BLOODY CHICKEN

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Introduction

A major frustration of foodservice operators is that, very often, chicken parts, believed to have been cooked well done, will still have bloody bones and blood around the bone area, as in the case of the legs, thighs, and wings. A small experiment was performed in order to obtain photographic examples of chicken parts that have been more than adequately pasteurized but would be extremely unacceptable to customers because of blood.

According to the poultry industry, today's marketed chickens are considerably younger and far more tender than they were years ago. Their bones have not yet matured and are still somewhat soft and porous. As a result, there can be seepage of bone marrow through the soft bone and into the surrounding meat.

When a young chicken is deep chilled, frozen ice crystals form inside the bone. They expand and force the heme out of the marrow through the soft, porous bones. During the cooking process, the tissue will darken in color. Although the appearance is unappetizing, the meat is not harmed when this happens.

Examples of pasteurized, bloody chicken

Figure 1 shows a piece of chicken thigh broiled in a frying pan in an oven. Figures 2 and 3 show chicken thighs that have been cooked to 155F center temperature for 30 seconds around the bone, as measured with an Atkins 33040 thermocouple meter with a micro-tipped probe [Atkins Technical, Inc.; Gainesville, Florida]. It is obvious that no consumer would eat this chicken, although it is juicy, delicious, and absolutely safe with an estimated10D *Salmonella* reduction.

Figures 4 and 5 show the two parts to the wings. These parts were cooked to 175 to 185F. Yet, these chicken parts also have an unacceptable, bloody appearance.

Discussion

If chicken, as shown in Figures 2 through 5, is served in a restaurant, consumers are likely to call the local health department with a food safety complaint, when in fact, the chicken is pasteurized and safe.

The chicken industry has stated that it is doing research to solve the problem, which is, that the chicken is so young--6 1/2 weeks at slaughter--and the bones are too porous, even though the animal is large enough to be sold for food. Because the objective of the industry is to grow chickens as rapidly as possible, it is doubtful that this blood and color problem will be solved in the near future. It would be probably more efficient to teach consumers to eat bloody chicken, if cooks can convince consumers that they have a thermocouple and know how to use it to validate pasteurization.

Conclusions

The retail food industry is being forced to sell grossly overcooked chicken in order to get rid of the red blood color around the bones. The result is chicken that is dried out, unappealing, and does not taste good. A counter measure is to needle the chicken, pumping in solutions of phosphates, flavoring compounds, and water, which puts pathogens in the middle of the chicken. If consumers were taught to eat safely prepared, bloody chicken, as they want to do with beef, they would be able to enjoy juicier chicken. This is an interesting problem for the USDA to solve.

Figure 1

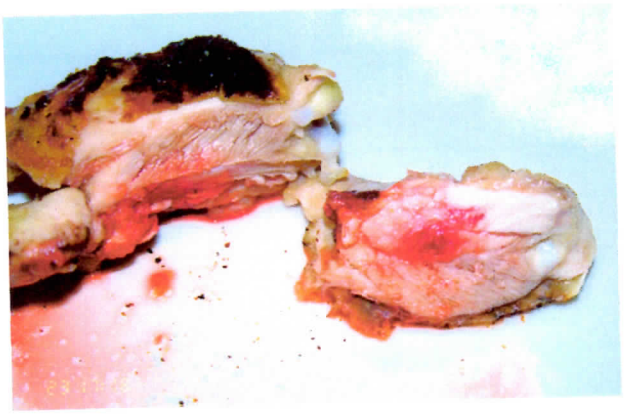

Figure 2

Figure 3

Figure 4

Figure 5