

Biochemical properties of rice wine produced from three different starter cultures

Abstrak

Starter cultures influence aroma and flavour in rice wine production. The biochemical characterization of rice wine produced from common and glutinous rice 5 using three starter cultures; 1) bitter (1.51×10^4 CFU/g), 2) bitter-sweet (5.5×10 CFU/g), and 3) 5 sweet (4.47×10 CFU/g), were investigated. The volume of wine, with pH ranging from 4.3 to 4.7, obtained from glutinous rice was twice the volume of common rice. Glucose levels of wine from glutinous rice ranged between $300.27 \pm 0.28 \sim 440.14 \pm 29.97$ mg/ml, twice of that in common rice wine. The wine from common rice contained higher alcohol ($9.96 \pm 0.08 \sim 12.53 \pm 1.35\%$) as compared to wine from glutinous rice. Volatile hydrocarbons in both rice wines were analysed and reported. Rice wine and fermented rice cakes were tested for their antioxidant and fibrinolytic activities. However, only fermented rice cakes from common rice displayed positive antioxidant and fibrinolytic activities. Best fibrinolytic activity was exhibited by a bitter-sweet starter with $IC_{50} 4.67 \pm 0.51$ mg/ml and 0.32 ± 0.01 unit plasmin/mg.