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# Quantification of Sourness and Saltiness Using a Multichannel Sensor with Lipid Membranes

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Membranes composed of two kinds of lipids showed electric potential behavior similar to that of the receptor potentials of biological taste cells. Sourness and saltiness were quantified by utilizing a multichannel sensor with these membranes. The sensitivity, reproducibility and durability of this sensor were superior to those of humans. The intensity of sourness obtained from the sensor matched the level of human sensitivity. Interaction between sourness and saltiness could also be detected.

## 1. Introduction

In human beings, there are five senses (sight, hearing, tactile, taste and smell). We judge the deliciousness of foods by utilizing all the senses: the deliciousness consists of not only the taste of the food itself but also the appearance (sight), flavors (smell) and the sensation to the tongue (tactile).[1] In addition, the mental condition influences the deliciousness of foods. Due to these facts, the sense of taste is difficult

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