

Turkey Chemistry

Brining Your Bird

Want your bird to be juicy and tender when it's time to carve? Give it a brine bath before popping it in the oven. Brining in cold salt water or broth causes a chemical process called osmosis. Initially, the moisture in the bird is drawn out into the salty mixture. But then the reaction reverses with water moving into the turkey meat. That means a moist, delicious bird once it's out of the oven.

Browning Your Bird

Part of a beautiful bird is golden brown skin. To give it that nice finish, add some apple juice to your brine mixture. A solution of sugar in the apple juice reacts with heat, and causes browning. It's known as the Maillard reaction. The juice also gives your turkey skin a light apple flavor. If that's not for you, regular sugar in your brine works too.

Time for Turkey

Before you eat, you have to be sure your bird is done. If you buy your turkey from the grocery store, chances are it has a pop-up timer. The timer contains a small drop of a metal alloy, a mixture of metals that melts at 180 degrees Fahrenheit, the safe cooking temperature for turkey. When the metal melts, the spring-loaded peg pops up, letting you know it's chow time.

Tryptophan – Myth Busted

People like to blame a compound in turkey called tryptophan for feeling sleepy after the big Thanksgiving dinner. The truth is, it's not that molecule that tires you out. Although the body uses tryptophan to produce serotonin, which helps you feel relaxed, there's simply not enough tryptophan in turkey to make you drowsy. Chances are it's the high amount of carbohydrates you eat during that massive meal that makes you sleepy.

Sources:

<http://www.washingtonpost.com/wp-dyn/content/story/2008/11/18/ST2008111801402.html>

<http://www.seriousseats.com/2012/11/>

[the-food-lab-the-truth-about-brining-turkey-thanksgiving.html](http://www.seriousseats.com/2012/11/the-food-lab-the-truth-about-brining-turkey-thanksgiving.html)

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