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Physical properties of different nut butters

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The objective of our experiment was to investigate the differences between four nut pastes, which were the following: walnut, peanut, pistachio, and tahini (sesame). The process technology of them is unknown, however, all the products contain 100% nut without any additives or flavouring. The paste samples were measured at $25 \pm 0,2$ °C temperature. The apparent viscosity at a 10 1/s shear rate during flow curve recording, and the dynamic viscosity at a constant 20 1/s shear rate was determined by viscosity measurement with the use of the MCR302 modular compact rheometer. The $L^*a^*b^*$ color components were determined by ColorLite sph850 spectrometer, finally, the particle sizes and shapes of the samples were analyzed by the high-speed image analysis instrument QICPIC.

The apparent viscosity and the average dynamic viscosity values of the four nut pastes were significantly different from each other. Differences were found between each paste according to the $L^*a^*b^*$ parameters. The complex structures of the particles are detailed and measurable, whereby the lengths and diameters of the particles can reliably be determined and fine deviations between the samples are detected. The sphericity decreases slightly with increasing particle size which means that bigger particles are more irregularly shaped.

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Food Safety and Quality Assessment of an Automated Vending Machine for Smoothies-A Case Study

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The development of the vending machine business has significantly increased over the last few decades. Concerns have been raised about assuring consumers of the safety of food served in vending machines due to the industry's rapid growth. In order to guarantee the safety of the food sold in vending machines, food safety and quality control are essential.

The purpose of this paper was to implement Good Hygiene Practices (GHP) and assess the quality and safety parameters of smoothies sold in vending machines. Frozen ingredients, water, blender, and smoothies were microbiologically analyzed to evaluate the microbial safety of ingredients, equipment, and the final product.

Microbiological analysis showed that none of the samples were contaminated with three major pathogens: *Listeria monocytogenes*, *Salmonella* spp., and *Escherichia coli*. This study showed the importance of the Clean-in-Place (CIP) process in automated vending machines.