ABSTRACT

THE EFFECT OF EXTRACT BAY LEAF (Syzygium polyanthum (Wight.) Walp.) ON THE LEVEL OF STARCH HYDROLYSIS, ANTIOXIDANT ACTIVITY AND SENSORY PROPERTIES OF INSTANT RICE

By

Isnaini Rahmadi

In some Asian countries, diabetes mellitus (DM) is suggested to be close related to their rice daily intake as rice intake contributes significantly into their blood glucose level. Threrefore, for patient of DM or people who has high risk of digestibility of starch should be lowered. This research aimem to obtain an optimal concentration of bay leaf extract that produces instant rice with low levels of starch hydrolysis, the high antioxidant activity and sensory properties are preferred. This research is arranged in a Complete Randomized Block Design (CRBD) with six bay leaf extract concentration, is 0%, 5%, 10%, 15%, 20% and 25% of the solution volume for cooking. The results showed the addition of the bay leaf extract did not affect the rate of starch hydrolysis and total of phenol in instant rice, but it is effected on antioxidant activity and sensory properties of instant rice. The best treatment is the instant rice with the addition of bay leaf extract at 0 % who has the degree of hydrolysis of starch by 15.21 %, the

antioxidant activity by 79.44 %, total of phenol about 186.00 ppm GAE, the percentage of panelists with like criteria to scents about 49.52 %, the taste 59.05 %, color 86.67 % and fluffier 41.90%.

Keywords: antioxidants, bay leaves, hydrolysis of starch, instant rice