

The possibility of a halal mix probiotic medium for the cultivation of *Lactobacillus plantarum* N16 and *Saccharomyces cerevisiae*

ABSTRACT

This study aimed to determine the effects of interaction between media type (halal mix preparation) and culture mixtures of *Lactobacillus plantarum* N16 and *Saccharomyces cerevisiae* (probiotics). A completely randomized factorial design (CRFD) consisting of 2 factors and three replications was used, where factor A was a mixture of *Lactobacillus plantarum* N16 and *Saccharomyces cerevisiae* at a ratio of 1:1 (A1); 1:2 (A2) and 2:1 (A3) and factor B was the type of growth media, that is, control (B1), whey tofu, molasses, and fish waste flour (B2), and coconut water, onggok flour and shrimp waste flour (B3). The variables measured were viability, cell biomass, and pH. The results showed interactions between factors A and B, which were significantly different ($p < 0.05$) in terms of viability, cell biomass, and pH. Based on the results of the study, it can be concluded that the mixture of *Lactobacillus plantarum* N16 and *Saccharomyces cerevisiae* at a ratio of 2:1 (A3), using coconut water, onggok flour, and shrimp waste flour (B3) as medium and incubated at 36 °C for 24 hours was the best medium. It had a 2.37 viability, 42.33 mg/ml biomass cell, and a pH of 2.37.