** This news release from K-State Research and Extension is available online at https://ksre-learn.com/food-safety-holiday-candy

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K-State food scientist says holiday candy can be a science experiment

Temperature, moisture are two keys in making candy, Blakeslee says

By Pat Melgares, K-State Research and Extension news service

MANHATTAN, Kan. – When it comes to making holiday candy, K-State Research and Extension food scientist Karen Blakeslee says it's a cooking process that usually turns into a science experiment.

"Really, any kind of baking – whether we're talking about making candy or something else – it really is a science, and that's one of the reasons why we encourage people to follow directions and use trusted recipes," Blakeslee said.

Blakeslee said there are two types of candies: Crystalline and non-crystalline. Fudge and fondant are examples of crystalline, while lollipops, taffy and caramels are examples of non-crystalline.

"Crystalline candies have tiny crystals in them," Blakeslee said. "The trick in making successful crystalline candy is how small or big those little crystals are."

"I've heard people say, 'My fudge is green.' Well, that's because the crystals just didn't get dissolved, or you didn't stir it fast enough or at the right temperature. So there's a lot of factors that go into what size those little crystals are. If you want nice, smooth fudge, the smaller the crystals, the better."

Non-crystalline candy relies heavily on temperature and moisture.

"If it's a humid day, or it's raining outside, that's probably not the best day to make (non-crystalline) candy," Blakeslee said. "As you're cooking, that candy mixture can pull in moisture from the air, and then it's harder to get it out."

To achieve the correct temperature, Blakeslee says:

- Use clean utensils. “It’s better to use a wood spoon as opposed to a metal spoon, because metal holds a lot of heat that can affect how your candy turns out.”
- Use a heavy, stainless steel pan, rather than an aluminum pan, because it conducts heat more evenly.
- If the recipe calls for bringing the candy mixture to a boil, bring it to that point slowly. “Be patient,” Blakeslee says.

“Probably the most critical thing in making any kind of candy is making sure you’ve got a good candy thermometer, whether it’s one that has a bulb on it, or an instant read thermometer,” Blakeslee said.

More holiday candy tips:

Don’t substitute ingredients
“If the recipe calls for cream, you don’t want to use whole milk,” Blakeslee said. “That’s just not going to work because the candy really needs fat. This is one time when it’s not a good idea to substitute ingredients because it will affect the outcome of the product.”

Don’t double the batch
Make one recipe at a time. “If you double the batch, it could affect how it heats up and the ability to cook the product properly,” Blakeslee said. “And it will probably fail.”

Follow cooking steps in the proper order
Don’t just dump everything in a pan and think that it’s going to turn out: “It’s probably not going to turn out very well,” Blakeslee said.

She adds: “Now some people may like grainy fudge, and if that’s you, then so be it. Some people like it smooth and some people like it with chocolate nuts.”

Allow extra ingredients to cool at room temperature before adding to candy
If adding nuts, peppermint candy or chocolate chips, let them cool at room temperature before adding them to a mixture, “because sometimes that temperature change can affect your candy mixture,” Blakeslee said.

Also, “be careful with such things as divinity (candy), which takes a little finesse to make because you’re working with raw egg whites.” Blakeslee said it can get tricky based on how slowly or quickly you pour the beaten egg whites into the candy mixture. “It can turn out really beautiful or it can be dried up and seized,” she said. “It takes some practice.”

Peanut brittle: A Holiday favorite
Peanut brittle is known for its airy texture, a result of using baking soda in the recipe. “You’ll see recipes that say to add a real small amount of baking soda, and when you put that in there, you’ll see that brittle mixture foam up,” Blakeslee said. “That’s when you spread it out on your pan and let it cool.”

For a hard, crunchy texture, leave the baking soda out of the peanut brittle recipe.

Storing holiday candy
Once done, candy should be stored in an airtight container at room temperature. “Freezing is not really an option,” Blakeslee said. “It can work for some things, but for others – such as divinity – freezing is probably not a good option.”

Some candies should be wrapped individually in plastic wrap or wax paper, such as caramels. “That helps prevent moisture absorbing back into the candy,” Blakeslee said.

Blakeslee recently spoke at length on tips for successfully making holiday candy on the weekly radio program, Sound Living, produced by K-State Research and Extension.

More food safety tips are available online from K-State’s Rapid Response Center for Food Science. Blakeslee publishes a monthly newsletter, called You Asked It!, with timely tips for safe food in and out of the home.

More information is also available at local extension offices in Kansas.

-30-

FOR PRINT PUBLICATIONS: Links used in this story
Sound Living, https://soundlivingksu.libsyn.com

Rapid Response Center for Food Science (Kansas State University), https://www.rrc.k-state.edu

You Asked It! food safety newsletter, https://www.rrc.k-state.edu/newsletter/index.html

K-State Research and Extension statewide locations, https://www.ksre.k-state.edu/about/statewide-locations.html

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