研究業績　英文表記

和文	
表題	機械そうめんの食感のミクロ構造的解析
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英文	
Title	Microstructural analysis of the texture of machine-made somen noodles
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Abstract	The objective of this study was to elucidate the texture characteristics of machine-made somen noodles based on their microstructure. The findings of sensory tests revealed that the firmness (elasticity) of somen noodles increased in the following order: machine-made somen (Kanzaki Somen, MS1), hand-pulled somen (Ibonoito, TS), and machine-made somen (Number One, MS2). On the other hand, when firmness was determined by measuring breaking strength, somen was stronger in the order of MS1 < MS2 < TS. Synchrotron radiation computed tomography (CT) scan measurements showed that the TS somen (dry noodle) had a large band of voids at their center, and that some of these bands of voids remained after boiling. This difference in the structure of the outer and inner portions is thought to be the reason for the higher firmness. On the other hand, the small voids that were evenly distributed inside the machine-made somen noodles were identified as the cause of the low breaking strength. However, the sensory tests showed that MS2 had higher firmness than TS, suggesting that the rate of water absorption during boiling also affected somen texture.
keyword	somen noodles, breaking strength, sensory test, synchrotron radiation CT scan, internal structure

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