Roselle/sorrel (*Hibiscus sabdariffa* L.) wines with varying calyx puree and total soluble solids: sensory acceptance, quantitative descriptive and physicochemical analysis

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Abstract

Effects of varying roselle sorrel (*Hibiscus sabdariffa* L.) puree and total soluble solids (TSS) on physicochemical properties and sensory acceptance of wines were investigated. For puree, calyces were hot-water processed at 90°C for 30 min, cooled and treated with 1.0% pectolase at 23°C for 24 h. Wine treatments were w/v 20% puree/20°Brix, 30% puree/26°Brix and 30% puree/30°Brix. Wines varied in chroma (*P* < 0.05), pH (*P* < 0.01), total titratable acidity (*P* < 0.01), TSS (*P* < 0.01), transmission (*P* < 0.01) and sensory colour (*P* < 0.01), clarity (*P* < 0.01), flavour (*P* < 0.05), balance (*P* < 0.05) and overall acceptability (*P* < 0.05). Wines with higher puree had more acceptable (*P* < 0.05) flavour. Sorrel wine of 30% sorrel puree/26°Brix was most acceptable overall (*P* < 0.05) of wines, with descriptors of bright clarity, intense redness, high alcohol, strong balance and weak bitterness. The reading of health benefits on sorrel influenced (*P* < 0.05) only hedonic colour of wines. There was no (*P* > 0.05) correlation between hedonic scores and descriptive intensity scores.