

# Monadic vs. Monadic Sequential

Best practice guidance derive from studies conducted in the period 2005 to 2012

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## Introduction

Having very well performing products is a key factor for success in a competitive markets. This requires the conduction of proper sensory consumer research. One of the most discussed topics is the test setup choice between a monadic and a monadic sequential test approach. There are many reasons stated whether to use one approach or the other. Both methods show their advantages.

This poster presentation brings acuteness to the following thoughts:

- Results are based on investigation of 36 European sensory consumer tests in different product categories (biscuits, dairy, convenience, juices, chocolate, pizza, ice cream, soups)
- The considered studies allow a direct comparison between both methods and to show the impact of monadic evaluation
- The results delivers arguments to choose the right approach according to the objectives

### Definition

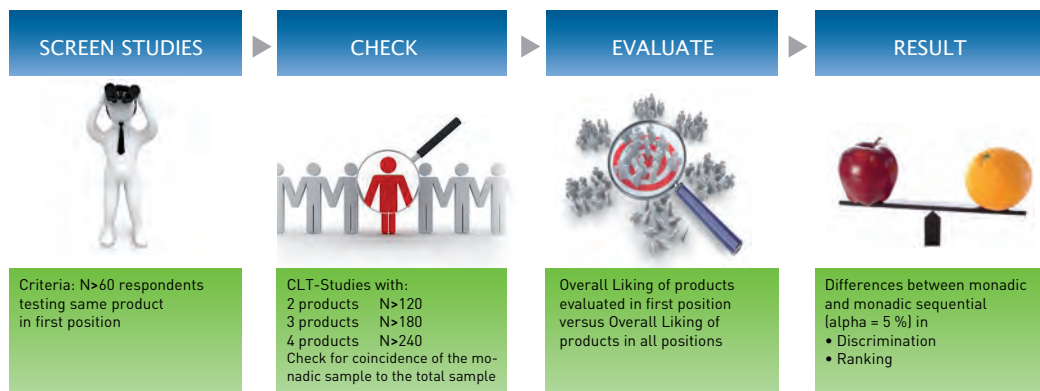


ID	POS 1	POS 2	POS 3
1	A	B	C
2	A	C	A
3	A	B	C
4	A	C	A
5	A		

Consumers evaluate one product. There is no comparison with other products.

Consumers evaluate several product in a fully balanced design.

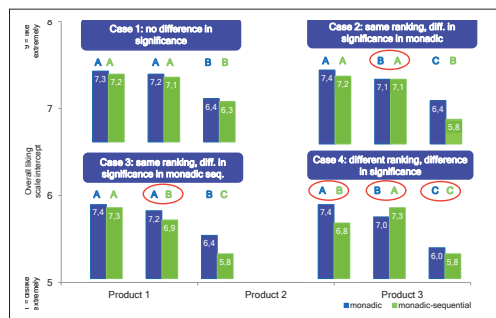
## Approach



## Results

The comparison of the data reveals 4 different hypothetical cases:

- Case 1: no difference in significance: **→ both methods deliver same results**
- Case 2: same ranking, significant differences in the monadic approach: **→ more discrimination in the monadic approach**
- Case 3: same ranking, significant differences in the monadic sequential approach: **→ more discrimination in the monadic sequential approach**
- Case 4: different ranking, significant differences between the approaches: **→ the different approaches deliver different results!**



Hypothesis	No. of studies	In % of studies
Case 1: no differences in significance	24	67%
Case 2: same ranking, difference in significance in monadic	2	6%
Case 3: same ranking, difference in significance in monadic sequential	10	28%
Case 4: different ranking, difference in significance	0	0%
<b>Total No. of studies</b>	<b>36</b>	<b>100%</b>

\* There is a tendency, that products tested in first position achieve higher overall likings. This is confirmed by another paper presented by SAM in Eurosense 2012 in Berne.

## Conclusion

### Monadic approach

#### Advantages

- Product effect is completely eliminated
- The test approach simulates more real life situation

#### Disadvantages

- Cluster analysis and consumer segmentation is not possible
- Discrimination between products is much lower compared to monadic sequential approach
- More expensive compared to monadic sequential approach

The approach delivers higher Overall Liking scores  
→ Higher benchmark must be set

Monadic Research Design	Characteristic	Monadic Sequential Research Design
No	Product effect	Yes (but balanced)
Higher	Overall Liking Score	Lower
More	Real Life Simulation	Less
No	Cluster Analysis	Yes
Less	Discrimination	More
More	Cost	Less

### Monadic sequential approach

#### Advantages

- Cluster analysis is possible and allows to identify consumer segmentation
- Discrimination between several products is higher and submits better basis for decisions and product improvements
- Cost saving (cheaper than the monadic approach)

#### Disadvantages

- Test scenario simulates less the real life situation
- There is a product effect (is mainly compensated by the balanced test design)

The approach delivers lower Overall Liking as mean score  
→ Lower benchmark must be set