Qualitative study on consumer willingness on value flavored spice coffee

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1. Introduction

The target coffee is defined as a coffee beverage comprised with coffee element. Coffee element of the target coffee is derived from a plant of the family *Rubiacea,* Genus *Coffea*. The coffee element can take the form of soluble coffee, roast and ground (Morrison et al., 1997). The coffee element may be caffeinated, decaffeinated, or a blend of both. The coffee source component modifiers may be obtained with any of these additional ingredients, in a suitable form, such that they are capable of adjusting the perceived concentration of the coffee source component, in the final consumable form of the coffee beverage (Yuwono et al., 2019). The desired mean particle size distribution of the coffee component particles and the flavoring component particles of the present finding is determined in part by the exact type of coffee component and flavoring component in the range, from about 250µm to about 2360µm, and the moisture level in the range, from about 1% to 4.5%. The ratio of coffee component particle size is in the range, from about 100:1 to about 5:1 (Sargent et al., 2005). Sensory test has mainly focused on untrained general consumers and their feedbacks on different spice flavored coffee under 9 point hedonic scale-ranking test. The main approach of this study is to determine sensory acceptance for admixing dry coffee compound with dried flavoring ingredient of spices and willingness of university students and to determine whether there is a significant difference between plain coffee and flavored coffee under Kruskal Wallis test, SPSS 2017 (Prakash et al., 2000).

2. Materials and Methods

A total of 6 different types of coffee were selected and assessed in this study; natural spice powders were added to Arabica coffee. Cinnamon flavored, ginger flavored, clove flavored, vanilla flavoured, cardamom flavored, and masala flavored coffee coded as F1, F2, F3, F4, F5 F6 respectively (Table 1). All coffee samples were bought from Indian Export Company and spices were collected from supermarket. Coffee samples were stored at room temperature, in a cool, dry storage area. Commercially packaged coffees were opened fresh on each trial day.

Coffee preparation
A kettle was filled with cold water and boiled to 100°C. Once the temperature of the water in the kettle cooled to 95°C, a cafetiere was warmed by filling it with 130 ml of the boiled water and swirling it around 30 seconds (s). Fresh filter coffee powder (20g) and spice powder (0.2g) was added into the cafetiere. The cafetiere was filled with 1070 ml of boiling water, and the contents were stirred after adding sugar (80g) with a metal table spoon. A 237-ml paper-based cup (methyl cellulose internally and externally coated with polythene) was filled with approximately 30 ml of flavored coffee was served for panelist at 70°C.

3. Results and Discussion
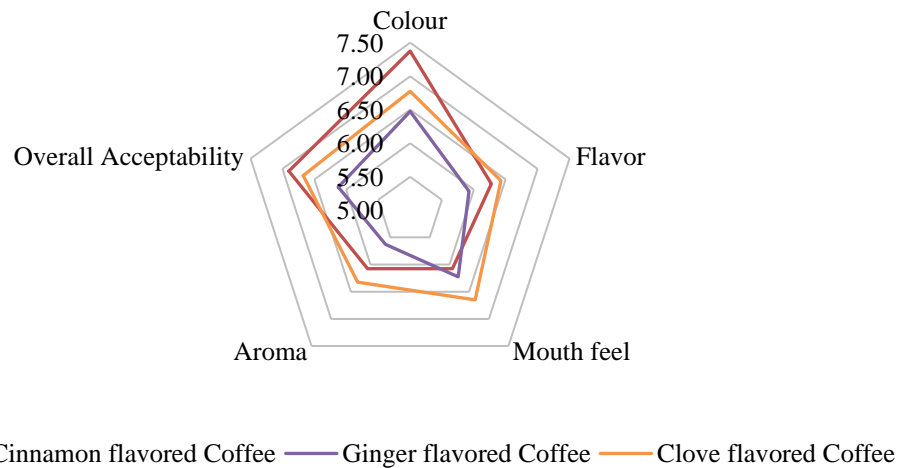
Figure 1. Consumer willingness on cinnamon, ginger and clove flavoured coffee with 9-point hedonic scale
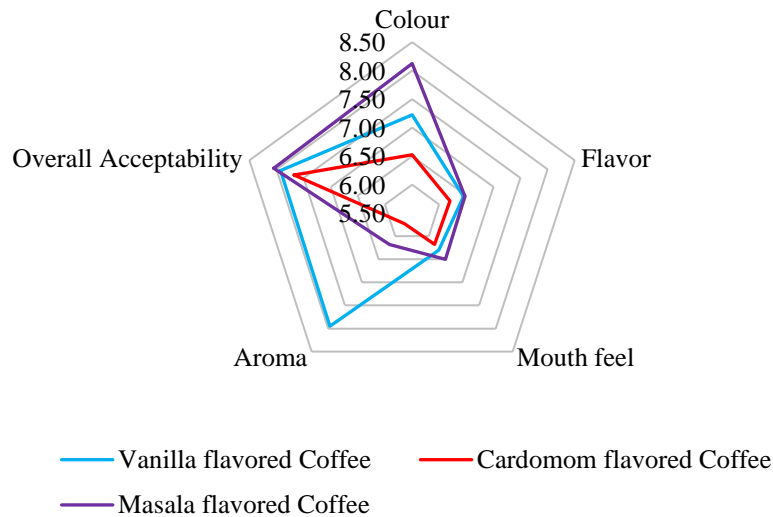
Figure 2. Consumer willingness on vanilla, cardamom and masala flavoured coffee with reference to 9-point hedonic scale

Mean of colour

F2< F5< F6< F3< F4< F1

Based on Robust test for equality means P (0.042) <0.05 and mean values of colour is significant.

Mean of flavour

F2< F5< F1< F3< F4< F6

Based on Robust test for equality means P (0.745)>0.05 and mean values of flavor is not significant.

Mean of Mouthfeel

F1< F5< F2< F4< F6< F3

Based on Robust test for equality means P (0.708)>0.05 and mean values of flavor is not sginificant.

Mean of Aroma

F2< F5< F4< F6< F1< F3

Based on Robust test for equality means P (0.496)>0.05 and mean values of flavor is not significant.

Mean of Overall acceptability

F2< F5< F4< F3< F6< F1

Based on Robust test for equality means P (0.301)>0.05 and mean values of flavor is not significant.

According to the Kruskal Wallis test, there is a significant difference between the flavored coffee and the plain coffee at 0.05 level of significance (P 0.01<0.05). Thus, consumer preference has increased with flavor, aroma and taste.

4. Conclusions

There is also market potential for a good quality spice flavored coffee in local and export market. Commercial prototype formulations can be developed from the information obtained in this study. This study can be extended further with trained panelists with different proportions of coffee and spice powders.

5. References

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