Akesowan, A.


DOI: 10.1007/s10068-010-0163-2

Department of Food Science and Technology, School of Science, University of the Thai Chamber of Commerce, Bangkok, Thailand

Abstract

Effect of soy protein isolate (SPI) (0.5 to 3%, w/w) on physical, chemical, sensory, and microstructure properties of light pork burgers containing added water incorporated with 0.7% mixed gum (konjac/gellan gum= 3:1) was carried out. Increasing of SPI levels resulted in significantly (p<0.05) higher cooking yield, lower reduction in diameter, and darker color of light pork burgers in relation to the control. Textural characteristics including cohesiveness, springiness, and chewiness significantly increased (p<0.05) with increasing of SPI up to 2% level; however, decreased these parameters were evident at 3% SPI used. Sensory results indicated that the 2% SPI light formulation showed significantly higher (p>0.05) scores for texture and juiciness than those of the control. The product was considered nutritious and provided the reduction of fat and total caloric content about 62.3 and 43.1% of the full-fat product, respectively. © KoSFoST and Springer 2010.

Author Keywords
Konjac flour; Low-fat meat product; Pork burger; Quality characteristics; Soy protein isolate

References

- Lee, H.C., Chin, K.B. Physicochemical, textural, and sensory properties of low salt/reduced salt sausages as affected by salt levels and different type and level of milk proteins (2009) Food Sci. Biotechnol, 18, pp. 36-42.
- Ahn, H., Hsieh, F., Clarke, A.D., Huff, H.E.
Extrusion for producing lowfat pork and its use in sausage as affected by soy protein isolate

- Akesowan, A.
  Effect of soy protein isolate on quality of light pork sausages containing konjac flour

- Conforti, F.D., Davis, S.F.
  The effect of soya flour and flaxseed as a partial replacement for bread flour in yeast bread


  Physicochemical, textural, sensory characteristics and storage stability of goat meat patties extended with full-fat soy paste and soy granules

- Lawless, H.T., Heymann, H.

- Cochran, W.G., Cox, G.M.
  2 <sup>nd</sup> ed. John Wiley and Sons, New York, NY, USA

- Singh, G.H., Kaur, A., Singh, N., Singh, S.N.
  Effect of liquid whole egg, fat and TSP on the textural and cooking properties of raw and baked patties from goat meat

- Choi, Y.S., Choi, J.H., Han, D.J., Kim, H.Y., Lee, M.A., Lee, E.S., Jeong, J.Y., Kim, C.J.
  Effects of rice bran fiber on quality of low-fat tteokgalbi

- Thomas, R., Anjaneyulu, A.S.R., Mendiratta, S.K., Kondaia, N.
  Effects of humectants on the quality of pork sausages

- Barbut, S.
  Effect of regular and hydrolyzed dairy proteins on texture, microstructure, and color of lean poultry meat batters

- Claus, J.R., Hunt, M.C.
  Low-fat, high added water bologna formulated with texture-modifying ingredients

- Chin, K.B., Keeton, J.T., Miller, R.K., Longnecker, M.T., Lamkey, J.W.
  Evaluation of konjac blends and soy protein isolate as fat replacements in low-fat bologna

- Yao, J.J., Wei, L.S., Steinberg, M.P.
  Water-imbibbling capacity and rheological properties of isolated soy proteins

- Brewer, M.S., McKeith, F.K., Britt, K.
Fat soy and carrageenan effects on sensory and physical characteristics of ground beef patties  

• Deliza, R., Serna-Saldivar, S.O., Germani, R., Benassi, V.T., Cabral, L.C.  
The effects of colored textured soybean protein (TSP) on sensory and physical attributes of ground beef patties  

• Aaslyng, M.D., Bejerholm, C., Ertbjerg, P., Bertram, H.C., Andersen, H.J.  
Cooking loss and juiciness of pork in relation to raw meat quality and cooking procedure  

• Danowska-Oziewicz, M.  
The influence of cooking method on the quality of pork patties  

• Cengiz, E., Gokoglu, N.  
Effects of fat reduction and fat replacer addition on some quality characteristics of frankfurter-type sausages  