Flavour Compounds and Sensory Attributes of Dry Cured Hams.

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Dry cured ham is characterized by a unique flavour that is very cherished by consumers. The flavour perceptions of dry cured ham are due to the presence of a large set of volatile compounds, most of them produced in the course of the curing and maturation time. Many of these compounds have been identified by different methodologies and their concentrations have been described in different kinds of hams. However, the relations between the most odour active compounds and the sensory attributes have not been established yet. Therefore, an explanatory study of the sensory perceptions based on both sensory and chemical analyses is still needed for a better understanding of the aroma of this prized food product.

This work studies the relationship between 46 volatile compounds and 17 sensory attributes, 13 of which concern the flavour perception. Volatile compounds were quantified in four parts of the hams (subcutaneous fat, *biceps femoris*, *semimembranosus* and *semitendinosus* muscle) by SPME-GC, and identified with assistance of standards, while the sensory attributes were evaluated by assessors fully trained for the ham sensory assessment. Olfactometry was used to determine odour impact zones of the chromatogram. Later the odour thresholds of the volatiles of these zones were determined by a process based on dilution analysis. Powerful univariate and multivariate statistical procedures were used to look for relationships between volatiles and sensory perceptions. Five sensory attributes (smoke smell, nutty smell and flavour, rancid taste, fat rancid flavour and fat pungent flavour) were explained by regression equations (adjusted $R^2 \geq 0.70$).