

Abstract

Blackberry (*Rubus* spp.) fruit is a highly perishable product. Industrialisation processes are necessary in order to obtain new products. Alcoholic fermentation could be an important option to process this fruit. This fermentation is affected by many different biological, physical and chemical factors. In this work, two *Saccharomyces cerevisiae* strains (Enofer T306 and ICV KI) were tested using clarified and pasteurized blackberry juice as culture medium. After 60 h fermentation, kinetic evaluated parameters for ICV KI strain were: maximum biomass production 21.0 g L^{-1} ; μ_{\max} , 0.0934 h^{-1} ; $Y_{x/s}$, $0.1679 \text{ gB gTSEG}^{-1}$; $Y_{p/x}$, $2.7782 \text{ gE gB}^{-1}$; $Y_{p/s}$, $0.4903 \text{ gE gTSEG}^{-1}$; q_s , $0.5563 \text{ GTREG gB}^{-1} \text{ h}^{-1}$; q_p , $0.2595 \text{ gE gB}^{-1} \text{ h}^{-1}$; Final ethanol concentration, 67.64 g L^{-1} (85 % p/v). For Enofer T306 strain the results were: maximum biomass production 3.9 g L^{-1} ; μ_{\max} , 0.0459 h^{-1} ; $Y_{x/s}$, $0.11 \text{ gB gTSEG}^{-1}$; $Y_{p/x}$, $3.6517 \text{ gE gB}^{-1}$; $Y_{p/s}$, $0.5136 \text{ gE gTSEG}^{-1}$; q_s , $0.4172 \text{ gGETS gB}^{-1} \text{ h}^{-1}$; q_p , $0.1676 \text{ gE gB}^{-1} \text{ h}^{-1}$; final ethanol concentration 61.68 g L^{-1} (7.75 % p/v). In conclusion, volatile compound production was affected by the *Saccharomyces cerevisiae* strain, but was not affected by fermentation condition. Alcoholic fermentation of blackberry juice by the ICV KI strain produced higher ethanol concentrations but lower aromatic compound concentrations than Enofer T306 strain. A medium alcoholic graduation wine was obtained, with potential of being stepped-up to industrial level.