

## Abstract

In this study, the effects of *Auricularia auricula* polysaccharide (Aap) on the quality of whole wheat dough (WWD) were investigated. The results showed that compared to the control, the content of ordered structure ( $\beta$ -sheet) of gluten protein improved by 6.81% and the content of free sulfhydryl decreased by 63.73% respectively in WWD with 1% Aap. Furthermore, the content of immobilized water increased up to 94.89% and the moisture distributed in the center of the dough had higher fluidity in WWD with 1% Aap. Moreover, the rheological properties of WWD including storage modulus and loss modulus were significantly increased with the addition of Aap compared to the control. In addition, the tensile resistance and the stretching distance of the WWD with 1% Aap improved by 68.01 and 12.65% respectively. Therefore, 1% Aap significantly improved the quality of WWD by affecting moisture, starch and protein fractions in dough.