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Use of Napping and CATA in industrial R&D, Tools for guidance in the product development process

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How can we make the product development process more efficient, and still obtain the right product quality? Can Napping and CATA contribute with relevant guidance in this process? These methods have both been investigated in an academic context, however to answer the questions above, it is necessary to explore the methods in an industrial development process. A leading Norwegian meat producer has recently been working on a line extension, and in order to ensure an efficient development process, both napping and CATA were implemented in the process.

1. Introduction

Descriptive profiling (QDA) has been a common industrial approach for many years, but recently several alternative methods have been developed and explored. This poster will show how the use of Partial Napping and CATA can give directions and guidance in an industrial product development process and discuss strengths and weaknesses of this approach.

2. Materials & Methods

In order to ensure an efficient development process, a working group at Nortura SA established the following plan focusing on pilot scale products:

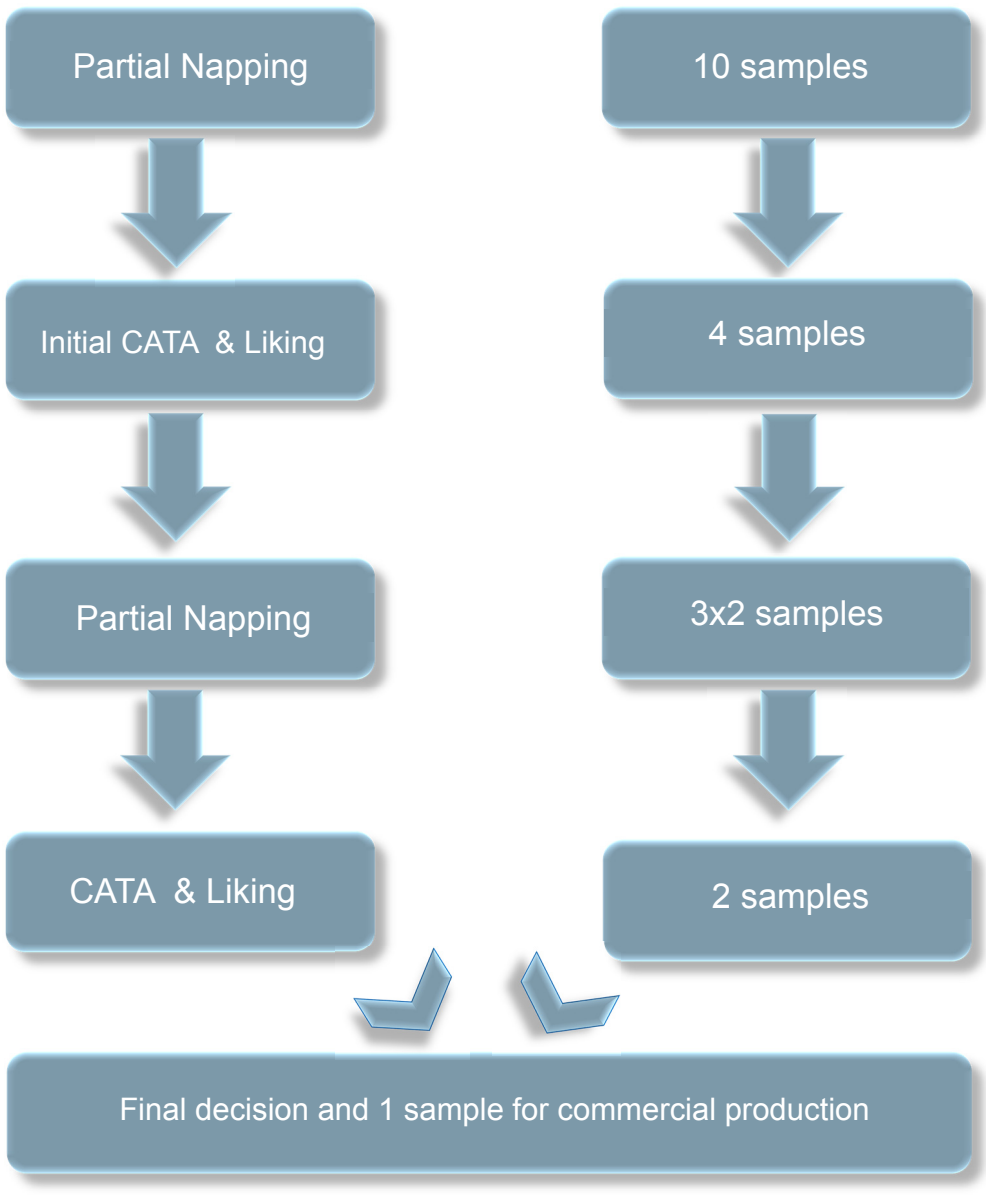

Figure 1 Product development process from the beginning with a set of 10 different samples, brought down to one sample for commercialization.

3. Results & Discussion

Partial Napping was an efficient and constructive method to sort, describe and select samples in the product development phase, both in an early phase and later on in the process.

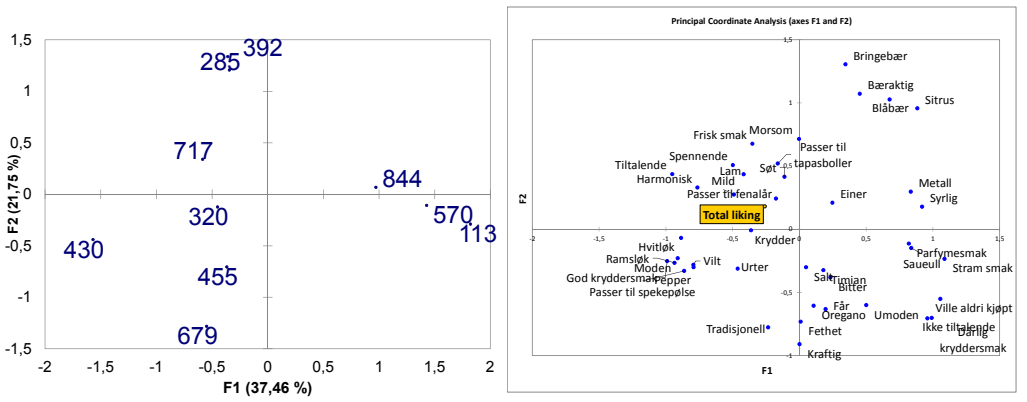

Figure 2 presents the correlation plot form the first Napping (left), and the results from the CATA whit total liking (right).

A sample size of 10 was on the maximum of what the panel could handle. However, they managed to differentiate between the sweet samples, the herb samples and the ones with onion-like flavoring (figure 2). Also CATA was appropriate in the product development process; it gave most relevant information used together whit a hedonic liking scale.

The combination of the two methods, CATA and Partial Napping, gave relevant and objective information, which is a large advantage in securing high quality products in the development process.

Conclusion

This project gave both important insight and a valuable set of tools regarding the product development process. Partial Napping is absolutely appropriate for the early development phases. It gives valuable information about the products, as well as direction to further development. CATA together with the hedonic liking test gave more information than consumer liking tests alone. Both methods appeared to be efficient and easy to implement in an industrial product development process.

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