



Hungarian University of Agriculture and Life

Sciences

Buda Campus

Institute of Food Science and Technology

MSc THESIS

The effect of virtual reality sensory testing in different environments.

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Abstract.

This study digs into the realm of sensory science, exploring the integration of Virtual Reality (VR) technology into traditional sensory evaluation methods. Techniques like Check-All-That-Apply and Just-About-Right are utilized to pinpoint specific sensory attributes. The study investigates the effectiveness of VR sensory testing compared to conventional approaches in the field of food science. Our research is the evaluation of two different virtual reality environments (a food court and a park) on the perception of samples. We set up the virtual sensory unit in those events for product tasting and sensory valuation in the virtual world, and then observing a connection with the usual sensory tank at the same time. By evaluating two different VR environments, the research line up to understand how these settings influence the perception of samples among participants. The study involved 40 participants, contributing diverse perspectives to the investigation. Results suggest that VR enhances sensory perception by providing immersive and dynamic environments, leading to a more engaging evaluation process. Different VR settings, such as food courts and parks, significantly impact sensory perception, with environments closely replicating real-life settings yielding more authentic responses. Advanced VR technologies broaden the scope of sensory evaluation by offering a variety of sensory stimuli. Participant responses varied depending on the VR environment, highlighting the importance of environmental settings in evaluation. Future research aims to address factors such as simulator sickness and visual resolution, further advancing VR sensory testing methodologies. Longitudinal studies and cross-cultural investigations are proposed to explore the long-term effects and cultural influences on sensory perception in VR environments. Integration with biometric technologies offers a potential for deeper insights into physiological responses during sensory evaluations.