

Influence of given information in the sensory perception of industrialized orange juice

Geovanna S. Pereira*, Alice R. Honorio, Bruna R. Gasparetto, Carla M.A. Lopes, Diana C. Nunes, Alline A.L. Tribst

Abstract

This study assessed how the sensory perception of orange juice change according to the information given to the consumers and to the size/ industrialization level of the cities where the consumers live. Results indicate that fresh squeezed orange juice was preferred and that industrialized juices acceptance (especially pasteurized and sterilized) is high in cities with high demography and increase when information about the juices were given. On the other hand, the juices prepared from concentrated samples (fruit liquid concentrate / frozen concentrated) had worse evaluation. These results highlight the importance of providing information about the processing and characteristics of different industrialized juices to consumers, allowing them to make more conscious choices about what they will consume.

Key words:

Sensory evaluation, orange juice, information to consumers.

Introduction

Orange juice is the world's most consumed industrialized juice (Gadioli et al., 2013). The lack of knowledge about juice processing by consumers can lead to wrong interpretation about nutritional characteristics and safety of the products, reflecting in the generalized rejection of industrialized juices (Gadioli et al., 2013). This study aimed to understand how the knowledge and beliefs of consumers about processed juices affect their sensory perception, as well as understand how this perception can change according to the information received.

Results and Discussion

Image 1. Multiple factor analysis of orange juice samples

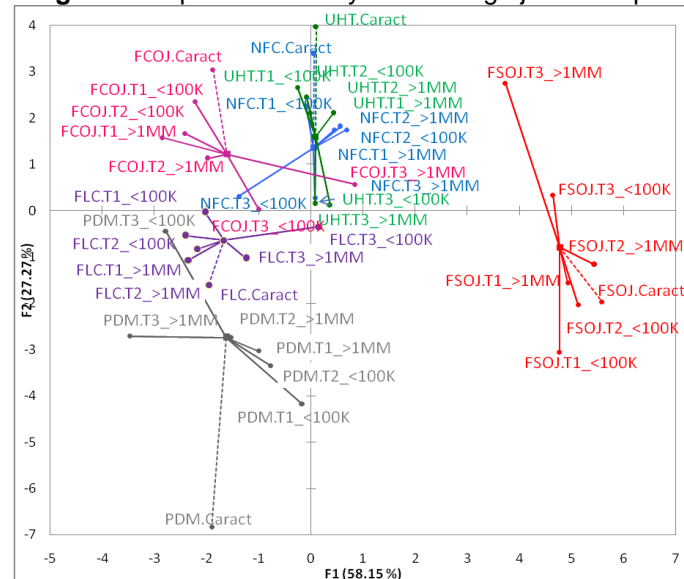


Image 1 shows a multifactorial analysis (MFA) leads from the sensory acceptance (aroma, color, flavor, sweetness, acidity, consistency and overall liking) of fresh squeezed orange juice (FSOJ), pasteurized not from concentrate orange juice (NFC), sterilized orange juice (UHT), frozen concentrated orange juice (FCOJ), orange fruit liquid concentrate (FLC) and powdered orange drink mix

(PDM). Data was collected in two different cities (< 100 K / > 1 MM inhabitants) and in three blocks of tests: blind (T1), informed (T2) and wrongly informed (T3) (same instruction of T2, but serving a mix juice FSOJ: PDM: NFC (1:1:1) as each sample).

It was observed that FSOJ and PDM were separated from other juices, showing that people have an ingrained concept about them, regardless of the information received or the size of cities. Thermally treated juices (UHT and NFC) had similar evaluations in the same test / city, but acceptance differences were observed between cities (people from cities with high demographics tend to evaluate them positively by classifying these juices closer to FSOJ samples). Juices prepared from concentrated samples (FCOJ and FLC) had worse evaluation, possibly due to the lower ratio (brix/acidity) of the samples after dilution. T3 highlight the impact of information given to the consumers, since different sensory perceptions were observed when people try the same juice (PDM had worse acceptance than other industrialized, while FSOJ was the sample with higher acceptance).

Conclusions

- People have a strong concept about PDM and FSOJ, not altered by the information received about them.
- People from cities of high demography tend to better evaluated industrialized juice (NFC, UHT);
- FLC and FCOJ had worse evaluation by consumers, possibly due to its lower ratio (brix/ acidity);
- Information given exerts a fundamental role in juice acceptance, being able to change sensory perceptions of consumers.

Acknowledgement

We would like to Thanks SAE/ UNICAMP for Geovanna Pereira fellowship and CEFET/ RJ for scientific partnership.

Gadioli, I. L., Pineli, L. D. L. D. O., Rodrigues, J. D. S. Q., Campos, A. B., Gerolim, I. Q., & Chiarello, M. D. (2013). Evaluation of packing attributes of orange juice on consumers' intention to purchase by conjoint analysis and consumer attitudes expectation. *Journal of Sensory Studies*, 28(1), 57-65.