

Characterisation of Cooked Ham using the method of Temporal Dominance of Sensations (TDS)

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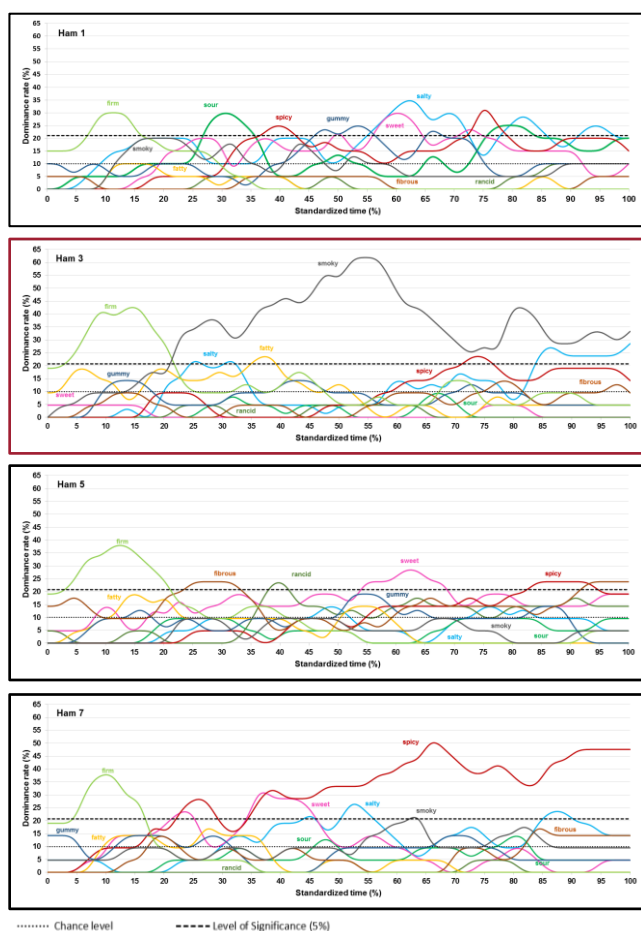


Objective

Temporal dominance of sensations (TDS) is a sensory method for analysing the dominant sensations and their intensity during the course of an in-mouth evaluation over time of a product, using previously defined descriptors.

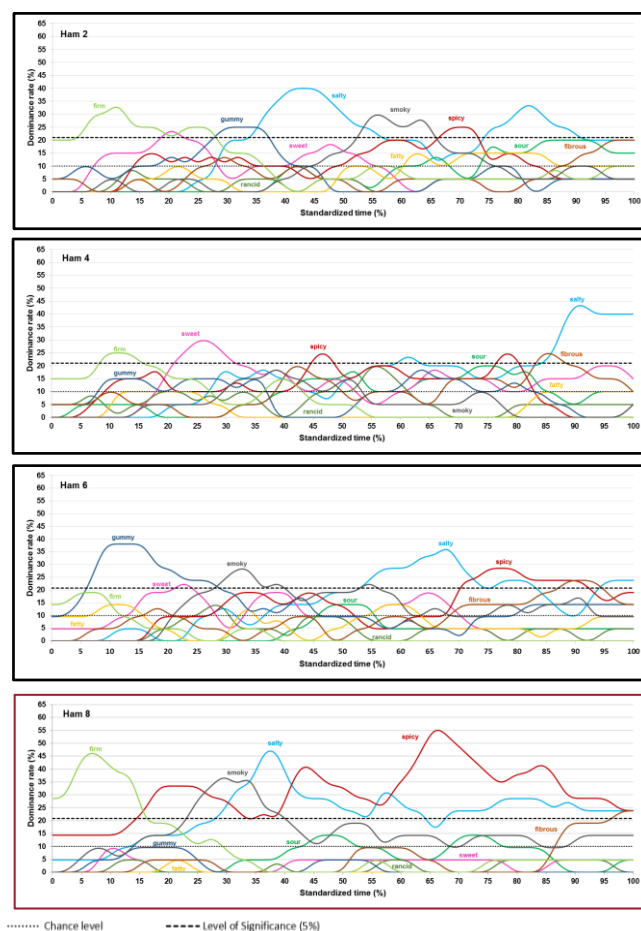
The aim of this study was to explore the potential of the TDS method for the differentiation of eight commercially available cooked hams which were evaluated focusing on texture and flavour attributes.

Results



Material and Methods

Eight commercial cooked ham samples from the market were evaluated by a trained panel ($n=8$). The attributes for the TDS characterisation of the ham products were determined based on a descriptive test. For each product, the attributes firm, gummy, fibrous, salty, sour, sweet, spicy, smoky, fatty, and rancid were rated on a 10 point scale over a period of 45 seconds. Samples were presented monadically and judged in triplicate. Data analysis was performed using the FIZZ software (Biosystèmes, France).



For the majority of the ham samples, texture attributes such as firmness and gumminess are the most dominant sensations at the start of the sensory evaluation. After swallowing, hams are clearly dominated by taste and flavour sensations with rates up to 64%. Attributes related to less desired sensory characteristics such as fatty, rancid and fibrous are perceived as significantly less dominant in almost all samples. Ham 3 and ham 8 show the most significant TDS differences most likely due to fabrication. These two samples are highly dominated by salty, spicy and smoky sensations, respectively.

Conclusion

For all samples, textural attributes were dominant at the beginning of the evaluation followed by taste and flavour characteristics and, therefore, are very important for the first sensory impression of meat products. In future TDS tests, an olfactory part will be added prior to in mouth evaluation in order to study the odour impact over time on the sensory perception of meat products.

Literature

N. Pineau, P. Schlich, S. Cordelle, C. Mathonnière, S. Issanchou, A. Imbert, M. Rogeaux, P. Etiévant, E. Köster.
Temporal dominance of Sensations: Construction of the TDS curves and comparison with time intensity, J. Food Quality and Preference 20, 450-455, 2009