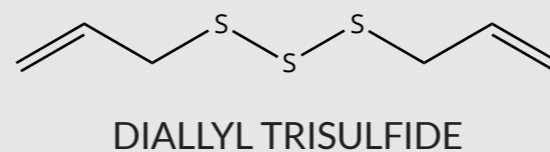
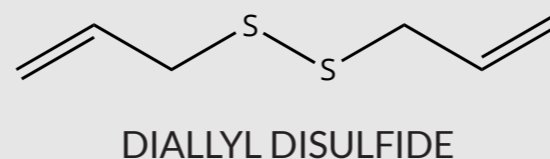
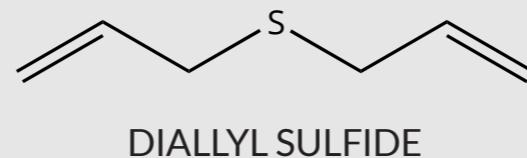
When garlic is mechanically damaged, enzymes convert the compound alliin to allicin (which gives chopped garlic its aroma). This is then broken down further into the afore-mentioned volatile compounds.

Allyl methyl sulfide is broken down in the body more slowly than the other three compounds, so it is the primary volatile responsible for garlic breath. It can pass into the bloodstream & organs, and is excreted via sweating, breathing, and through the urine. Its effects can last up to a day!

A few foods have been shown to have some effect on reducing garlic breath, including parsley & milk.



WHAT GIVES GARLIC ANTIBACTERIAL PROPERTIES?



Sulfur-containing organic compounds give garlic some antibacterial properties. Antimicrobial effects have been shown to increase as the number of sulfur atoms in the compounds increases.

The organosulfur compounds can penetrate the cell membranes of bacteria cells, and combine with certain enzymes or proteins to alter their structure, injuring the cells.

Allicin, formed initially when garlic is crushed, also has antibacterial properties.