

Ultrasound impact on sensory acceptance of aged beef

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The study aimed to evaluate the impact of high intensity ultrasound (HIU) technology on the consumer acceptability of aged (5 and 10 days) vacuum-packed and dry-aged beef. Steaks (2.5 cm thick) were randomly assigned to the following treatments: CON = control meat without HIU nor ageing; WA5 = meat wet-aged for 5 d; WA10 = meat wet-aged for 10 d; DA5 = meat dry-aged for 5 d; DA10 = meat dry-aged for 10 d; HIU5 = HIU and wet-aged for 5 d; and HIU10=HIU and wet-aged for 10 d. After treatment, meat was placed in a shelf-life simulation for 5 d. General consumer and attribute liking test were conducted using 100 consumer panelists. Consumer acceptability and liking were analyzed using the 9-point test. A correspondence test was performed to determine the degree of association between the level of liking for the attributes (taste, smell, softness and juiciness) and the treatment effect. No significant effect ($P>0.05$) was observed in the consumer acceptability among treatments. Overall, application of HIU of meat before aging did not affect general acceptability nor the attribute liking of HIU5 and HIU10. Also, no difference was observed between the acceptability of wet- and dry-aged meat. The mapping of preferences indicated that the treatments were perceived as different. The sample with the highest acceptance by consumers was the DA5, and the sample with the lowest level of liking was the WA5. This evidenced a relationship between the treatment and the level of liking of consumers ($P<0.05$). As a conclusion, HIU applied to vacuum packed meat has potential as a safe method for aging bovine meat. These findings should be complemented by trained panel analysis, to explore in a more detail the sensory profile of meat subjected to HIU and aging.