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Nature of the invasive species Prosopis juliflora in Sri Lanka

Varieties of Palmyrah fruit, based on morphological charactereistics were collected from 8 locations. The fruit pulps were subjected to fermentation using a Saccharomyces cerevisiae strain ($1.2x10^7$ cells per 100g pulp).

Measurements of alcohol and initial and residual sugar and the rates of CO_2 evolution showed differences in rates and efficiency of fermentation differed in the different types of fruit pulps. As the rate of fermentation is related to sugar content, calibration plots (with the same number of cells) of % sucrose vs.g of CO_2 evolved at 24h were used to obtain a correlation factor for fermentation rate. Results showed that types from Anuradhapura and Anamaduwa had higher rates than in the stadstandard synthetic fermentaiton medium while the six other fruit pulps had lower rate of initial (24h) fermentation. The sample from Polonnaruwa gave only 20-30% of the normal rate of fermentation and with a 54% efficiency of conversion of sugar to alcohol compared with 83-95% for the other types of fruit pulp. Analysis of the fruit pulp of Polonnaruwa speciemen showed that it had 8-10 flabelliferins on TLC separation. Interestingly, the dominant flabelliferins on densitometry were not the ones that identified previously (Fb0 (nikawela 1998) as an anti-fermentation flabelliferin. Fermentation did not appear to cause a change in flabelliferin profile.