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**Exploring sweet taste preferences across age and familiarity of sweeteners**

E. Mura\*, H. Nagai

*Suntory Business Expert Limited, Japan*

Overconsumption of sugar taken from beverages is a serious problem in obesity. Indeed, Japanese consumers who are health conscious tend to choose no-calorie drinks when they purchase sweet beverages. Given this situation, various non-caloric artificial/natural sweeteners are used in beverages worldwide to reduce calories. However, there are many different properties between caloric and noncaloric sweeteners: taste quality, binding site of sweet receptor and transduction pathway. These properties may relate the perception of sweetness and preference, but little is known about the relationships between preference and properties of sweeteners. Here we explore sweet taste preference through the sensory evaluation. More specifically, we focused on the effect of age and familiarity of sweeteners.

A total of 176 healthy Japanese adults participated in the test. Subjects exposed their mouth to sweet solution and spit it out. They rated their preference on a 9-point hedonic scale used a rank rating scaling method. Seven solutions contain caloric or non-caloric artificial/natural sweeteners with equivalence of sweet intensity as sucrose were used. Separately, subjects answered a questionnaire about frequency of commercial beverages.

Results are discussed in terms of age and familiarity associated with the perception of sweet solution. As a conclusion, it is considered that younger generation around twenties prefer artificial sweetener more than elder generation.

Keywords: sweet preference, beverage, rank rating scaling method