

Insights on product optimization

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Aims and Scope

Optimizing samples is a critical step in product development as it allows companies to get closer to the consumer's optimal sample, hence increasing the chances of market success.

Originally, optimization was performed through statistical modelling that combined sensory description of the samples gathered from trained panels to the consumers liking responses. Such approach has been extended with data collection methods that include directly the information regarding optimal product (Ideal Profile Method, Just About Right Scale).

This tutorial will give you comprehensive insights on the statistical models and how they can be efficiently used to help you with your product optimization. Original (e.g. Preference Mapping) as well as more recent methods (PrefMFA, PLS based models, etc.) will be presented and discussed.

The aim of this tutorial is to propose an overview of the *statistical methods for optimization*, including:

- Finding your drivers of liking;
- Building your preference maps (PrefMap, PrefMFA, PLS_based map);
- Estimating the profile of your optimal sample from the external preference map;
- Communicate the information to product developer, and compare the solution to reformulated samples.
- Looking at an alternative interactive tool based on PLS.

Outline

Topics will include:

- introduction to the notion of drivers of liking, and how to get them;
- construction of preference maps: the Danzart method;
- alternative preference maps: PrefMFA;
- estimation of the sensory profile of the optimal sample;
- comparison to a re-formulated sample;
- interactive model using PLS regression.

Duration: 0.5 day

Audience: Students, researcher or professionals who would like to learn more about this methodology, or who would like to learn a new way of getting relevant information from consumers.

Background: No prior knowledge is required.



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Going Further

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Software: All these steps will be presented in R by using the SensoMineR package, except the last one that would be performed using OptiPAQ.

Requirements: As a requirement, please bring your own laptop if possible (in case you do not have administrative rights, please contact me prior to the webinar and I'll inform you with the software that need to be installed)