

Does the consumer perception of aroma and flavor agree with the new Brazilian soluble coffee classification?

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Introduction: Brazil is the world's largest producer and exporter of soluble coffee (SC)¹. The consumption in the country has been increasing after the creation of a sensory evaluation and classification protocol in 2022 by the Brazilian Association of Soluble Coffee Industry (ABICS)¹, considering the perception of attributes, which vary according to the species and industrial processing used, such as roast degree, extraction factor (EF), drying method (freeze-drying and spray-drying) and aroma recovery (AR). As a result, SC products were distributed in three classes by ABICS: "Excellence" (E), "Premium" (P), and "Classic" (C). But do consumers perceive and agree with this evaluation? The aim of this study was to evaluate the acceptance and sensory perception of samples from these categories by SC consumers, trying to answer this question.

Materials/Methods:

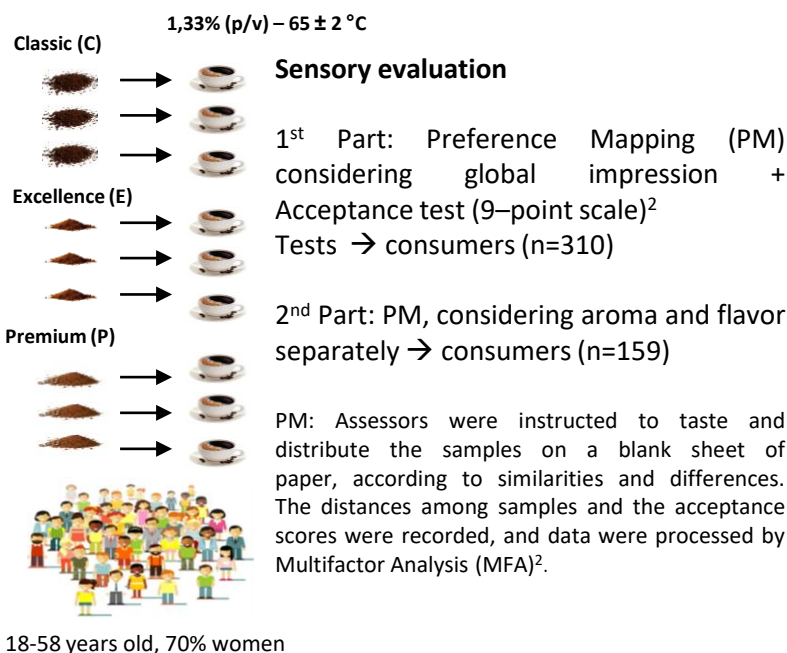


Figure 1: Study experimental design

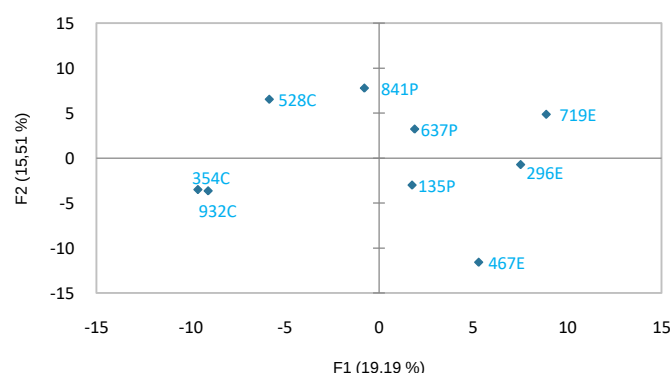


Figure 2: Dispersion of instant coffee samples by aroma similarity in PM (Note: PM Result from global impression was very similar to this result).

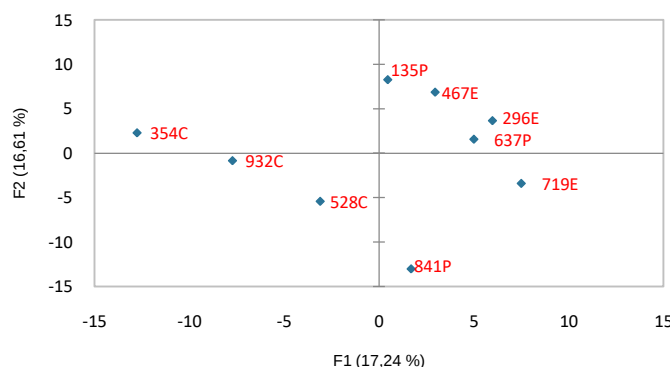


Figure 3: Dispersion of instant coffee samples by flavor similarity according to the evaluators.

Results/Discussion: About 70% of consumers were young adults. The large majority reported preference for traditional and dark coffee (85%); 59% consumed instant coffee; 62% usually sweetened their beverages. In parts 1 and 2 (Figs 2 and 3), assessors were able to distinguish the three classes, especially regarding global impression and aroma, with C (100% spray-dried canefora) samples, located more distant from P and E in the MFA charts. The freeze-dried 100% arabica sample, E3 was placed away from the spray-dried ones. P3 (100% spray-dried canefora) was placed closer to C samples. P1 (100% arabica; freeze-dried) was placed closer to E samples. Acceptance scores varied vastly among assessors, with no difference among mean values (5.8 for C, 5.5 for P, 5.5 for C, in a 9-point scale)¹.

Conclusions & Perspectives: These results indicate that the consumer's perception of aroma and flavor is in accordance with the classification by ABICS, but with little distinction between P and E, especially regarding flavor. Furthermore, the species, together with EF, and the drying method, were the main factors for distinguishing and grouping samples.