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Suppression of Salt Absorption by Edible Acidic Biopolymers and Its Application to Food

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Summary

Salt improves food taste and is effective for food preservation. Indeed salt is essential for human being life, but its excess intake may not be good for health. In this study, we aim to reduce the salt entry into the body by suppressing the sodium absorption. The utility of acidic biopolymers were examined for sodium absorption *in vivo* and *in vitro*. The binding activity of sodium was examined by equilibrium dialysis method. As a result, alginic acid, phytic acid and pectic acid showed high sodium absorption activity *in vitro*. *In vivo* experiments, pectic acid was administered to rats and their gastrointestinal tracts were observed. The sodium contents of portal vein were analyzed after intake of pectic acid. The significant difference between pectic acid and control diet was not observed in our conditions.