

Public Abstract

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Graduation Term:WS 2007

Department:Food Science

Degree:MS

Title:Physical and Chemical Attributes of a Defatted Soy Flour Meat Analog

The objective of this study was to observe how the replacement of soy protein isolate in a meat analog with defatted soy flour would affect the physical and chemical characteristics of the product. A 4x3x3 (four mixes, three moisture contents, three cooking temperatures) factorial experiment with 2 replications was conducted. The first set of information required was the extruder responses. To observe any differences in texture, a texture profile analysis (TPA) was conducted. Color tests were performed to determine if the addition of defatted soy flour, moisture content, or cooking temperatures had an effect on the final product. Protein solubility was performed to interpret the changes in chemical bonds that would cause differences in the textures of the samples. General linear model and analysis of variance were used to determine the significance of variables and relationships among the results.