

# Characterization of commercial plant-based yogurt analogues to explore potential market niches

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## INTRODUCTION:

Consumers' demands have led to the emergence of many vegan alternatives to different traditional foods, some with characteristics which accurately mimic the target food, but other with many differences with the goal category. One of the first steps for new products development is to explore competitors and products already present in the market. The aim of this research was the screening of commercial yogurt/analogues samples plant-based yogurt versus dairy Greek yogurt.

## METHODS:

A screening of 11 yogurt/analogues samples, 10 plant-based and 1 Greek yogurt, was conducted using:

- ☼ Sensory analysis: napping technique
- ☼ Physico-chemical analysis: pH, total acidity, dry extract, total soluble solid (TSS), instrumental color, texture
- ☼ Microbiological analysis: Plate Count Agar (PCA) for lactic acid producing bacteria

## RESULTS:

- ☼ Napping test showed 4 different clusters (**Figure 1**)
- Greek yogurt was associated with creamy, acid and sweet descriptors while all plant-based yogurt analogues were associated with legume-like, tasteless or watery attributes
- ☼ PCA results showed that plant-based yogurts had  $\leq 5.5 \times 10^5$  UFC/mL
- ☼ Physico-chemical results showed significant differences ( $p < 0.05$ ) among samples (**Table 1**)

Table 1. Physico-chemical analyses results.

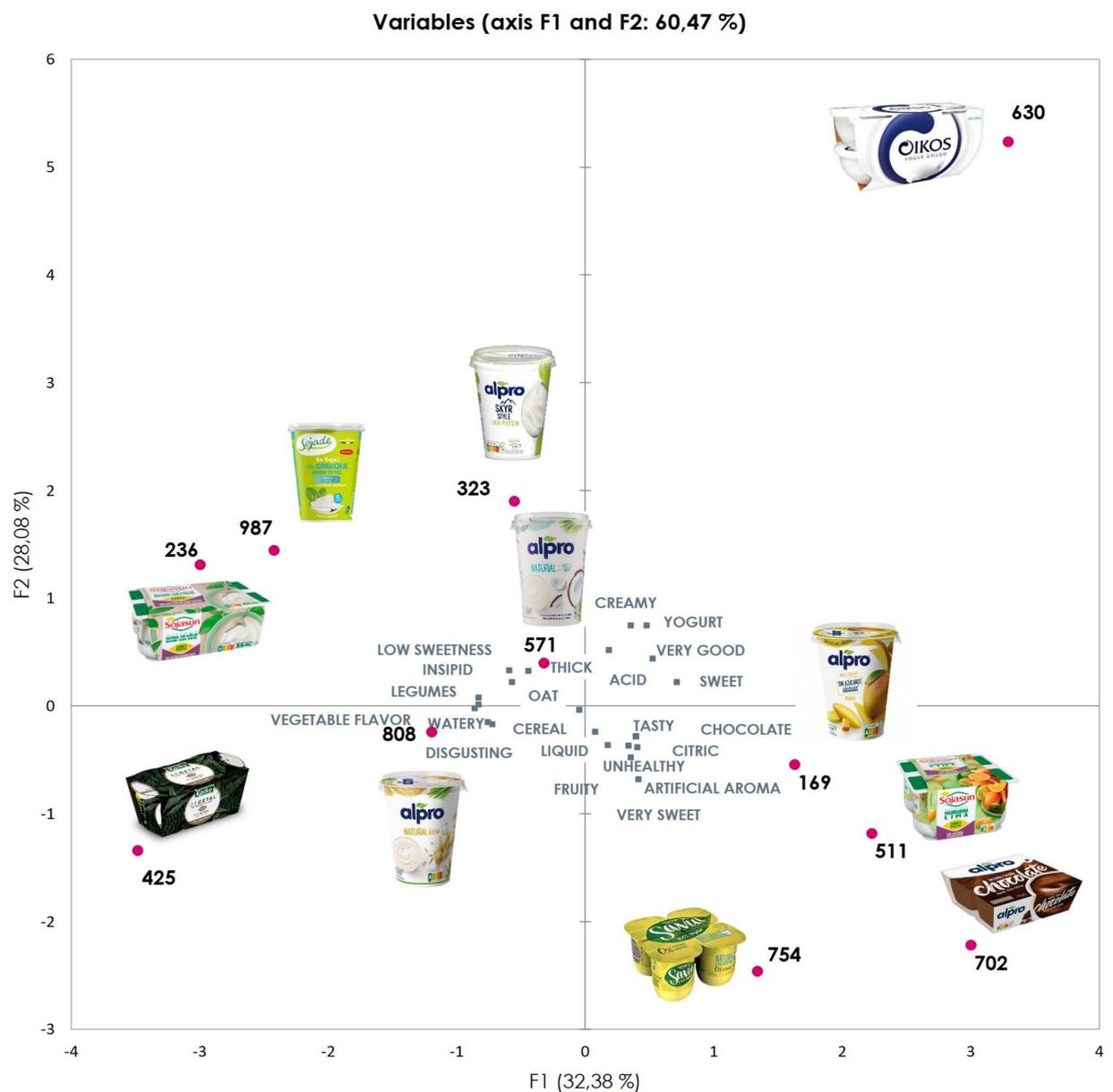
Physico-chemical analysis	Range
pH	4.3 - 4.6
Total acidity (g lactic acid/100mL)	0.25 - 0.98
TSS	3.7 - 10
Dry extract (%)	9.4 - 15.2
Color L*	87.6 - 81.4
b*	7.3 - 21.2
Texture: consistency (g)	655 - 1915

Table 2. Napping test yogurt code.

Code	Plant-based yogurt
169	Soy-mango
236	Soy
323	Soy-high protein
425	Almond-vanilla
511	Soy-tangerine
571	Soy-coconut
702	Soy-chocolate
754	Soy
808	Soy-oatmeal
987	Soy-greek style

Code	Dairy yogurt
630	Greek style



## CONCLUSION:

- ❖ Results provide a general overview of plant-based yogurt analogues currently available in the Spanish market.
- ❖ Understanding analogues products gives the opportunity to develop and improve new products within this category.

### Acknowledgements: