Title:

Sensory science: new needs and challenges

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In the domain of foods and diets there are new challenges which are important in the present societal context and sensory scientists are faced to questions whose answers are important for different stakeholders, such as food producers, health professionals, caregivers and public policies. Foods and diets must be culturally acceptable, economically affordable; nutritionally adequate, and healthy. In this context, it is clear that, for evaluating food acceptability, it is necessary to take into account not only the sensory characteristics of the products, but also the 'external characteristics' associated to information mentioned on the packaging such as the nutritional information or the type of production (e.g., organic, fair trade) which induce expectations. Expectations and consequently acceptance also depend on previous experiences and on their memorization. It seems particularly necessary to pay more attention on taste memory for determining how much it is possible to reduce the content of some ingredients such as fat, sugar and salt. Thus, sensory scientists must consider that is not sufficient to evaluate the pleasure associated to tasting one product. In fact, the methodological approach should address all stages from buying intention to memorization of the whole experience with the product. Another societal challenge is a demographic challenge with an important increase of the elderly population who has specific nutritional needs and capabilities. Besides, it is now well recognized that infancy and early childhood are key periods in the development of eating habits and these young consumers have also specific nutritional needs and capabilities. Since it is not possible to infer elderlies' and infants or children's perception and food acceptance from data collected on an adult population due to differences related to generation and age effects it is necessary to conduct sensory and consumer studies with these specific groups. Thus, it is important to choose the best methods or even to develop methods for measuring the sensory reactions, food acceptance and also for exploring the cognitive aspects of food perception of these specific groups of population.