Analysing L-shape data in sensory and consumer sciences

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In the analysis of consumer liking data, one is interested not only in the liking data themselves, but also in how liking ratings relate to sensory properties of the food products and consumer attributes, such as socio-demographics, attitudes, and habits. The data sets for such situations can be formulated within a so-called **L-shape**. The information obtained from investigating all three data sets and their links is important for product developers and marketers to improve product properties, product communication, and marketing strategies of new food products.

This tutorial looks at different ways to (1) interpret the relations between consumer likings, product properties, and consumer attributes; (2) handle consumer segments in this L-shape data. We will focus on a *one-step procedure* called L-Partial Least Squares (L-PLS) regression, and a *two-step procedure* (TSP) using standard Partial Least Squares (PLS) regression methods along the horizontal and vertical direction in the L-shape separately.

We will give an overview of how two procedures work, how they differ from interpretation, and some potential extensions. For each method, guidance will be also provided, and data analysis will be done in R.

At the end of this workshop, attendees will have a better understanding of analysing L-shape data and interpreting the relation between consumer likings, product properties, and consumer attributes in R.

Duration	3 hours
Audience	Sensory and consumer scientists who are interested in interpreting the relation between sensory data and consumer data.
Background	While intermediate knowledge of statistics is helpful, it is not mandatory.
Laptop	Attendees are encouraged to bring their personal computers with the latest version of R installed.