

Original article

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

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(Received 13 January 2006; Accepted in revised form 15 May 2006)

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 , $0.43 \pm 0.07\%$ citric acid, 10.53 ± 0.53 °Bx and $15.29 \pm 0.71\%$ alcohol.

Keywords *Hibiscus sabdariffa* L. pectolase, physicochemical quality, pretreatment, sensory quality, sorrel/roselle, temperature/time.