Quality Characteristics of Irradiated Chicken Breast Rolls from Broilers Fed Different Levels of Conjugated Linoleic Acid


Abstract:

Dietary conjugated linoleic acid (CLA) treatment reduced color a*- and b*-values of cooked chicken breast rolls. Sensory panels rated the color of cooked chicken rolls with CLA treatments darker than the control. The production of carbon monoxide (CO) in cooked chicken rolls increased dramatically after irradiation and was correlated with the increased redness of cooked chicken rolls after irradiation. Consumer test indicated that the color of cooked chicken rolls after irradiation was preferred to the nonirradiated, but no preference for the color among the three CLA treatments was found. Irradiation greatly increased volatile production and induced a metallic off-flavor in chicken rolls. Sensory evaluation indicated that the hardness of chicken rolls increased and juiciness decreased as the dietary level of CLA increased.

Keywords:

Chicken breast roll; Irradiation; Sensory characteristics; Consumer test; Conjugated linoleic acid

Published In: