THE UNIVERSITY OF TENNESSEE KNOXVILLE

Sensory & Consumer Science Research Group
Department of Food Science

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Our lab focuses on three topics: 1) **olfactory perception**, 2) **crossmodal food perception**, 3) **texture perception and oral processing**. Besides our own research interests we have also partnered with other researchers to assess the sensory properties of foods of interest to their research.

Crossmodal Food Perception When we perceive food we use multiple senses. Often the sensory information from one modality influences the perceived sensory experience in other senses. We look at this interaction, known as crossmodal correspondence, in the several aspects of the eating experience.

Olfactory perception

While humans only have approximately 400 odor receptors, our ability to identify and discriminate odors far out paces the number of receptors. Furthermore, food odors are often mixtures of compounds that can exhibit perceptual suppression or synergism. We are investigating how small changes to an odor mixture are detected and how factors such as familiarity play a role in a person's ability to detect these small changes. The goal of this line of research is to better inform producers of products with a complex aroma and provide much needed data to those research groups studying the physiological underpinnings of olfaction.

Food texture perception & oral processing

The texture our food perceives is heavily dependent on oral processing parameters such as salivary output and chewing behavior. Therefore, to truly understand food texture perception it is important to account for oral processing factors. Additionally, we know very little about texture as a multidimensional food attribute. To help inform our understanding of texture, we use consumer research. This is the research topic that we have the most experience with and is the central focus of our lab.