



Worthwhile Operational Guidelines & Suggestions

BROILER PROCESSING TIMELY INFORMATION – JANUARY, 2011

Discolorations in cooked poultry

Fully-cooked meat and poultry products must be safe. Undercooked meat and poultry (i.e., based on pink or red color) is a concern for processors and customers alike. Producers of fully-cooked products occasionally observe pink/red discoloration even after achieving cooking temperatures of up to 93C (200F). Cooked-meat discolorations can be grouped into distinct categories:

- Pink color diffused throughout the breast or thigh meat, deboned, cooked and diced.
- Distinct red blotches (~1 cm) appearing close to the surface of breast and tenders interfacing with the ossified portions of the keel, clavicle and coracoids bones.
- Bone-in parts (wings, drumsticks, and especially the thighs) with a gush of red juice and diffused red discoloration in surrounding meat.
- Surface color defects that may appear as black spots (especially on drumsticks).
- Bone darkening, especially in thighs and drumsticks, with severity decreasing away from the bone.
- Localized reddening around the blood vessels of cooked and sliced breast fillets.

Most of these color defects may be occurring, albeit at very low levels, at any given time. The incidence and/or severity of these discolorations may increase during distinct periods often with no particular cause. Typically, the companies respond by immediately increasing cooking temperatures, times or both. At times, this approach works, but often product quality and process yields suffer. More than likely, these discolorations have different causes and therefore require different solutions. Processing, freezing, thawing and cooking conditions must all be systematically evaluated for specific causes.



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