their salivary response overall stimuli. The CRD showed a significant difference among the taste responses of the groups whereas the RMD did not. The CRD tests the group effect against the residual error term, and considers the judges a fixed effect. The RMD tests the group effect against an error term that reflects variability among subjects within group, and considers the judges a random effect.

Relationship between visual appearance and other sensory attribute of beef meat

A. Brugiapaglia, G. Destefanis & M. T. Barge
Dipartimento di Scienze Zootecniche, Via Genova 6, 10126 Torino, Italy

The authors have studied the relationships between judgement on appearance of raw meat and judgements on tenderness, juiciness, overall acceptability of cooked meat, expressed by a trained panel of some researches carried out in the authors' department. When the meat of bullocks of the same breed, age and weight at slaughtering has been examined, the correlation between appearance and the other sensory characteristics was inexistent. On the contrary, when the meat came from beefs different from factors of a certain importance (breed, sex, age) the visual evaluation of raw meat gave a good provision of the eating qualities.

The triangle test compared with signal detection measure

Peter Dürr
Federal Research Station for Fruit-Growing, Horticulture and Viticulture, CH-8820, Wädenswil, Switzerland

The triangle test is widely used to check the existence of a perceptible difference between two samples. It is easy to understand and to perform but ambiguous, since the results strongly depend on experimental design, panel size and the panellist's experience. Furthermore, triangle data provides only little information on the degree of difference. An alternative is the short-cut signal detection measure, proposed by O'Mahony in 1979. A practical comparison is made between the two methods. Twenty-two pairs of juices, wines, waters and biscuits were tested with unt· ·ned and unselected consumer panels. The percentage of correct answers above chance from the triangle test is plotted against the *R*-value of the signal detection measure. The two data types correlate well, except in the case of wine.

Importance of interindividual differences in quantitative descriptive psychophysics

Germaine Gazano
L'ORÉAL, 188-200 rue P. Hochart, Chevilly-Larue, 94152 Rungis, France
Patrick MacLeod[a] and Jean-Marc Sieffermann[b]
[a]EPHE, [b]ENSIA-MASSY, 1 avenue des Olympiades, 91305 Massy, France

The aim of this work was to evaluate the contributions of intra- and interindividual variances in data generated by quantitative descriptive sensory analysis. Thirteen sweet and 14 salty baby foods were evaluated by 46 subjects. The panel generated 15 descriptors for the sweet products and 11 for the salty ones. Each experiment was replicated three times. An excellent reproducibility of individual profiles was observed, but many significant differences were found between individual food profiles. Using principal component analysis and cluster analysis, a typological partition of the panel was then practised in order to minimise intragroup differences.

Stimulus intensity measurement by using individual reference ratings

Ruth Genner-Ritzmann, Barbara Guggenbühl Gasser, Felix Escher and Jürg Solms
Department of Food Science, Swiss Federal Institute of Technology, CH-8092, Zurich, Switzerland

A graphical quantitative scale has been developed for measuring small ranges of stimulus concentrations. This method has been applied successfully to determine equisweetness of sucrose and various sweeteners. The procedure starts with a discriminatory decision for differences between test and reference samples. Panellists are then asked to judge the perceived intensity of the reference sample and rate it individually on an open scale. Test samples are rated in relation to the individually fixed reference point. These ratings are normalised, thus taking into account individual perception of reference sample. Finally, data are treated statistically by both graphical and numerical procedures.