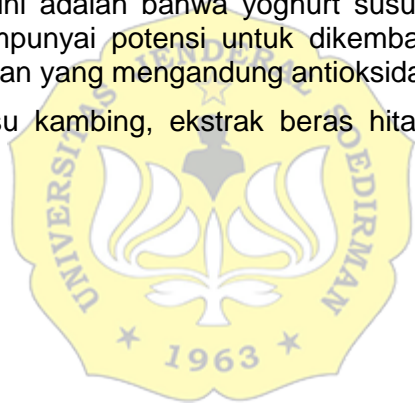


ABSTRAK

Penelitian berjudul “Pengayaan Yoghurt Susu Kambing dengan Ekstrak Beras Hitam Sebagai Pangan Fungsional” telah dilaksanakan di Laboratorium Teknologi Hasil Ternak, Fakultas Peternakan, Universitas Jenderal Soedirman, Purwokerto, pada tanggal 22 April – 21 Juni 2019. Tujuan penelitian ini adalah mengevaluasi pengayaan yoghurt susu kambing dengan penambahan ekstrak beras hitam dilihat dari karakteristik fisikokimia yang meliputi daya ikat air, sineresis, total padatan dan total asam tertitrasi, serta dilihat dari sifat fungsional yang meliputi aktivitas antioksidan. Variabel yang diukur yaitu daya ikat air, sineresis, total padatan, total asam tertitrasi dan antioksidan. Perlakuan terdiri atas P_0 (susu kambing + 10% starter komersial), P_1 (susu kambing + 10% starter komersial + 5% ekstrak beras hitam), P_2 (susu kambing + 10% starter komersial + 10% ekstrak beras hitam), P_3 (susu kambing + 10% starter komersial + 15% ekstrak beras hitam) dan P_4 (susu kambing + 10% starter komersial + 20% ekstrak beras hitam) dengan 5 kali ulangan. Data dianalisis menggunakan analisis variansi dan dilanjutkan dengan Uji Ortogonal Polinomial. Hasil penelitian menunjukkan penambahan ekstrak beras hitam berpengaruh nyata ($P < 0,05$) meningkatkan daya ikat air secara kubik dengan persamaan $Y = -2242,70x^3 + 638,80x^2 + 26,17x + 54,99$. Berpengaruh sangat nyata ($P < 0,01$) penurunan total padatan secara linier dengan persamaan $Y = -16,25x + 15,99$. Berpengaruh sangat nyata ($P < 0,01$) penurunan asam tertitrasi secara kubik dengan persamaan $Y = -252,00x^3 + 95,14x^2 - 11,76x + 1,28$. Tetapi tidak berpengaruh nyata ($P > 0,05$) terhadap sineresis. Ekstrak beras hitam memberikan pengaruh yang sangat nyata ($P < 0,01$) terhadap yoghurt susu kambing variasi penambahan ekstrak beras hitam sebanyak 5% menunjukkan nilai IC50 tertinggi. Simpulan dari penelitian ini adalah bahwa yoghurt susu kambing dengan penambahan ekstrak beras hitam mempunyai potensi untuk dikembangkan menjadi produk pangan fungsional sebagai makanan yang mengandung antioksidan yang baik.

Kata kunci : yoghurt susu kambing, ekstrak beras hitam, karakteristik fisikokimia dan fungsional.



ABSTRACT

The study titled "Goat Milk Yogurt Enriched with Black Rice Extract As Functional Food" have been carried out in the Laboratory of Livestock Products Technology, Faculty of Animal Husbandry, University of Jenderal Soedirman, Purwokerto, on 22 April to 21 June 2019. The purpose of this study was to evaluate the enrichment of goat milk yogurt with the addition of black rice extract seen from physicochemical characteristics including water binding capacity, syneresis, total solids and total titrated acid, as well as judging by functional properties including antioxidant activity. The measured variable is water holding capacity, syneresis, total solids, total titrated acid and antioxidants. Variables measured yogurt namely water holding capacity, syneresis, total solids, total tertitiasi acids and antioxidants. The treatment consisted of P0 (goat's milk + 10% starter commercial), P1 (goat's milk + 10% starter commercial + 5% extract of black rice), P2 (goat's milk + 10% starter commercial + 10% extract of black rice), P3 (goat's milk + 10% + 15% commercial starter black rice extract) and P4 (goat's milk + 10% + 20% commercial starter black rice extract) with 5 replications. Data were analyzed using analysis of variance followed by Orthogonal Test polynomial. The results showed that the addition of black rice extract significantly affected ($P < 0,05$) increasing the water binding capacity in cubic with the equation $Y = -2242.70x^3 + 638.80x^2 + 26.17x + 54.99$. Very significant effect ($P < 0,01$) decrease in total solids linearly with equation $Y = -16,25x + 15,99$. Very significant ($P < 0,01$) reduction in cubic titrated acid with the equation $Y = -252,00x^3 + 95,14x^2 - 11,76x + 1,28$. But did not significantly ($P > 0,05$) affect syneresis. Black rice extract gives a very real effect ($P < 0,01$) on goat milk yogurt variation adding black rice extract as much as 5% showed the highest IC50 value. Conclusions from this research is that the goat milk yogurt with the addition of black rice extract has the potential to be developed into functional food products as foods that contain antioxidants that are good.

Keywords: goat's milk yoghurt, black rice extract, characteristic chemical and functional.

