

**TEXTURAL AND WATER BINDING PROPERTIES OF  
REDUCED SALT CHICKEN MYOFIBRILLER PROTEIN  
GELS FORMULATED WITH GUAR GUM AND BEAN FIBER**

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There has been a great interest in the development of low salt meat products for the meat industry due to the health problems arising from high dietary sodium intake. When the amount of salt is reduced to a certain level, it should be replaced by another agent to overcome the problems resulting from salt reduction. Therefore, the objective of this study was to evaluate the effects of addition of guar gum (GG) or pea fiber (PF) to the salt soluble myofibrillar protein (SSMP) gels to improve textural and functional characteristics of the gels when the NaCl content was reduced. SSMP extract prepared from chicken *pectoralis* muscle was divided into seven parts to constitute the treatment groups: (1) Control, (2) 3% NaCl + 0.5% GG addition, (3) 1.5% NaCl+0.5% GG addition, (4) 0.5% GG addition, (5) 3% NaCl + 1% BF addition, (6) 1.5% NaCl+ 1% BF addition, (7) 1% BF addition. Texture profile analysis, water holding capacity (WHC) and cooking loss (CL) were determined in the SSMP gels. Addition of GG and BF improved CL and WHC in the reduced NaCl SSMP gels. GG appeared to be more efficient than BF in reducing CL ( $p<0.05$ ). Reduction of NaCl to 1.5% in the presence of GG or BF was accomplished without altering the textural properties as compared to 3% NaCl group. Results obtained from the present study suggest that adding GG and BF could be a sound alternative in reducing NaCl in comminuted meat products.

Keywords: Reduced salt, guar gum, pea fiber, texture, functional properties

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