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New ham product with seaweed

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Danish open sandwich with ham and Wakame

Objective

The aim of this study was to develop a new ham product with seaweed added as a healthy ingredient.

Introduction

Seaweed has high levels of vitamins, minerals, flavonoids and antioxidants and is considered to be very healthy. The seaweed Wakame and Dulce are applicable, because they are commercial available, have a mild taste, and low iodine content.



Dulce

Wakame

Materials and methods

Sandwich ham was produced from chopped *Musculus semimembranosus*, 1% of seaweed (Wakame or Dulce) in dry weight was added and tumbled to a 20% weight gain. The ham was heat treated to a core temperature of 75°C, cooled, sliced and packed in modified atmosphere 30%CO₂/70%N₂. Salt in final product was 1.5% NaCl.

Cooking loss, sliceability and shelf life were measured. Holistic analyses were used for consumer test where the products were associated with emotional responses.

Results

Adding seaweed resulted in distinctly different appearance of the ham.



Ham with Dulce



Ham with Wakame



Traditional ham

- Cooking loss was reduced in the ham with Wakame
- Cooking loss was increased in ham with Dulce
- Slice ability (100%) and texture were comparable with traditional ham.
- The microbiological and sensory shelf life of sliced MA-packed (30% CO₂/70%N₂) ham with seaweed was not affected
- Positive consumer responses such as: "exciting, surprising, exotic and healthy".
- 63% of the consumers reported that they would like to buy the product.

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Conclusions

A healthy new ham product with seaweed added can be produced with low cooking loss, good texture and slice ability. Consumers were very positive towards the new ham product and described it as exciting, surprising and exotic.