

Title Use of sense masking to study sensory modalities singly: Interest for the understanding of apple in-mouth perception

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Abstract

The relative contribution of aroma, taste and texture modalities to overall perception, as well as the interactions which can occur between them, were studied during the consumption of natural foods, i.e. apples. Aroma, taste and texture perceptions were masked in that order by employing different masking agents, separately or combined, allowing one or several of these senses to be omitted during various matching tasks. By means of Common Components and Specific Weight Analysis (CCSWA), matching results were compared to those of rating tests performed by a trained panel, without masking agents. Taste was the modality which contributed most to apple discrimination, followed by texture and aroma. While taste did not seem to interact with texture, its perception may have been amplified by odorant information. A perceptual taste–taste interaction may also occur during apple consumption. The use of masking agents could thus become a useful tool to better understand the perception of several sensations of real natural foods whose formulation cannot be modulated.