

Development of Sensor with High Selectivity for Saltiness and Its Application in Taste Evaluation of Table Salt

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(Received September 17, 2009; accepted December 25, 2009)

Key words: saltiness sensor, saltiness, bitterness, charge density

Previous research has focused on using taste sensors to evaluate very low concentrations of minerals in table salt that cannot be detected with the senses, indicating potential applications in salt quality control. However, the poor selectivity of taste sensors for salt and the inability to evaluate the total taste due to the presence of other tastes, such as bitterness, besides saltiness have become new research topics. Our work aims to improve the selectivity of sensors for saltiness by optimizing the sensor components for foodstuff applications. Furthermore, we have evaluated saltiness with a high correlation to human sensory saltiness evaluation scores by a new analysis method using saltiness sensors with positively and negatively charged membranes. We hope that the optimized saltiness sensors and new analysis method can be used in evaluating the taste of salt in the general foodstuff industry.

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