

〈第10回大会ラウンドテーブルディスカッション「官能評価」〉

総 論

1) 官能評価と嗜好性

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Sensory Evaluation and Preference

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Abstract

- 1) What is sensory evaluation? In the 1950s and '60s, Sensory testing or inspection was formalized as a method to evaluate and test qualities of products, without reference to measuring instruments. However, as the manufacturing process is more automated, and quality level of suppliers become higher, the necessity to assess quality by human sensory organs declined, while replacement by instrumental measurement is in progress. In contrast to the declining needs in manufacturing, importance of sensory evaluation become more conspicuous in R & D section. Hence, the term "sensory test" is replaced by the term.
- 2) Measurement of sensory intensity. Precision is improved by the advancement of scientific concept (like "magnitude estimation", proposed by Stevens, S.S.) and micro-electronic devices. Pictures shown in the lecture are our attempt to record and analyze time-intensity curves of taste, with microcomputer (PC-9801 F2) and MS- mouse. In case of olfaction, similar method will be useful, and further elaboration may be expected. However, it is difficult to apply these methods to problems of preference.
- 3) Description of sensory qualities. Until recently, what words are used in the description of products, belonged to a technical secret of enterprises, however, collaboration of several enterprises are now in progress in most of the advanced countries. First, collection of relevant words. Second, grading of relevance by specialists. Third, description of standard stimuli by those selected words. Fourth, correlation analysis of those 40 – 50 words, in order to condense into less-than-10 dimensions. Results indicate rather good agreement among countries, which is a testimony of validity.
- 4) Statistical treatment of data. Post-war advancement of statistics and diffusion of computer facilities was the main tool to treat objectively the subjective aspects of sensory experiences. However, some of qualities are pervious to these techniques, assuming continuous properties. So-called qualitative data and ordered data are common in sensory evaluation. In the last two decades, mathematical methods were developed to cope with these data, including multi-dimensional one.
- 5) Preference survey. Is it predictable or not? Preferences reflect affective and emotional processes of subjects, which fluctuates more easily than sensory processes, and it is affected considerably by cultural-historic factors and socio-economical conditions. Hence, most attempts to predict people's preferences only from physico- chemical properties of products have failed. In case of costume fashions, we can trace its historical currents by time-series analysis of pictures in magazine, or we may guess trends from periodical observation data, at some fixed places (e.g. Ginza crossroads, Aoyama Avenue, etc.). However, our accumulation of cosmetics data in the past is too scanty to extract definite trends. In the long run, we should adopt similar survey as those of fashion observatory.