

Selectivity Control in a Sweetness Sensor Using Lipid/Polymer Membranes

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We studied the selectivity control in a sweetness sensor with lipid/polymer membranes. Sweet tasting substances such as sucrose, fructose and glucose are nonelectrolytes and therefore are susceptible to interference from electrolytes and/or adsorptive substances. In this study, we focused on suppressing the adsorption of bitter and astringent substances on a membrane surface. The membrane was designed to be electrically neutral to avoid interference from electrolytes. Additives used in this experiment have a hydroxyl group and are not protonated compounds, which change the hydrophobicity character of a membrane. The results show that *n*-tetradecyl alcohol reduced the responses to bitter and astringent substances.

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