

ABSTRAK

Penelitian ini berjudul “Pengaruh Waktu Fermentasi Yoghurt dan Penambahan Sari Buah Naga Merah Terhadap Aktivitas Antioksidan Yoghurt Terfortifikasi Sari Buah Naga Merah” bertujuan untuk memproduksi yoghurt berkadar antioksidan tinggi dengan penambahan sari buah naga merah yang disukai konsumen. Metode yang dilakukan meliputi produksi yoghurt dengan variasi waktu fermentasi 6 Jam (A), 12 (B) Jam dan 24 Jam (C) dan variasi penambahan sari buah naga merah 9:1 (1), 8:2 (2) dan 7:3 (3). Analisis yang dilakukan meliputi analisis betasianin, penentuan kadar betasianin sari buah naga merah dan produk yoghurt terfortifikasi sari buah naga merah menggunakan metode spektrofotometer UV-Vis, aktivitas antioksidan menggunakan metode DPPH untuk sampel sari buah naga merah, yoghurt sebelum dan sesudah fortifikasi sari buah naga merah, serta organoleptik menggunakan uji hedonik berdasarkan parameter aroma, warna, rasa dan tekstur produk yoghurt oleh 20 panelis tidak terlatih. Hasil penelitian menunjukkan bahwa sari buah naga merah betasianin dengan kadar 9,83 mg/100g. Aktivitas antioksidan sari buah naga merah yang diperoleh sebesar 52,06%. Aktivitas antioksidan yoghurt sebelum fortifikasi sari buah naga merah pada waktu fermentasi 6 jam, 12 jam dan 24 berturut-turut adalah 5,72%, 3,47% dan 3,23%. Aktivitas antioksidan yoghurt sesudah fortifikasi sari buah naga merah pada produk A1, A2, A3, B1, B2, B3, C1, C2 dan C3 berturut-turut adalah 11,54%, 12,78%, 18,24%, 5,40%, 6,42%, 8,79%, 3,36%, 8,46% dan 14,77%. Aktivitas antioksidan yoghurt sebelum fortifikasi lebih kecil dibandingkan setelah fortifikasi. Aktivitas antioksidan terbaik didapatkan pada produk A3 yaitu dengan waktu fermentasi 6 jam dan perbandingan 7:3. Produk yoghurt dengan sifat organoleptik terbaik yang paling disukai panelis berdasarkan parameter aroma dan tekstur yaitu B1, sedangkan untuk warna yaitu C2, dan untuk rasa panelis lebih menyukai produk B2.

Kata Kunci: Waktu Fermentasi, Yoghurt, Aktivitas antioksidan, Sari buah naga merah, Fortifikasi

ABSTRACT

This research was titled “The Effect of Yoghurt Fermentation Time and The Addition of Red Dragon Fruit Extract to the Anti-Oxidant Activity of Fortified Yoghurt” and aimed to produce yoghurt with high anti-oxidant activity by the addition of Red Dragon Fruit Extract which was preferable by the consumers. The methods which were done included the production of yoghurt with fermentation time variations 6 hours (A), 12 hours (B) and 24 hours (C) and the variations of red dragon fruit extract composition 9:1 (1), 8:2 (2) and 7:3 (3). The analysis betacyanin, UV-Vis spectrophotometer analysis to know the betacyanin concentration of red dragon fruit extract and in the fortified yoghurt. The anti-oxidant activity of red dragon fruit, the yoghurt before and after fortification was done by DPPH method, organoleptic test was done using hedonic test based on the aroma, color, flavor, and texture of the produced yoghurt which was done by 20 untrained panelists. The result showed that red dragon fruit extract contained betacyanin with the concentration of 9.83 mg/100 g. The anti-oxidant activity of red dragon fruit extract was 52.06 %. Anti-oxidant activity of the yoghurt before fortification by using fermentation time of 6, 12 and 24 hours respectively were 5.72 %, 3.47% and 3.23%. Anti-oxidant activity of the yoghurt after fortification to the labeled products A1, A2, A3, B1, B2, B3, C1, C2 and C3 respectively were 11.54%, 12.78%, 18.24%, 5.40%, 6.42%, 8.79%, 3.36%, 8.46% and 14.77%. Anti-oxidant activity of the yoghurt before fortification was smaller than the yoghurt after fortification. Best anti-oxidant activity obtained at yogurt A3 with fermentation time 6 hours and composition 7:3. The produced yoghurt with best organoleptic properties, which are the panelists favorites, based on the aroma and the texture was B1, but based on the color was C2 and based on the flavor was B2.

Keywords : Time of Fermentation, Yoghurt, Anti-oxidant activity, Red dragon fruit extract, Fortification