

KINETICS OF FERMENTATION OF DIFFERENT *SACCHAROMYCES CEREVISIAE* IN RASPBERRY MUST

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In modern viniculture selected yeast has been used preferably to ensure a final product with desired quality. These yeasts are selected based on certain desirable characteristics such as resistance to high concentrations of sugars. Yeasts strains used for fruit wine production have to adapt to different sugar composition and concentrations, presence of organic acids, pectin and other components present in the fruit pulp. The objective of this study was to evaluate the performance of different *Saccharomyces cerevisiae* strains during alcoholic fermentation of raspberry (*Rubus idaeus*) must. Fermentation parameters such as ethanol yield, productivity and maximum specific rate of cell growth are considered to be essential for good performance in a fermentation process. Raspberry pulp was diluted with a sucrose solution to adjust the sugar concentration to 16° Brix. CaCO₃ was added to increase the pH value to 4.0. Batch fermentations were carried out at 22°C in Erlenmeyer flasks containing 100 ml of raspberry must. The μ_{max} (h⁻¹) found were 0.08, 0.09 and 0.12 for yeast UFLA CA1162, UFLACA11 and UFLACA15, respectively. The higher yield of ethanol (Y_{p/s}) was 0.48 g/g for yeast UFLA CA15, while the other yeasts showed a Y_{p/s} of 0.41 g/g. The values found for the biomass yield (Y_{x/s}) were 0.06, 0.07 and 0.08 g/g for yeasts UFLA CA11, UFLA CA1162 and UFLA CA15, respectively. The highest ethanol productivity was found 1.45 g/l.h for yeast UFLA CA15. It was concluded that raspberry must can be fermented by the different *S. cerevisiae* strains used in this study and based on the kinetic parameters, the yeast UFLA CA15 showed the best fermentation performance in comparison with yeasts UFLA CA11 and UFLA CA1162 in the fermentation of the raspberry pulp.

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