



How to store oil is a controversial topic

I read on an Internet site that vegetable oil should be refrigerated after opening, but I've never done this and I've never had a problem. Should I start?

The ideal storage conditions for most vegetable oils — such as corn, canola, soybean, olive and similar oils — would be in airtight containers in a darkened location that's generally cooler than room temperature but warmer than in a refrigerator. A wine cellar would do the trick, but not too many of us have one of those. That's why it's easy to find different storage recommendations from different experts on the Internet and elsewhere.

The problem stems from oil's susceptibility to air, light and heat, any one of which could cause it, over time, to become rancid.

Rancidity itself is an interesting phenomenon. Usually caused by oxygen, and boosted by heat and light, rancidity is the process of molecular reactions in fatty acids. Unsaturated fats are more susceptible to rancidity because of their chemical structure. Indeed, the term "unsaturated," chemically, means that not all of the carbon atoms on the fatty acid chain are paired with hydrogen atoms. (Saturated fats are more shelf-stable precisely because all of the available carbon atoms are "saturated" with hydrogen atoms.) The unpaired carbon atoms in

unsaturated fatty acids are vulnerable to oxygen and other reactive molecules, which literally can start a chain reaction that, eventually, deteriorates the fatty acid chain and causes off-flavors to develop. That's what we know as rancidity.

Generally, unopened vegetable oils should store just fine at room temperature for six to 12 months, or perhaps longer. Once they're opened, try to use them up quickly, anywhere from one to six months. When you use oils that have been stored for a long time, take a whiff. If you don't like the smell, you won't like the flavor, either. Time to buy new.

If you don't use oils very much and want them to last as long as possible, by all means store them in the refrigerator. You will probably see some cloudiness develop (don't worry — that's normal), and some oils, such as olive oil, may become too thick to pour until you they get back up to room temperature.

If you don't want to go that far, you can help oil last longer if you make sure it's in a tightly sealed container (protecting it from air) and stored inside a cupboard (protecting it from light) that's not near the stove, dishwasher or refrigerator (protecting it from the heat those appliances generate).

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.



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