PU 606 DO ROASTING CONDITIONS AFFECT CONSUMER LIKING FOR COFFEE BEVERAGES?

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Brazil is the first coffee producer and the second world market consumer of the beverage with potential for an increasing consumption in the near future. Coffee consumers are becoming more demanding in terms of beverage quality, and, as a consequence, the industry has to optimize coffee processing to deliver products that meet consumer expectations. Coffee roasting is a relevant step for the development of coffee flavor and aroma. It has a considerable effect on the beverage sensory characteristics, which will impact on consumer liking. Therefore, investigating consumer liking is a matter of recognized importance in the development and optimization of coffee beverages because it plays an important role when one chooses and buys such product. Considering that variation in taste attributes impact hedonic responses, it is important to investigate the consequences of different roasting conditions on consumer beverage liking. This study aimed at investigating the effect of roasting coffee conditions on consumer liking of beverages, taking into account individual preferences, in order to identify possible market niches. Brazilian good quality green Arabica coffee beans were roasted by varying the roasting temperature gradient in a semi-fluidized bed roaster (three speed conditions: slow, medium and fast), and the colour (moderately light and dark), yielding six different types of beans. Fifty-seven coffee drinkers (at least one cup of black coffee a day: 21 males and 36 females, aged between 18 – 65 years old) participated in the study. They evaluated the six beverages in terms of liking using 9-point structure hedonic scales, which varied from 1: disliked extremely to 9: liked extremely. Demographic and frequency of consumption data were also collected. Coffee brews at 10% (weight/volume) were prepared in electrical coffee makers using mineral water and monadically served to participants at 68 ± 2°C in white porcelain cups coded with three digit numbers, following a balanced presentation order. They were evaluated in sensory booths under white light. Data were analyzed using ANOVA, Preference Mapping and Cluster Analysis. The first three dimensions of the PCA accounted for by 72.8% of the variance. The first dimension separated samples by roasting colour, and lighter coffee beverages were more liked by consumers, regardless of the speed conditions. Three segments of consumers were identified with different appreciation of samples. However, most of them (segments 2 and 3, 67% of participants) didn't like dark roasting in all speed conditions. The results demonstrated the importance of using consumers to identify adequate green coffee roasting conditions, and may provide valuable information to the industry.

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