

Public Abstract

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Title:GROWTH CHARACTERISTICS OF DEKKERA BRUXELLENSIS DURING GRAPE WINE FERMENTATION

Wine is an alcoholic beverage usually made from fermented fruit juice, especially from grapes. Today, more and more wineries are built to produce a huge amount of wine to meet its high consumption. It is not hard to imagine the great economic losses even if only a single batch is spoiled. The yeast species *Dekkera bruxellensis* is reported to be responsible for the mousy off-flavor in wine. An unculturable state of the spoilage yeast was observed during this work. Thus, the wine spoilage problem could be mitigated if the unculturable state can be induced during fermentation.

This work aimed to investigate the influence of several factors that may affect the state of the spoilage yeast. There were two more specific objectives: 1) to develop a method to determine the individual yeast concentrations in a co-culture of wine and spoilage yeasts, and 2) to determine fermentation conditions that affect the culturability of the spoilage yeast.