

Multidimensional measurement for individual differences in human sense of taste

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BACKGROUND

The means to describe people's sensitivity or perception of taste include detection and recognition thresholds, suprathreshold intensity measures, sensitivity to PROP, and fungiform papillae count. These means describe only partly our sense of taste.

The hypothesis: several taste stimuli must be evaluated when individual differences in taste perception is researched.

MATERIALS AND METHODS

Test procedure	<ul style="list-style-type: none"> Intensity rating of four concentrations of a prototypic taste compound (see fig.1) Served in random order, sip-and-spit method
Subjects	<ul style="list-style-type: none"> 205 Finnish volunteers Age 19–79, 80 % females
Data collection	<ul style="list-style-type: none"> With Compusense five plus ISO 8589 Sensory lab, University of Turku Line scales from 0 (no sensation) to 10 (extremely strong)
Statistics	<ul style="list-style-type: none"> Hierarchical clustering of standardized intensity ratings, Unscrambler X ANOVA for differences between clusters, IBM SPSS Statistics

Hierarchical clustering was used to group subjects based on intensity ratings of a taste compound.

CONCLUSIONS

- ✓ The clustering revealed distinctive groupings for taste qualities
- ✓ The number of subjects in clusters varies. Thus a person doesn't belong necessarily to the same cluster in every taste quality.
- ✓ Are mean and sd good descriptors for consumer taste data? Could consumer segmentation be done with taste sensitivity?

Individual differences in taste perception depends on taste quality and concentration level.

RESULTS

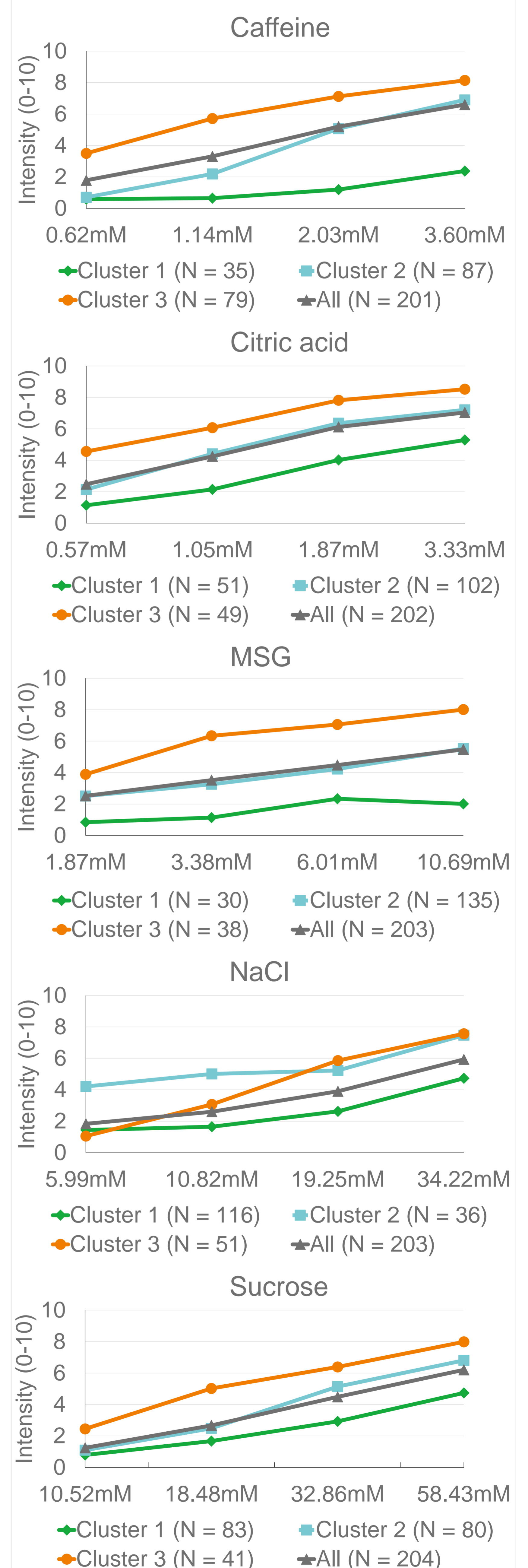


Fig. 1. Mean intensities by sample in clusters and in entire sample population. There is a statistically significant difference ($p < 0.001$) between clusters in every concentration/compound.

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