



## Try heat, drying if fresh garlic turns ct

**When I crush a fresh garlic clove and spread it on a piece of fish or meat and put it in the oven to bake, the crushed garlic turns bluish-greenish. Why does this happen? Can I prevent it?**

The ability of garlic to turn those surprising hues can be caused by a number of things. They all can be traced to the fact that garlic is rich in powerful sulfur-containing compounds, including thiosulfinates, sulfoxides and dithiins. The sulfur is responsible for garlic's pungent odor and is likely the reason for the reaction you see.

One of the best explanations we've seen for this reaction comes from Linda Stradley on her Web site, "What's Cooking America" (<http://whatscookingamerica.net>). Stradley explains it this way: Garlic's sulfur compounds can react with copper to form copper sulfate. And what color is copper sulfate? You guessed it — it's a blue or blue-green compound. The amount of copper needed for this reaction incredibly small — the amount you might find in normal water supplies.

Copper is a trace mineral, and as such it might also be found in the fish or meat you're cooking. Or it might be in the pan or utensils you're using.

The reaction is caused by an enzyme, also in the garlic, that allows the reaction between sulfur and copper to occur. The enzyme can be inactivated with heat, before the sulfur and copper come into contact.

Blanching the garlic — quickly heating it for about 30 seconds in boiling water and then cooling it ice water — could prevent the reaction from occurring. Or you might try a quick saute instead — it might be easier. Experiment to see what works best.

Another potential cause is a reaction with acid. The "What's Cooking" site explains that if fresh garlic is picked before it is fully mature and hasn't been properly dried, it can turn an iridescent blue or green color when exposed to an acid, such as lemon juice. The site recommends that if you grow your own garlic, be sure to mature it at room temperature for a couple of weeks before using it. Another food specialist, this one at North Carolina State University, recommends storing freshly picked garlic bulbs in warm, dry air (between 70 to 80 degrees F) to prevent the green/blue-green pigments from appearing.

If you don't mind the color, don't worry — the garlic is still safe to eat. And keep in mind: Those same sulfur-containing compounds that are causing you grief are also the source of many of garlic's health-promoting effects. Garlic appears to help against heart disease and many types of cancer, as well as have some anti-inflammatory, antibacterial and antiviral effects. So don't let its hue get you blue — keep enjoying garlic as much as you wish.

*Chow Line is a service of Ohio State University Extension and the Ohio Agricultural Research and Development Center. Send questions to Chow Line, c/o Martha Filipic, 2021 Coffey Road, Columbus, OH, 43210-1044, or [filipic.3@cfaes.osu.edu](mailto:filipic.3@cfaes.osu.edu).*



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