

RESEARCH REPORT - No. 1508 FY 2015

Title of research project	Study on the intake estimation method for the evaluation of flavouring
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Name of principal research Investigator (PI)	Kyoko Sato

【Abstract】

JECFA adopts the single portion exposure technique (SPET) in addition to the maximized survey-derived intake (MSDI) method to estimate the dietary exposure of flavouring agents for use in the Procedure for the Safety Evaluation of Flavouring Agents (the Procedure).

SPET is based on flavour-industry recommended use levels for each flavouring agent in food categories, in combination with standard portion sizes. The standard portion is taken to represent the mean food consumption amount for consumers of that food category, assuming daily consumption over a long period of time. Among all the food categories with a reported use level, the dietary exposure from the single food category leading to the highest dietary exposure from one portion is taken for the SPET estimate.

In order to adopt the SPET as an estimation method of the dietary exposure of flavouring agents in Japan, the standard portion sizes appropriate for Japanese dietary habits were considered in this study.

Based on the data on the usual daily diet in Japan taken from the Special Survey Study of the Frequency and Level of Food Consumption (2005-2007) (government confidential report), the 50th percentile of daily consumption for eaters of each food was calculated. These 50th percentile values were allocated to 76 food categories used in the JECFA SPET, depending on the type of each food. The maximum of the 50th percentile values in each food category was assigned to the temporal portion sizes of the food category, and through the detailed examination of the data, the “Japanese” standard portion size of each food category was confirmed. Then the SPET values for 209 flavouring agents were calculated using the Japanese standard portion sizes, and applied to the Procedure to evaluate the safety of these flavouring agents in Japan.

For 4 food categories, the Japanese standard portion size exceeded the standard portion size of the SPET used by JECFA. The SPET estimated values of 2 flavouring agents calculated using the Japanese standard portion sizes were higher than those used at JECFA in its evaluation of these 2 substances. However, the conclusion of safety in use as flavourings of these 2 flavouring agents, evaluated through the Procedure using the estimated Japanese SPET values, did not change (= no safety concern). It was concluded that the SPET values using the standard portion sizes used by JECFA in its safety evaluation of flavouring agents were applicable for Japanese to evaluate the safety of the flavouring agents.