

RINGKASAN

Konsumsi tepung terigu Indonesia adalah 6,66 ton per tahun dan pertumbuhan konsumsi per kapita tepung terigu selama tahun 2014 hingga 2018 mencapai 19,92%. Alternatif untuk menggali potensi lokal salah satunya dengan mengganti sebagian bahan dasar substitusi tepung terigu dengan bahan lain yaitu tepung ubi jalar ungu. Substitusi tepung terigu dilakukan karena, tepung ubi jalar ungu memiliki kandungan amilosa 24,79% dan amilopektin 49,79%. Amilopektin merangsang terjadinya penambahan volume pada produk makanan. Pati yang kaya akan amilopektin menyebabkan sifat ringan, prorus, garing, dan renyah. Penelitian ini bertujuan untuk mendapatkan substitusi tepung ubi jalar ungu dan lama fermentasi yang baik pada modifikasi roti tawar.

Penelitian menggunakan rancangan acak lengkap (RAL) faktorial dengan dua (2) ulangan. Faktor I : Substitusi tepung ubi jalar ungu dengan tepung terigu (S) yang terdiri dari 4 taraf : S1= (5% tepung ubi jalar ungu dan 95% tepung terigu), S2 = (15% tepung ubi jalar ungu dan 85% tepung terigu), S3= (25% tepung ubi jalar ungu dan 75% tepung terigu), S4 = (35% tepung ubi jalar ungu dan 65% tepung terigu). Faktor II : Lama fermentasi adonan (L) yang terdiri dari 4 taraf : L1 = (1 jam), L2 = (2 jam), L3 = (3 jam), L4 = (4 jam). Parameter yang diamati meliputi daya kembang roti, daya serap air, kadar air, organoleptik warna, aroma, rasa dan tekstur. Hasil penelitian menunjukkan bahwa substitusi tepung ubi jalar ungu dan lama fermentasi memberikan interaksi perlakuan terhadap daya kembang roti, daya serap air, kadar air dan organoleptik tekstur. Interaksi perlakuan terbaik untuk daya kembang roti (8,97%) yaitu S1L4, daya serap air (3,73 ml/gr) yaitu S1L1, kadar air (33,00%) yaitu S1L1 dan organoleptik tekstur (3,80) yaitu S1L1. Sebagai kesimpulan bahwa substitusi yang dapat dilakukan pada produksi roti tawar adalah substitusi tepung ubi jalar ungu dan tepung terigu (S1) pada semua perlakuan lama fermentasi.

Kata Kunci : Tepung Ubi Jalar Ungu, Roti Tawar, Lama Fermentasi

SUMMARY

Indonesia's wheat flour consumption is 6.66 tons per year and the growth in per capita consumption of wheat flour from 2014 to 2018 reached 19.92%. One alternative for exploring local potential is to replace some of the basic ingredients by substituting wheat flour with other ingredients, namely purple sweet potato flour. The substitution for wheat flour was made because purple sweet potato flour contains 24.79% amylose and 49.79% amylopectin. Amylopectin stimulates the increase in volume in food products. Starch that is rich in amylopectin causes light, flaky, crisp and crunchy properties. This research aims to obtain a substitution for purple sweet potato flour and a good fermentation time in modified white bread.

The study used a factorial completely randomized design (CRD) with two (2) replications. Factor I: Substitution of purple sweet potato flour with wheat flour (S) consisting of 4 levels: S1 = (5% purple sweet potato flour and 95% wheat flour), S2 = (15% purple sweet potato flour and 85% wheat flour), S3 = (25% purple sweet potato flour and 75% wheat flour), S4 = (35% purple sweet potato flour and 65% wheat flour). Factor II: Dough fermentation time (L) which consists of 4 levels: L1 = (1 hour), L2 = (2 hours), L3 = (3 hours), L4 = (4 hours). The parameters observed include bread flower style, water absorption capacity, water content, organoleptic color, aroma, taste and texture. The results showed that the substitution of purple sweet potato flour and fermentation time provided a treatment interaction on bread riseability, water absorption capacity, water content and organoleptic texture. The best treatment interaction for bread riseability (8.97%) is S1L4, water absorption capacity (3.73 ml/gr) is S1L1, water content (33.00%) is S1L1 and organoleptic texture (3.80) is S1L1. In conclusion, the substitution that can be made in the production of white bread is the substitution of purple sweet potato flour and wheat flour (S1) in all long fermentation treatments.

Keywords : Purple Sweet Potato Flour, White Bread, Fermentation Time