Estimation of Quality of Black Tea Grades by Different Brewing Methods and Their Chemical Composition

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The objective of the present study was to determine the optimal brewing methods and their contribution to the in-cup chemical composition as well as to correlate the chemical composition of tea infusions to their sensorial properties. BOP, PF1, FBOPF grades are obtained by different manufacturing methods. The fixed brewing temperature and time in preparation of tea for all grades were not effective for the extraction of full liquor characters to the brew. Black tea samples were brewed at different temperature levels (75 ℃, 85 ℃, and 95 ℃) for 2, 5, 7, and 9 min using three different high grown black tea grades. Highly trained seven panellists evaluated different tea grades using a seven — point hedonic scale. The data were analyzed through the Kruscal-Wallis non parametric ANOVA method. Conover-Inman method was used for the selection of the best treatment combinations. Two factor factorial design was used for chemical analysis in each type and to determine the polyphenol content, correlation between tea quality attributes and in-cup chemical composition. Across all three black tea samples at 12 different brewing temperatures and time combinations, 95 ℃ for 9 minis the best temperature and time combination for brewing all the black tea grades. Also the extraction of polyphenol was increased by prolonging the infusion time for 5, 7, and 9 minutes.

Keywords: Black Tea, Quality attributes, Brewing methods, In cup chemical composition