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# A novel salt substitute containing amino acid and low sodium processed meat

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Salt is one of the most important necessaries in food processing and cooking. However, the excessive intake of sodium can cause a rise in blood pressure for human beings, thus increasing the risk of cardiovascular and renal diseases. Methods of reducing sodium intake have attracted great attention in all over the world. In this investigation, we invented a novel salt substitute which is extracted from the cuttlefish bone aqueous extracts. Based on the experimental study, a final optimal formulation of the salt substitute was determined: the contents of NaCl, sodium gluconate, KCl, KOH, L-histine and L-lysine are 42.8%, 3.5%, 45.2%, 0, 1.5% and 7.0%, respectively. The sodium content in the salt substitute is 56.3%, which is less than that in a NaCl solution of the same degree of saltiness.

The low sodium salt is applied in Kamaboko processing. There was a significant transformantion in the protein secondary structure, which had a good effect on the hydrophobicity and solubility of myosin. Specifically, the gel strength, springiness, water-holding capability and hardness of myosin gel with salt substitute are strengthened. Also, the salt substitute has been successfully utilized in dry-cured ham (e. g. Jinhua Ham, a famous brand of China), sausage and western ham. Analysis shows that the final products which are processed with low sodium salt not only keep the traditional flavor, but also display a bright red color and high juiciness.

## Biography

Yu-Xia Zhu received the M. S. degree in Pharmaceuticals from Jiangnan University, China, in 2013. Now she is doing her Ph. D. degree in Food Science with College of Food Science and Technology, Nanjing Agricultural University since 2016. Her current research fields are food emulsifier and salt substitutes. Zengqi Peng is her doctoral supervisor. Zengqi Peng, PhD, a professor in Nanjing Agricultural University and National Center of Meat Quality and Safety Control, majors in meat science. He devotes himself to the green manufacture technology (GMT) for processed meat in recent years. Now I am researching on the reduction of sodium chloride in food industry.

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