Identification of Ideal Plain Sufu (Fermented Soybean Curds) Based on Ideal Profile Method and Assessment of the Consistency of Ideal Profiles Obtained from Consumers

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Abstract : The Ideal Profile Method (IPM) is a newly developed descriptive sensory analysis conducted by consumers without previous training. To perform this test, both the perceived and the ideal intensities from the judgements of consumers on products' attributes, as well as their hedonic ratings were collected for formulating an ideal product (the most liked one). In addition, Ideal Profile Analysis (IPA) was conducted to check the consistency of the ideal data at both the panel and consumer levels. In this test, 12 commercial plain sufus bought from Hong Kong local market were tested by 113 consumers according to the IPM, and rated on 22 attributes. Principal component analysis was used to profile the perceived and the ideal spaces of tested products. The consistency of ideal data was then checked by IPA. The result showed that most consumers shared a common ideal. It was observed that the sensory product space and the ideal product space were structurally similar. Their first dimensions all opposed products with intense fermented related aroma to products with less fermented related aroma. And the predicted ideal profile (the estimated liking score around 7.0 in a 9.0-point scale) got higher hedonic score than the tested products (the average liking score around 6.0 in a 9.0-point scale). For the majority of consumers (95.2%), the stated ideal product considered as a potential ideal through checking the R2 coefficient value. Among all the tested products, sample-6 was the most popular one with consumer liking percentage around 30%. This product with less fermented and moldy flavour but easier to melt in mouth texture possessed close sensory profile according to the ideal product. This experiment validated that data from untrained consumers could be guided as useful information. Appreciated sensory characteristics could be served as reference in the optimization of the commercial plain sufu.
Keywords : ideal profile method, product development, sensory evaluation, sufu (fermented soybean curd)
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