EFFECTS OF TOMATO POWDER OR SOY FIBER ADDITION AND FAT CONTENT ON PHYSICOCHEMICAL PROPERTIES OF HOT DOGS

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ABSTRACT

The main objective of this study was to investigate the effects of dietary fiber additions (tomato powder 3%, tomato powder 5%, soy fiber 3% and soy fiber 5%) and fat content (10, 15 and 20%) on physical and chemical properties of beef hot dog.

Tomato powder and soy fiber additions increased protein content and dietary fiber content in all cases, and all dietary fiber additions provided a small degree of showed antioxidant activity in the order of 3% tomato powder >3% soy fiber> 5% tomato powder= 5% soy fiber. Tomato powder content had decreased water holding capacity, whereas soy fiber increased water holding capacity. The interaction of fat and dietary fiber effects on cooking loss due to different types of fiber addition were found in 10 and 20% fat levels. Dietary fiber addition affected color profile of hot dog source due to the color of dietary fiber source, and decreased all texture parameters of hot dog depend on the type of dietary fiber and amount of dietary fiber addition.

Adding dietary fiber to hot dogs might be a good way to improve dietary fiber. Soy fiber and 3 % tomato powder addition might be an efficient way to change the texture profile and extend shelf life in low fat beef hot dogs. Soy fiber might be used as an ingredient to reduce cooking loss and increase water holding capacity. However, sensory evaluation needs to be conducted to determine the effects of dietary fiber addition on mouth feel, flavor and aroma before recommendations can be made.