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A Study of Tea Consumption Pattern and Quality Attributes of Local and International Black Tea Brands in Malaysia

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Structured Abstract

Background: Tea is derived from leaves of Camellia sinensis plant, producing different types of tea such as black, green, and oolong. Tea plays a part in Malaysian culture, as it is consumed daily and recognized as part of social interaction and cultural identity. This research will contribute to the existing scientific knowledge as it provides current empirical data about consumer consumption behaviour in Malaysia that has been overlooked entirely in current published research. Additionally, this research enhances understanding of the physicochemical properties of black tea brands in Malaysia, as well as how quality attributes relate to the preferences of consumers and subsequently their market behaviour; thereby, addressing a research gap in the Malaysian tea industry.

Methods: A tea consumption pattern questionnaire (n=196) was distributed via social media to collect data on demographics, consumption habits, preferences, and perceptions., and the data were analysed using reliability analysis. Triplicate black tea samples from four local and four international brands were analysed. Moisture content was determined using halogen moisture analyser (120°C), pH value was measured by using pH meter, particle size was analysed using sieve shaker, and bulk and tapped density were determined using measuring cylinder. Colour was measured by using chromameter, total sugar (TS) and total phenolic content (TPC) were analysed through spectrophotometer, while magnesium and sodium contents were determined using atomic absorption spectroscopy (AAS).

Results: Reliability analysis for questionnaire gives Cronbach's Alpha value of 0.55. For all physicochemical properties analysis, there is significant difference in mean between sample ($p<0.05$). OSK shows the lowest moisture content and the highest magnesium content, indicating greater quality. Lipton shows the highest pH, sodium content, and particle size, along with smallest difference between bulk and tapped density, reflecting greater physical quality. Dilmah exhibited the highest C* value for colour analysis, Cameron Valley had the highest TS, and Ahmad Tea had highest TPC.

Conclusion: In conclusion, demographic factors significantly influence tea consumption patterns. Within local brands, Lipton demonstrated greater physicochemical properties, while within international is OSK. Overall, international brands exhibited higher quality standards related to stability, appearance, and functional quality.

Keywords: Black tea, Tea consumption patterns, Physicochemical properties, Local and international tea brands

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