

Taste Sensor Chip for Portable Taste Sensor System

Shinichi Etoh*, Lingyan Feng¹, Kenichi Nakashi², Kenshi Hayashi³,
Akira Ishii⁴ and Kiyoshi Toko³

User Science Institute, Kyushu University, Fukuoka 819-0395, Japan

¹Graduate School of System Life Sciences, Kyushu University, Fukuoka 819-0395, Japan

²Department of Electrical, Electronic and Computer Engineering,
Kyushu Institute of Technology, Fukuoka 804-8550, Japan

³Graduate School of Information Science and Electrical Engineering,
Kyushu University, Fukuoka 819-0395, Japan

⁴Faculty of Design, Kyushu University, Fukuoka 815-8540, Japan

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A taste sensor chip miniaturized on the basis of the one-chip-size receptor part of a conventional taste sensor, which can measure taste using lipid/polymer membranes, was fabricated. The reference electrode in the taste sensor chip realized the miniaturization and stabilization of potential using a multilayer structure of a pHEMA layer and other polymer layers. In this study, we improved the stability of the taste sensor chip during the measurement by changing the material of the partition of the taste sensor chip to plastic. We successfully integrated the working and reference electrodes on the chip. The portable taste sensor system was composed of the taste sensor chip, an integrated electric signal processing part and a laptop computer. We considered that the design of the portable taste sensor facilitates the easy manual measurement of taste. By realizing the taste sensor chip and the portable taste sensor, taste measurement can be easily performed anywhere.

*Corresponding author: e-mail: etoh@usi.kyushu-u.ac.jp