

EFFECT OF BILBERRY AND ARTICHOKE CO-PRODUCTS TREATMENTS ON GROUND RABBIT MEAT CHARACTERISTICS DURING REFRIGERATION STORAGE

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ABSTRACT

The use of synthetic antioxidants is one of the major strategies for preventing lipid oxidation problems in meat products. In order to extend the shelf life, current recommendations restrict synthetic food additives and encourage their replacement by naturally-occurring ingredients with similar functions. Hence, there is a growing interest in natural antioxidants in meat products. In this context, the use of bilberry pomace (BP) and artichoke bracts (AB) by-products powders as source of natural antioxidant in ground rabbit meat stored at 4°C for 12 days was evaluated. The following seven treatments were tested: group 1-Control (rabbit meat without salt and natural antioxidant), group 2-S (2% w/w of salt), group 3-BHT (2% w/w of BHT), group 4-AB0.5 (2% w/w of salt and 0.5% w/w of AB), group 5- AB1 (2% w/w of salt and 1% w/w of AB), group 6-BP0.5 (2% w/w of salt and 0.5% w/w of BP) and group 7- BP1 (2% w/w of salt and 1% w/w of BP). The water and lipid content, pH value, lipid oxidation, total phenolic content and antioxidant activity were determined. Two-way ANOVA was performed to study the full factorial design (treatment and storage time). Results showed a significant interaction of storage time and antioxidant treatment on the water and lipid content of the studied samples. Rabbit meats treated with AB and BP showed a decrease in their pH values during storage independently of the

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V CONGRESO AMERICANO DE CUNICULTURA, MÉXICO 2014

Facultad de Medicina Veterinaria y Zootecnia, Asociación Científica Mundial de Cunicultura – Rama Americana
Secretaría de Desarrollo Agropecuario del Gobierno del Estado de México, Secretaría de Agricultura, Ganadería, Desarrollo Rural,
Pesca y Alimentación, Consejo Mexiquense de Ciencia y Tecnología

concentration. In addition, they showed higher phenolic levels and therefore a higher antioxidant activity. The oxidation process was significantly ($P<0.05$) delayed by the type of antioxidant and its concentration. Therefore, it was concluded that AB and BP have the potential to be successfully used as natural antioxidants to minimize the lipid oxidation of rabbit meat stored at refrigerated temperature.

Keywords: artichoke bract, bilberry pomace, antioxidant, rabbit meat, refrigeration, lipid oxidation.



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Congreso Americano
de Cunicultura
2014



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