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Abstract	:	Air frying has become a healthier alternative to deep-frying in recent years. Researchers have taken various technical approaches to reduce the oil content of fried products without compromising the quality of the product. Therefore, this study aims to improve the alternative method of providing healthier foods with the same sensory characteristics compared to deep-frying foods. Innovative Air-Fryer's (IAF) functionality was evaluated by measuring the core temperature and observing the appearance of cooked chicken flesh at different fan speeds in 30 minutes. Additionally, the study on the fan speed expanded using a moisturizing agent to observe its influences on moisture and lipid contents. The core temperature of the chicken flesh was measured using a digital thermometer while moisture and lipid content were measured using a moisture analyzer and the Soxhlet method, respectively. Consequently, the highest core temperature of samples after 30 minutes was observed at Speed 4 which is 78.7°C. The highest moisture content was obtained at speed 4 which is 36.9% in 15 minutes. The value of lipid content decreases with the increase in fan speed due to the shorter time it takes for chicken flesh to reach the designated temperature. The lipid content using IAF at Speed 4 (1.12%) is significantly lower compared to the samples cooked using the deep-frying method (3.99%). In conclusion, increasing fan speed during 30 minutes of cooking will increase the core temperature of food and positively impact moisture and lipid content.