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Effects of the immersion of poultry meat in citric acid solutions on the organoleptic properties

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Poultry meat is a good source of protein and consumption of the same is less regulated by ethno-religious taboos. Poultry carcasses are immersed in citric acid (CA) solutions to reduce the *Salmonella* contamination. Objective of the present experiment was to evaluate the affect of immersing broiler meat in CA solutions on organoleptic properties of broiler meat. Breast meat samples were immersed in 0, 2% or 4% CA solutions for 20 or 40 minutes. Then the meat samples were boiled for 40 minutes. Sensory evaluation was done for color, odor, taste, texture and overall acceptability with sensory panel of ten people. A meat sample, which was not treated with CA solution, was used as the reference sample. The data were analyzed using Friedman test. Reference sample had comparatively higher scores for all sensory qualities except for odor. Odors of the meat samples treated with 2% citric acid for 20 minutes and 4% citric acid for 20 minutes were better than reference sample. Higher CA levels reduced the sensory qualities (color, odor, taste and texture). Immersion in 4% CA for 40 minutes resulted in the lowest score for color compared to all other CA X time combination. Tastes of all the samples were lower than reference sample. Texture also decreased with increasing CA levels. The overall acceptability of reference sample was also better than other samples. It was concluded that immersion of broiler meat in 2% or 4% CA solutions for 20 or 40 minutes adversely affects some organoleptic properties including taste, texture and overall acceptability.

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