

INVESTIGATION OF THE NATURAL FERMENTATION OF
MARULA FRUIT JUICE

BY

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Abstract

In Marula fruit fermentation the fermenting microorganisms are part of the natural flora found on the fruit. The fruit juice was extracted and fermented in glass containers at room temperature. Changes in the microbial population and flora were noted. Microorganisms that were part of the fermenting inoculum were bacterial, molds and yeast. Marula fruit is an acid fruit with pH of around pH3.12 and pH 4.01. pH changes were followed during the length of the fermentation. The pH dropped during the first two days of fermentation, then increased thereafter. The acid content at the end of fermentation was related to the initial pH, initial pH of 3.12 gave titratable acidity of 3.628 g/L H_2SO_4 and initial pH 4.01 gave titratable acidity of 2.842g/L H_2SO_4 Brix,. The sugar content decreased gradually throughout the fermentation. The decrease was monitored for nine days after which there was still some sugar in the wine. There was no detectable sugar after four weeks. Marula juice fermentation was found to be a successive fermentation. The initial fermentation is bacterial followed by yeast fermentation.