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Liking and willingness to pay for salt reduction in cooked ham

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It is been worldwide demonstrated the need for reducing salt in manufactured foods due to several health problems caused by its high ingestion. As a consequence, the food industry has been facing the task of producing reduced sodium products to meet consumers' and worldwide regulatory demands for healthy and more nutritious products. High hydrostatic pressure (HHP) is a technology that has been considered a possible alternative for achieving this goal, without compromising the product sensory characteristics, and improving product safety. The use of HHP for salt reduction can be characterized as an innovation, which has to be accepted and valued by consumers. This study aimed at evaluating consumer preference and willingness to pay (WTP) for sliced cooked ham processed by HPP and with reduced salt content.

Two levels of salt (standard and 25% reduction) and pressure (non-pressurized and 400MPa/15min) were applied, yielding four experimental samples, which were evaluated by 102 ham consumers. The evaluation of samples was performed in three conditions: *blind*, looking at the label (*expected*), and tasting the product along with the label (*informed*), using structured nine-point hedonic scales. The WTP was assessed by the procedure known as BDM (Becker, Degroot, Marschak, 1964.) Slices of cooked ham were vacuum packed in plastic bags. Labels with information on salt reduction health benefits as well as on HHP contribution to the product safety were specially created for each experimental sample, and used accordantly for the expected and informed conditions. They mimicked a real ham package.

On average, when evaluating in blind, consumers scored higher the non-pressurized samples for both the standard and reduced salt levels. However, results revealed that the expected liking was higher for the salt reduced samples in both processing conditions (pressurized and non-pressurized), and they would also pay higher prices for such ham. It suggests that participants valued the information on salt reduction and HHP processing. When consumers tasted products and looked at their labels (*informed condition*) they evaluated them similarly they did in blind, demonstrating the power of the sensory characteristics and label information, but also the need for further studies to improve technological issues related to HHP and ham processing. Encouragingly was the finding that it was possible to make cutbacks in sodium, and consumers were willing to pay a higher price compared to those they declared in the *expected* condition.

Keywords: willingness to pay, salt reduction, cooked ham, High hydrostatic pressure