

To Whom It May Concern;

The pink color that is sometimes observed in fully cooked poultry is not due to under cooking of the item. At Tyson Foods, we go to great lengths to monitor and verify the cooking process to ensure that all products meet and/or exceed the temperature requirements for doneness. This is accomplished by continual monitoring of equipment and temperatures by quality control and production personnel on the critical control points of the process. The occurrence of pinking in a product does not necessarily indicate the product is not properly cooked, while this pinking defect is not aesthetically pleasing it is not automatically an indication of a food safety problem.

There has been a great deal of research conducted on the pinking issues of fully cooked poultry products and there are many things which can contribute to the pinking issues. It is important to note that meat color is provided by water-soluble proteins naturally present in the muscle sarcoplasm (principally myoglobin, also hemoglobin and cytochrome). Together, these pigments are referred to as the hemochrome in the muscle. When oxygenated, these pigments are bright red (blood-color); when deoxygenated, they become dark and purple.

The pinking characteristic develops when certain elements complexes to the iron in the hemochrome, displacing the oxygen normally present. This allows for the pink color to persist even after the poultry products are fully cooked. Even meat which is cooked to higher endpoint temperatures of above 170 degrees F. may still be visually pink in color due to certain reactions occurring in the meat.

Another factor is whether the product is cooked in a gas oven. Hemoglobin in the muscles can likewise react with air during cooking to give the meat a pinkish color even after cooking. The chicken's feed and whether the product has been frozen can also affect the final color. The USDA FSIS website further explains that fully cooked poultry can sometimes show a pinkish tinge in the meat and juices.

Thank you for giving us the opportunity to assist you and hope that we have answered your questions. Please feel free to contact me at 800-424-4253 extension 8308 with any questions. Please be assured we are committed to providing the highest quality products for you and your students.

Michelle Johns

Tyson Food Safety
Quality Assurance



PRODUCT APPEARANCE INFORMATION

WHY WOULD MY FULLY COOKED POULTRY BE PINK?

THERE ARE SEVERAL REASONS WHY THIS COULD BE HAPPENING.....



• MYOGLOBIN IN MEAT

-MYOGLOBIN (IRON AND OXYGEN BINDING PROTEIN FOUND IN MUSCLE TISSUES) A NATURALLY OCCURRING PROTEIN IS CHANGED AS A NORMAL RESULT OF THE COOKING PROCESS AND CAN CREATE A PINK COLOR
-DARK MEAT RETAINS A HIGHER PERCENTAGE OF MYOGLOBIN OR HEMOGLOBIN



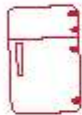
• GAS OVEN

-HEMOGLOBIN (ANOTHER IRON AND OXYGEN BINDING PROTEIN IN BLOOD) IN THE MEAT CAN REACT WITH AIR DURING COOKING TO GIVE THE MEAT A PINKISH COLOR AFTER COOKING



• CHICKEN FEED OR WATER SUPPLY

-NATURALLY OCCURRING NITRATES OR NITRITES MAY INCREASE THE TENDENCY FOR COOKED MEAT TO APPEAR PINK IN COLOR



• FROZEN

-FREEZING A PRODUCT MAY ALSO AFFECT COOKED COLOR

THE USDA STATES THAT FULLY COOKED POULTRY CAN VARY IN COLOR FROM WHITE TO PINK TO TAN. IF YOU FIND A PINKISH COLOR IN A FULLY-COOKED PRODUCT, PLEASE KNOW THAT IT IS ...



- COOKED TO A PROPER AND SAFE END POINT TEMPERATURE
- SAFE TO EAT

WHAT YOU CAN DO TO ENSURE SERVING A DELICIOUS TASTING PRODUCT

- ➔ FOLLOW RECOMMENDED COOKING INSTRUCTIONS
- ➔ ENSURE INTERNAL TEMPERATURE OF 165° BEFORE SERVING

FOR MORE INFORMATION GO TO:

www.FSIS.USDA.GOV >> TOPICS >> FOOD SAFETY EDUCATION >>
FACT SHEETS >> POULTRY PREPARATION



ADDITIONAL INFORMATION SOURCES . . .

- MEATINGPLACE: NEW FINDINGS ON INHIBITION OF PINK COLORATION IN POULTRY MEAT: CASEY M. OWENS, PH.D.; AUGUST 17, 2011
- AMERICAN MEAT SCIENCE ASSOCIATION: PINKING IN POULTRY SYMPOSIUM: KAREN E. FRIESEN AND JOHN A. MARCY
- JOURNAL OF FOOD SCIENCE: VOLUME 68 ISSUE 3: K. HOLOWNIA, M.S. CHENMAN, A.E. REYNOLDS: PINK COLOR DEFECT IN POULTRY WHITE MEAT AS AFFECTED BY ENDOGENOUS CONDITIONS: 2006