

# A Comparison of 6 Snack Bars Using Flash Profile

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## Introduction

Companies need to get to market faster. Shrinking product development time lines require quicker sensory methodologies with meaningful results to guide the scientist during the product development stages.

Descriptive Analysis is a qualitative and quantitative method widely used in sensory evaluation. However, it is an expensive and lengthy method which requires a consensual lexicon creation on the product category and training an expert panel on evaluation procedures. This process could take weeks to complete depending on the type of product used.

Flash Profile is a quick sensory method that assesses the relative position of products. It is a comparative procedure derived from Free Choice Profiling where the panelist chooses his/her own attributes to evaluate a set of products and ranks them on the chosen descriptor.

## Materials & Methods

- 9 expert descriptive panelists with no prior experience in the product category were selected to evaluate 6 marketed bars.
- Flash Profile, a comparative evaluation procedure derived from Free Choice Profiling and ranking of the product set based on personalized attributes and evaluation.
- A total of 38 texture attributes were used by panelists. Each panelist used between 7 to 17 attributes for product evaluation.
- The texture evaluation portion of the project was completed in two sessions of two hours each.
- One-way Analysis of Variance (ANOVA) was used to understand the discrimination ability of attributes.
- Generalized Procrustes Analysis (GPA) and Principle Component Analysis (PCA) were performed to assess the degree of consensus among panelists' rankings and identify the main texture dimensions.

## Results & Discussion

- Two sensory dimensions were identified that explain 84% of the variance in the consensus profiles of the 6 snack bars.
- Figure 1 demonstrates attributes that are correlated with each of the dimensions. Although panelists used different terms in the Flash Profile, the similarity in meaning of the terms that are correlated with each dimension indicates that there was agreement among panelists' perceptions of the products.
- Figure 2 shows the product map. Axis 1 differentiates products that are rough, crunchy, crumbly and dry in the mouth vs. products that hold together and are moist, soft and gummy. Axis 2 differentiates products that are dense, chewy and stick to the teeth and roof of the mouth vs. products that have a flaky, crumbly or cake-like texture.

## References

Dairou, V. and Sieffermann. JM, 2000. A comparison of fourteen jams characterized by conventional profiling and a quick original method, the Flash Profile. Journal of Food Science vol. 67:826-834

Sieffermann. JM, 2002 Flash Profiling. A new method of sensory descriptive analysis. In: AIFST 35th convention, Sydney, Australia, 21st-24th July 2002, [www.perceptionsensorielle.com](http://www.perceptionsensorielle.com)

## Objective

To quickly understand the sensory positioning of 6 snack bars and generate descriptive terms to aid in product development.

## Conclusion

The sensory map provided by Flash Profile allowed quick positioning of the products in the sensory space and assess the relative positioning of the products.

The panelists did not require any training and were able to provide solid results on 6 snack bars in 2 short sessions using Flash Profile. Panelists generated 38 terms for 6 snack bars and mapped the product to guide product development.

Figure 1: Attribute Map

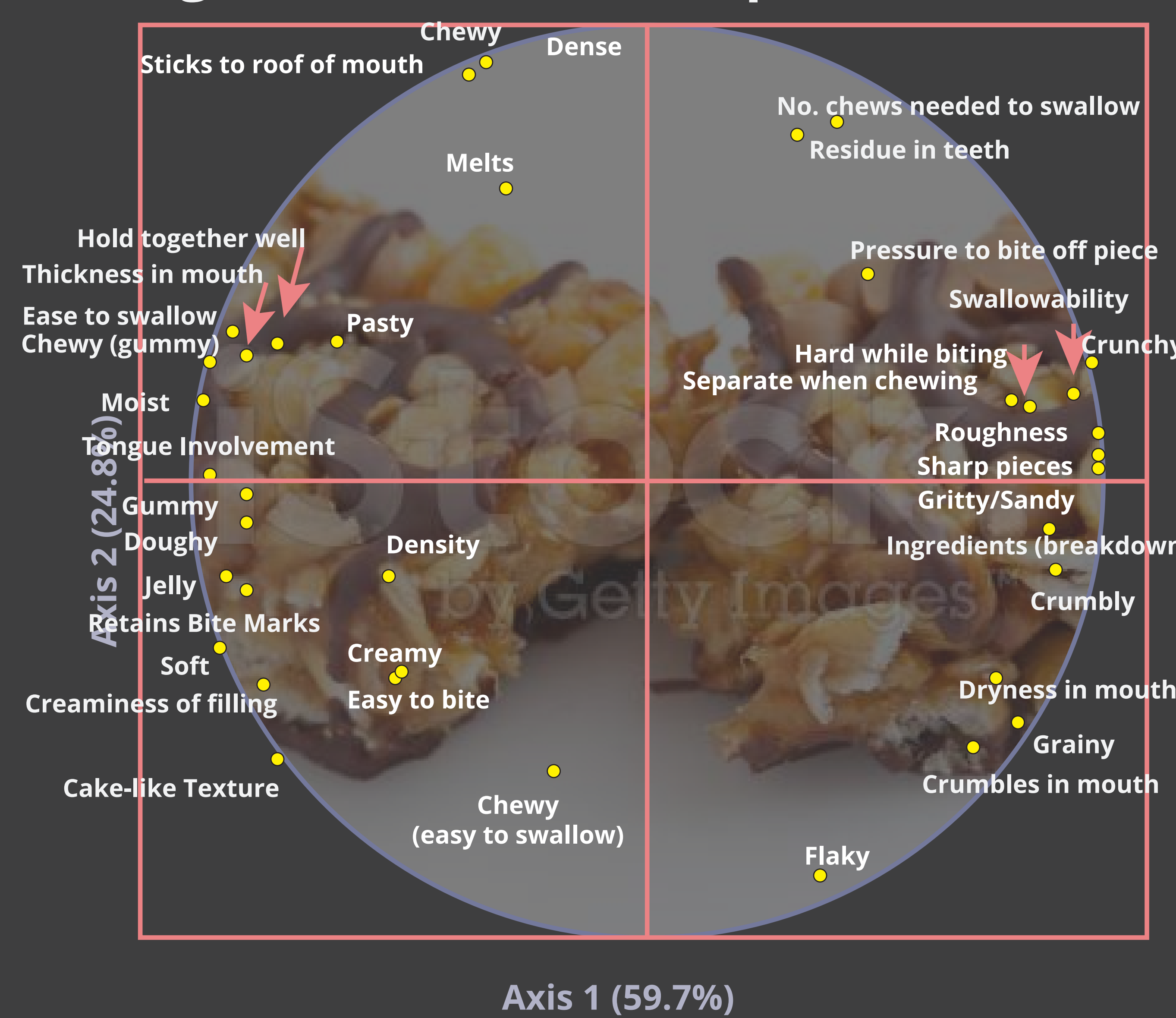
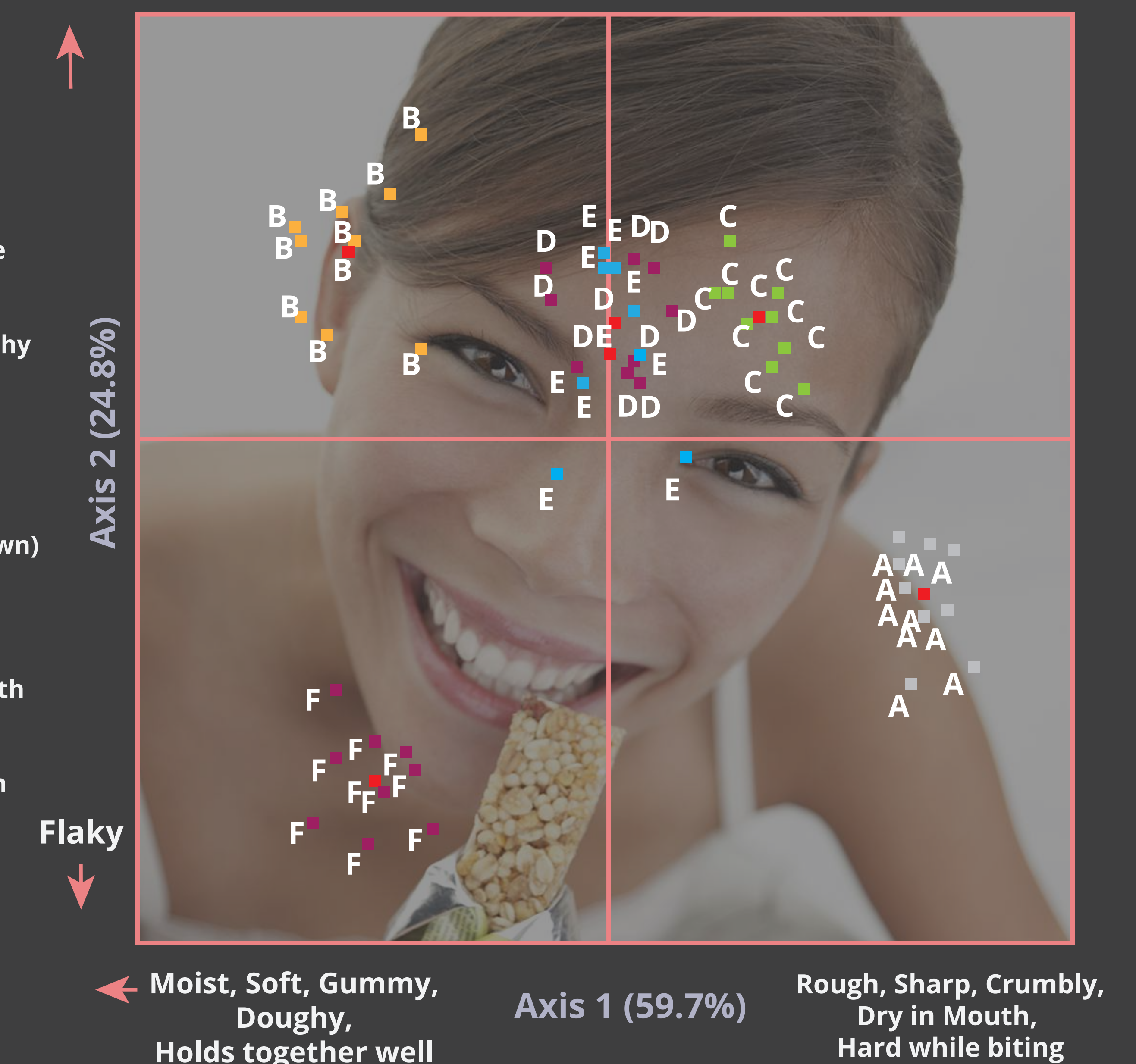


Figure 2: Product Map



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