

Functional Characteristics of Spent Duck Meat for Use in Emulsion-Type Meat Products

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Abstract	<p>Spent ducks produce nutritive meat; however the meat possesses undesirable characteristics such as strong odor and tough. Hence, appropriate yet simple processing technologies need to be developed in order to maximize the use of duck meat. The experiment was conducted to evaluate functional characteristics of spent duck meat as raw material for the production of emulsion-type meat products, such as nugget and sausage. Chilled carcasses of 96 spent ducks were deboned manually, then mixed thoroughly and ground using a 5 mm diameter grinding plate. The ground meat was divided into 4 batches (group) of treatments; one batch was treated with iced tap water (M1), one batch with 0.1% NaCl solution (M2), one batch with 0.5% NaHCO₃ solution (M3), and one batch was left as is as control (M4). Variables measured were water holding capacity (WHC), pH, emulsion capacity and stability of the meat; and firmness and tenderness of the meat gel. Results showed that M1 meat has significantly higher WHC (less percentage of free water) than control (M4), whereas M2 and M3 meat has similar WHC to control. Processing caused the ground duck meat to have significantly higher pH than control. The highest meat pH was observed in M3, followed by M2, M1 and control. Processing duck meat with iced tap water, NaCl or NaHCO₃ produced significantly more tender meat gel compared to untreated meat (as is). Tenderness of meat gel of M3 was the most tender followed by M2 and M1. Similar results for meat gel firmness were observed. No significant differences were observed in term of emulsion capacity (expressed as ml oil/gr protein and ml oil/gr fresh meat), emulsion stability (expressed as ml oil and total liquid released per 100 gr emulsion), and cooking recovery (%). The study reported in this paper offers simple processing technologies to improve functional characteristics of spent duck meat to be use as raw material for the production of emulsion type meat products. (Animal Production 12(1): 55-59 (2010))</p> <p>Key Words: spent duck meat, processing, functional characteristics, emulsion type meat product</p>
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