Original article

Physicochemical and sensory quality of wines from red sorrel/rosette (Hibiscus sabdariffa L.) calyces: effects of pretreatments of pectolase and temperature/time

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Summary The effects of pretreating red sorrel (Hibiscus sabdariffa L.) calyces on the physicochemical and sensory quality of wines were investigated. Sorrel calyces were processed at 60 °C for 3.5 h or 90 °C for 30 min at 0%, 0.5% and 1.0% w/w pectolase addition in fermentation of wines. Significant changes (P < 0.01) in all physicochemical parameters of sorrel wines were found during fermentation, but not (P > 0.05) because of temperature/time effects. Colour (P < 0.01) became redder with pectolase and on storage at 23 °C for 2 months. Significant differences (P < 0.01) were noted in sensory quality for taste and flavour, balance, duration and overall quality. Higher (P < 0.01) overall sensory quality scores were obtained for wines by pretreatment at 90 °C for 30 min (10.44–11.06/20) when compared with wines at 60 °C for 3.5 h (6.88–9.06/20). Colour of wines from 90 °C/30 min was most saturated and red than all wines and had pH 2.57 ± 0.01, 0.43 ± 0.07% citric acid, 10.53 ± 0.53 °Bx and 15.29 ± 0.71% alcohol.

Keywords Hibiscus sabdariffa L., pectolase, physicochemical quality, pretreatment, sensory quality, sorrel, rosette, temperature, time.