

# Senso'Flash

A new methodology approaching expert panels' sensory profiles with consumers, based on their experiences

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## Introduction

Sensory profiling: Mainly with **expert panels** performing QDA

- Rather weighty implementation
- Maintaining panels represents a cost
- Less viable for occasional profiling

Faster methods based on consumer ratings already exist:

- Direct use of QDA methodology (1), but vocabulary (descriptors) needs to be adapted to consumers
- Assessment on CATA questions (2), but qualitative data obtained
- RATA rating (3,4,5), but contradictory and controversial results

Development of a **new methodology**

- Objectives**
- Use very technical vocabulary
  - Obtain QDA-type data

How to collect this type of data with consumers?

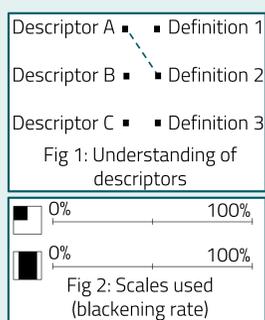
## Methods

**Senso'Flash methodology** { CATA-RATA approach, based on consumer experience + experts vocabulary

*Hypothesis: "We are all experts to evaluate some products on some dimensions"*

Ad-hoc recruitment:

- Consumers of the product
- Understanding the definitions of descriptors (Fig. 1)
- Right use of rating scales (Fig. 2)



Adapted evaluation:

- Consumers rate a descriptor only if they feel comfortable enough to do so
- Then, they evaluate descriptor intensity on a 0 to 10 continuous scale

Not all consumers will feel comfortable with all descriptors: need **enough panellists**

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## Main results

### Selection of descriptors

Number of descriptors selected to be evaluated by consumers varies: They use the instruction asking only to rate descriptors with which they feel comfortable.

### Discrimination

All **RV** coefficients obtained on product spaces discrimination were **above 0.80**. See below (Figure 3) product space for face creams.

### Description

Standard deviations of descriptors are larger for consumers than for experts (on average 2.4).

Nevertheless, results are close to those obtained with experts: through a face cream example (Figure 4), it is noticeable that among three descriptors evaluated less consensually, two have a low intensity rating (approximately 2/10 for consumers and 0/10 for experts). The other difference, on skin results, could be linked to skin type variability among consumers.

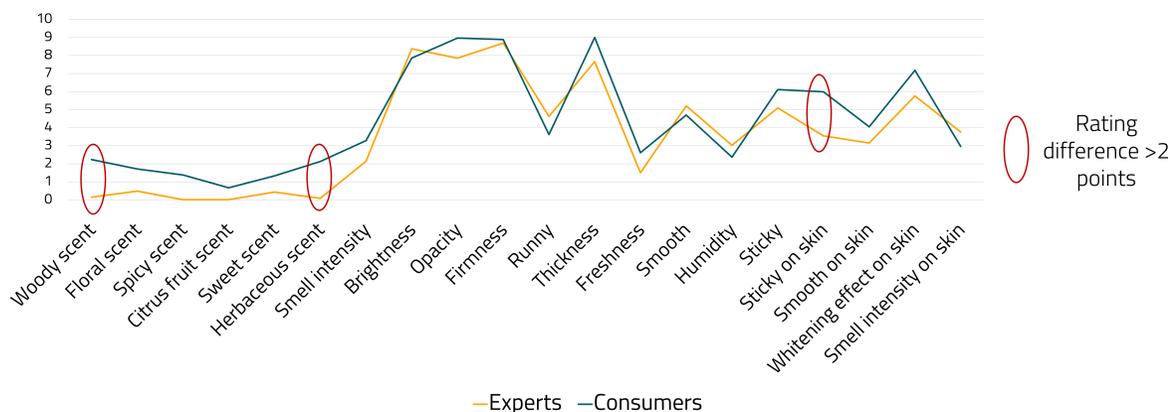


Figure 4: Experts and consumer profiling of a cosmetic cream (N32)

With multivariate regard, **RV** coefficients are more variable, rely on some descriptors **technicity** and **proximity**. A link could also be made with the number of consumers initially surveyed:

- Processed Cheese description quality < Chocolates et Cosmetics
- Chocolate descriptors are, for example, well evaluated (Figure 5).

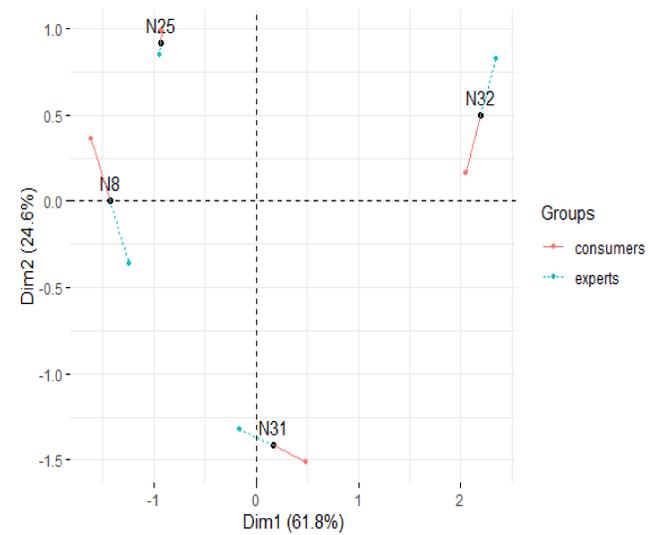


Figure 3: MFA realized on cosmetic products (RV =0.94)

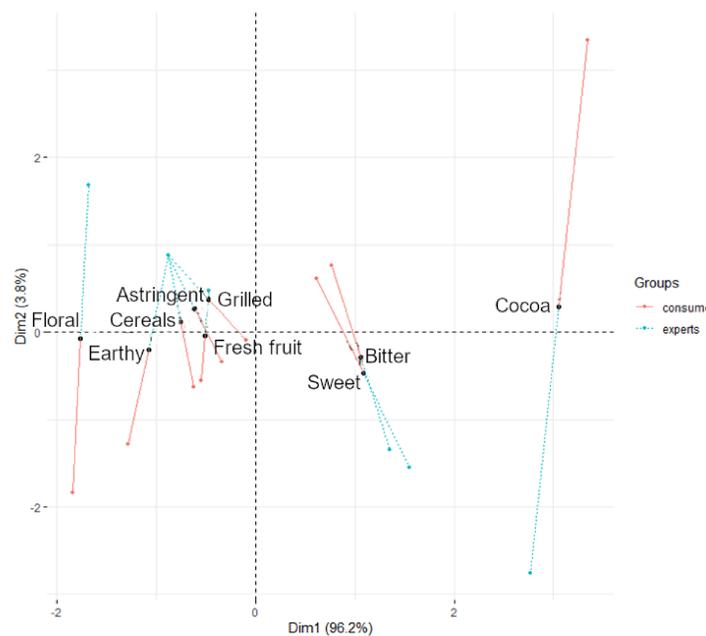


Figure 5: MFA realized on chocolate products (RV =0.86)

## Collaborators



## Materials

Three different tests with experts profiling comparison

Product type	Senso'Flash panel number	Experts number / source	Number of common descriptors	Products number	Test location
Face cream (cosmetics)	102	8 / internal	20	4	CLT
Chocolate (food)	98	6 / Puratos	9	4 + 1 duplicated	CLT
Processed cheese (food)	70	12 / Bel	30	5	HUT (1 day between each rating)

Face cream: Product range moderately differentiated

Chocolate: All with more than 70% cocoa rate

Processed cheese: Similar products, mainly variations of texture

## Supplementary results

**Repeatable:** On chocolate products test, consumers are repeatable on 96% of evaluated descriptors (scent + taste).

**HUT sensory tests:** Product discrimination is efficient in HUT, with high similarity levels between consumers and experts.

**Descriptive:** Descriptors less evaluated by consumers are not those further from experts ratings.

## Conclusion

Consumers are able, based on their experience, to be discriminating and also to describe products effectively. This conclusions can be made both on **food** products (usual on publications) and **cosmetics**. Products can be rather similar without impacting their good discrimination.

It is not necessary to have a lot of ratings on one descriptor to have a **suitable evaluation**.

It is possible to discriminate product in CLT but also in HUT, with one product evaluation per day.

## Perspectives

Identify the minimum number of consumers to be surveyed in CLT and HUT.

Take into account et understand impact of products diversity. Consider the similarity of perception of some descriptors to obtain more accurate selections.

## References

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