

Effect of operating parameter on clarification of bambangan juice using enzymatic treatment of juice quality

ABSTRACT

Bambangan juice that are currently available in local market is relatively viscous, turbid, and cloudy and tend to settle during storage after bottling of the juice. The turbidity and viscosity of bambangan juice might be due to the presence of polysaccharides in the juice such as pectin and starch, which would lead to instability and deterioration. Clarification is necessary to obtain a bright, clear product with low viscosity which generally can be conducted through enzymatic treatment. Therefore, this study aims to determine the best operating parameters (enzyme concentration, incubation temperature, and incubation time) for clarification of bambangan juice using pectinase from *Aspergillus aculeatus*. The juice qualities were evaluated based on yield and physicochemical properties. The best operating parameters for bambangan juice clarification using pectinase were obtained at 0.10% v/v enzyme concentration, temperature of 40°C, and incubation time of 30 minutes. Under these conditions, a significant improvement in juice qualities was achieved in terms of yield, clarity, and colour (L^* , a^* , b^*) with values of 87%, 0.5, L^* - 61.1; a^* - 2.7; b^* - 1.4, respectively.