

## RESEARCH

# THERMOMETERS ARE KEY TO SAFETY



Consumer behavior research shows that cooking by color is just one of the ways consumers typically judge whether or not food is “done.” Consumers said they also “eyeball” the food, go by recommended cooking times, and trust their experience and judgement. The only problem is, those methods may be misleading them.

In 1995, for instance, a study by Kansas State University indicated that ground beef may turn brown before it’s cooked to a safe internal temperature sufficient to destroy potentially dangerous pathogens.

With that information in hand, the Food Safety and Inspection Service (FSIS) commissioned the U.S. Department of Agriculture’s (USDA) Agricultural Research Service (ARS) to examine the color of ground beef nationwide as it relates to doneness.

## THE 1998 FINDINGS?

- One out of every four hamburgers turns brown before it’s been cooked to a safe internal temperature.
- And yet, only 3 percent of consumers checked hamburgers with a food thermometer according to a 1998 consumer food safety survey conducted by the Food and Drug Administration and FSIS.

## WHICH GROUND BEEF PATTY IS COOKED TO A SAFE INTERNAL TEMPERATURE?



This IS a safely cooked hamburger, cooked to an internal temperature of 160 °F, even though it’s pink inside.



This is NOT a safely cooked hamburger. Even though it’s brown inside, it is undercooked. Research has shown that some ground beef patties look done at internal temperatures as low as 135 °F.

For more information, check out the FSIS Technical Information publication titled “Color of Cooked Ground Beef as It Relates to Doneness” (8/98). It’s available through the web: [www.fsis.usda.gov/OA/topics/gb.htm](http://www.fsis.usda.gov/OA/topics/gb.htm).

## WHAT DOES THIS RESEARCH MEAN TO TODAY’S CONSUMERS?

**The only way to know food has been cooked to a safe internal temperature is to use a food thermometer.**

The goal of the FSIS Thermy™ campaign, “It’s Safe to Bite When the Temperature is Right!”, is to increase consumer use of food thermometers. And today’s thermometer technologies make checking the temperature of “thin” food—like hamburgers or chicken fillets—a “piece of cake.” It only takes a few seconds.

For instance, digital instant-read thermometers need to be inserted only a very short way into food. As a result, consumers can easily check the temperature of thin foods by inserting the thermometer probe into food from the top.

It’s not complicated—and it’s worth the effort. This is especially true for people who are high-risk for foodborne illness—young children, people over 65, pregnant women, and people with chronic illnesses.

For more information on different types of thermometers and their uses, check out FSIS’ Web site at [www.fsis.usda.gov/thermy](http://www.fsis.usda.gov/thermy) or call the USDA Meat and Poultry Hotline, 1-800-535-4555 (TTY: 1-800-256-7072).