

Standardised sensory language for salami-type sausages

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Objective

Develop a standardised sensory language for dry sausages, allowing a description of odour, flavour and texture characteristics.

Material and Methods

To develop the language, nine salami from the Swiss market with different sensory characteristics were evaluated by the internal trained panel (n=11). In a first phase, the judges rated the intensity of 101 descriptors, which had been found in the literature, on unstructured line scales. In the following sessions, the list of attributes was reduced following the procedure suggested by ISO-Norm 11035 (1994) to 24 terms. For every descriptor a definition was elaborated and references were defined. Moreover, a testing procedure was established.

As a result of this language development, sensory profiles of the nine salami samples were obtained.

Data was analysed with geometrical means, AOV, Cluster Analysis and PCA.

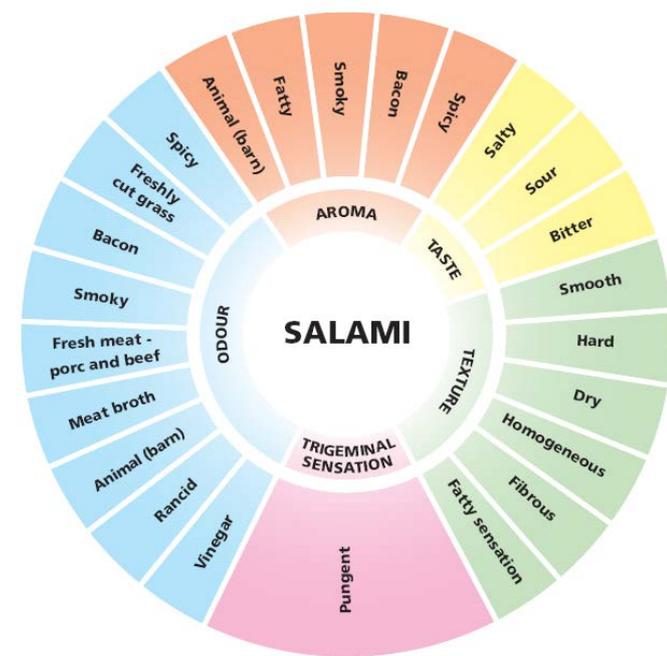


Fig. 1 Sensory wheel for salami-type sausages

Tab. 1 Selected odour attributes

Descriptor	Definition	References
Animal (barn)	Odour associated with farm animals and barns.	0.001% para-cresol in propylene glycol.
Rancid	Pungent odour, reminding of rancid butter, rancid fat and rancid salami.	A salami slice exposed during two weeks to air and light (20°C) or 0.1% butyric acid in propylene glycol.

Conclusion

This language development study led to a final attributes list consisting of 24 terms, correlated with definitions and references. Although the ISO-Norm was not always very precise, its use allowed the development of a comprehensive vocabulary for dry sausages with specific, relevant and discriminating descriptors.

Results

The selected 24 terms are illustrated in figure 1 and describe odour (9 attributes), texture (6 attributes) and flavour (9 attributes). Definitions and References of selected attributes are shown in table 1 and 2. Attributes related to off-flavours like "mouldy", "yeasty" or "soapy" explained cumulatively less than 10% of the information and therefore do not appear on the wheel.

The 9 tested products showed varying profiles and differences were found in each category of attributes. In total seventeen attributes out of 24 were discriminating. Figure 2 and 3 show the results for the texture.

Fig. 2 PCA of the 6 texture attributes used for the description of 9 salami from the Swiss market

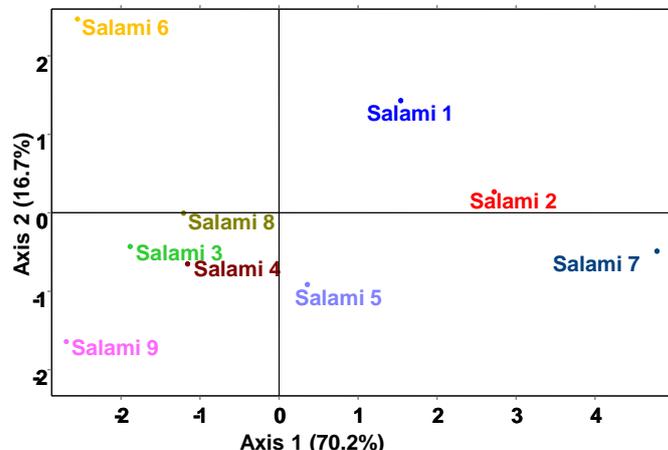
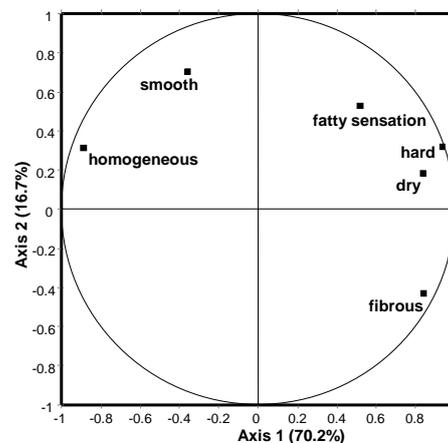


Fig. 3 PCA products - texture attributes

Tab. 2 Selected texture attributes

Descriptor	Definition
Fibrous	Attribute describing the fibrous consistency of a product (aligned long, thin and firm elements). Comparable to the fibrous consistency of pineapple or celery. Evaluated as the amount of fibres perceived in the salami slice during chewing.
Fatty sensation	Attribute related to the perception of the quantity of fat contained in the product. Evaluated as the amount of a fatty film left on the surface of the oral cavity, immediately after swallowing.

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